City of Troy

National Pollutant Discharge Elimination System

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

TABLE OF CONTENTS

Table of Contents

National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Application Form (Reissuance)

version 1.4

(Submission #: 2EE-DD8C-HVAZ, version 3)

Details

Form Alias	National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Application Form (Reissuance)
Submission #	2EE-DD8C-HVAZ
Submission Reason	Renewal
Status	Submitted

Form Input

Existing Permit Details

Existing Permit ID (Read Only)
NONE PROVIDED

Existing Permit Number (Read Only)
NONE PROVIDED

Section 1. Applicant Information

Applicant Information

Contact

Prefix
Mr.

First Name	Last Name
Bill	*Huotari*

Title
City Engineer

Organization Name
City of Troy

Phone Type	Number	Extension
Business	248-524-3383	

Email
Cityengineer@troymi.gov

Fax
NONE PROVIDED

Address

500 W. Big Beaver Road
Troy, Michigan 48084
United States of America

Section 2. MS4 Location Information

Municipal Entity Name (e.g., City of Lansing)
City of Troy

Identify the Primary Municipal Facility or the Mailing Address Location

A site needs to be identified as part of the application. Identify the physical address for the municipal entity, such as the primary municipal facility (e.g., City Hall).

Facility Location
42.5639484,-83.15550510000003

NONE PROVIDED

Section 3. MS4 Contacts (1 of 1)

CONTACTS

A contact must be provided for each of the roles listed below. You may assign more than one role to a single contact by holding down the 'Ctrl' key while selecting each role. Use the "+" (repeat section) button to add an additional contact.

Contact
Storm Water Billing Contact
Storm Water Program Manager
Application Contact

Contact

Contact

Prefix
Mr.

First Name	Last Name
Bill	*Huotari*

Title
City Engineer

Organization Name
City of Troy

Phone Type	Number	Extension
Business	248-524-3383	

Email
Cityengineer@troymi.gov

Fax
NONE PROVIDED

Address

500 W. Big Beaver Road

Troy, Michigan 48084

United States of America

Section 4: Regulated Area, Outfalls/Points of Discharge, and Nested Jurisdictions (1 of 1)

Regulated Area

Identify the urbanized area within the applicant's jurisdictional boundary as defined by the 2010 Census. The regulated MS4 means an MS4 owned or operated by a city, village, township, county, district, association, or other public body created by or pursuant to state law and the nested MS4 identified below that is located in an urbanized area and discharges storm water into surface waters of the state. The 2010 Census maps are located at the Urbanized Area Link below.
Urbanized Area Link

Select an Urbanized Area
Detroit

Outfall and Point of Discharge Information

Provide the following information for each of the applicant's MS4 outfalls and points of discharge within the regulated area: identification number, description of whether the discharge is from an outfall or point of discharge, and the surface water of the state that receives the discharge.

An outfall means a discharge point from an MS4 directly to surface waters of the state.

A point of discharge means a discharge from an MS4 to an MS4 owned or operated by another public body. In the case of a point of discharge, the surface water of the state is the ultimate receiving water from the final outfall.

Please note than an MS4 is not a surface water of the state. For example, an open county drain that is a surface water of the state is not an MS4.

An example table is available at the link below.
Outfall and Point of Discharge example table link

OUTFALL AND POINT OF DISCHARGE INFORMATION

TABLE OF CONTENTS.pdf - 03/29/2016 05:21 PM
Appendix A_City_Outfalls.pdf - 03/29/2016 05:21 PM
Comment
Appendix A - City Outfalls

Nested Jurisdictions

Submit the name and general description of each nested MS4 for which a cooperative agreement has been reached to carry out the terms and conditions of the permit for the nested jurisdiction. The applicant shall be responsible for assuring compliance with the permit for those nested jurisdictions with which they have entered into an agreement and listed as part of the Application. If the primary jurisdiction and the nested jurisdiction agree to cooperate so that the terms and conditions of the permit are met for the nested MS4, the nested jurisdiction does not need to apply for a separate permit. A city, village, or township shall not be a nested jurisdiction.

Use the "+" (repeat section) button to add an additional Jurisdiction contact.

Nested Jurisdiction

Contact

Prefix
NONE PROVIDED

First Name	Last Name
NONE PROVIDED	*NONE PROVIDED*

Title
NONE PROVIDED

Organization Name
NONE PROVIDED

Phone Type	Number	Extension
NONE PROVIDED	NONE PROVIDED	

Email
NONE PROVIDED

Fax
NONE PROVIDED

Address

[NO STREET ADDRESS SPECIFIED]
[NO CITY SPECIFIED], [NO STATE SPECIFIED] [NO ZIP CODE SPECIFIED]
[NO COUNTRY SPECIFIED]

Section 5: General SWMP, Enforcement Response Procedure, and Public Participation/Involvement Program

STORM WATER MANAGEMENT PROGRAM (SWMP)

This Application requires a description of the Best Management Practices (BMPs) the applicant will implement for each minimum control measure and the applicable water quality requirements during this permit cycle. The applicant shall incorporate the BMPs to develop a SWMP as part of the Application. The SWMP shall be developed, implemented, and enforced to reduce the discharge of pollutants from the MS4 to the Maximum Extent Practicable and protect water quality in accordance with the appropriate water quality requirements of the NREPA 451, Public Acts of 1994, Part 31, and the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq.). The Maximum Extent Practicable may be met by implementing the BMPs identified in the SWMP and demonstrating the effectiveness of the BMPs. The applicant shall attach any appropriate and necessary documentation to demonstrate compliance with the six minimum control measures and applicable water quality requirements as part of the Application.

The applicant shall complete this Application to the best of its knowledge and ensure that it is true, accurate, and meets the minimum requirements for a SWMP to the Maximum Extent Practicable.

Several minimum control measures include a statement requesting the applicant to indicate in the response if you are, or will be, working collaboratively with watershed or regional partners on any or all activities to meet the minimum control measure requirements. If the applicant chooses to work collaboratively with watershed or regional partners to implement parts of the SWMP, each applicant will be responsible for complying with the minimum permit requirements.

For purposes of this Application, a procedure means a written process, policy or other mechanism describing how the applicant will implement minimum requirements.

When answering the questions in this section of the Application, the applicant's MS4 encompasses what the applicant identified in Sections 4. The applicant shall include a measurable goal for each BMP. Each measurable goal shall include, as appropriate, a schedule for BMP implementation (months and years), including interim milestones and the frequency of the action. Each measurable goal shall have a measure of assessment to measure progress towards achieving the measurable goal. A United States Environmental Protection Agency (USEPA) guidance document on measurable goals is available at the link below.
USEPA measurable goals guidance document link

Enforcement Response Procedure (ERP)

The applicant shall describe the current and proposed enforcement responses to address violations of the applicant's ordinances and regulatory mechanisms identified in the SWMP. The following question represents the minimum requirement for the ERP. Please complete the question below.

ERP

Troy_ERP v1.1.pdf - 07/12/2019 11:15 AM

Comment

Appendix B - Enforcement Response ProcedureThe City currently has a complaint response system in place. Complaints or concerns may be reported by the public through the City's Service Request Portal available on the City's website.

Public Participation/Involvement Program (PPP)

The applicant shall describe the current and proposed BMPs to meet the minimum control measure requirements for the PPP to the maximum extent practicable, which shall be incorporated into the SWMP. Please indicate in your response if you are, or will be, working collaboratively with watershed or regional partners on any or all activities in the PPP during the permit cycle (i.e., identify collaborative efforts in the procedures). The following questions represent the minimum control measure requirements for the PPP. Please complete all the questions below. A measurable goal with a measure of assessment shall be included for each BMP, and, as appropriate, a schedule for implementation (months and years), including interim milestones and the frequency of the BMP. The responses shall reflect the nested MS4s identified in Section 4.

Proposing to work collaboratively on any or all activities in the PPP during the permit cycle?
Yes

PPP Procedures

Appendix C - FINAL PPP 3-22-16.pdf - 03/29/2016 05:22 PM
Appendix C_FINAL_APPROVED_PPP.pdf - 07/13/2018 06:21 PM

Comment

Appendix C - Rouge River Collaborative Public Participation/Involvement Program

2. Provide the reference to the procedure submitted above 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. (page and paragraph of attachments): e.g., Attachment A, Page 3, Section b.
Appendix C - Rouge River Collaborative Public Participation/Involvement Program, Section B

3. Provide the reference to the procedure submitted above for inviting public involvement and participation in the implementation and periodic review of the SWMP. (page and paragraph of attachments):
Appendix C - Rouge River Collaborative Public Participation/Involvement Program, Section D

Section 6. Public Education Program

Proposing to work collaboratively on any or all activities in the PEP during the permit cycle?
Yes

PEP Procedures

Appendix D_Final ARC Collaborative PEP_032116.pdf - 03/29/2016 05:30 PM
Appendix J_Clinton River_PEP.pdf - 03/29/2016 05:31 PM
Appendix D_Collaborative PEP 32117.pdf - 07/13/2018 06:21 PM
Comment
NONE PROVIDED

4. PEP activities may be prioritized based on the assessment of high priority, community-wide issues and targeted issues to reduce pollutants in storm water runoff. If prioritizing PEP activities, provide the reference to the procedure submitted above with the assessment and list of the priority issues (e.g., Attachment A, Section 1).
Appendix D – Rouge River Collaborative Public Education Program, Section A Appendix J – Clinton River Collaborative Public Education Plan, Appendix A. The City of Troy participates in both the Rouge River and Clinton River Collaborative Plans.

5. Provide the reference to the procedure submitted above identifying applicable PEP topics and the activities to be implemented during the permit cycle. If prioritizing, prioritize each applicable PEP topics as high, medium, or low based on the assessment in Question 4.

For each applicable PEP topic below, identify in the procedure the target audience; key message; delivery mechanism; year and frequency the BMP will be implemented; and the responsible party. If a PEP topic is determined to be not applicable or a priority issue, provide an explanation.

An example PEP table is available at the link below.
PEP table example link

A. Promote public responsibility and stewardship in the applicant's watershed(s). Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.
High. Appendix D - Rouge River Collaborative Public Education Program, Table 2, Page 3

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. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.
High. Appendix D - Rouge River Collaborative Public Education Program, Table 2, Page 3

C. Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.
High. Appendix D - Rouge River Collaborative Public Education Program, Table 2, Page 3

D. Promote preferred cleaning materials and procedures for car, pavement, and power washing. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.
Medium. Appendix D - Rouge River Collaborative Public Education Program, Table 2, Page 3

E. Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.
High. Appendix D - Rouge River Collaborative Public Education Program, Table 2, Page 3

F. Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter into the MS4. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.
High. Appendix D - Rouge River Collaborative Public Education Program, Table 2, Page 3

G. Identify and promote the availability, location, and requirement of facilities for collection or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, and motor vehicle fluids. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.
High. Appendix D - Rouge River Collaborative Public Education Program, Table 2, Page 3

H. Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.
High. Appendix D - Rouge River Collaborative Public Education Program, Table 2, Page 3

I. Educate the public on, and promote the benefits of, green infrastructure and low impact development. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.
High. Appendix D - Rouge River Collaborative Public Education Program, Table 2, Page 3

J. Identify and educate commercial, industrial, and institutional entities likely to contribute pollutants to storm water runoff. Provide the reference to the procedure submitted above or explanation as to why the topic is not applicable.
Low. Appendix D - Rouge River Collaborative Public Education Program, Table 2, Page 3

6. Provide the reference to the procedure submitted above for evaluating and determining the effectiveness of the overall PEP. The procedure shall include a method for assessing changes in public awareness and behavior resulting from the implementation of the PEP and the process for modifying the PEP to address ineffective implementation. e.g., Attachment A, Page 3, Section b.
Appendix D - Rouge River Collaborative Public Education Program, Section D, Page 13 Appendix J - Clinton River Collaborative Public Education Plan, Appendix A.

Section 7. Illicit Discharge Elimination Program

>>Click here to access the MDEQ IDEP Compliance Assistance Document

>>Click here to access the Center for Watershed Protection guide

Proposing to work collaboratively on any or all BMPs in the IDEP during the permit cycle?
Yes

Illicit Discharge Ellimination Program Procedures

Appendix E - Final Collaborative IDEP_032416.pdf - 03/29/2016 05:40 PM
Appendix H_Pollution Prevention and Good Housekeeping.pdf - 03/29/2016 05:42 PM
Appendix E_Attachment E - IDEP Ordinance Table.pdf - 04/01/2016 12:58 PM
Appendix E_Collaborative IDEP 09 25 2017 w Approval ltr.pdf - 07/13/2018 06:22 PM
Appendix H__P2GH-Street Maintenance and Winter Operations ver.1.1. Revised.pdf - 09/13/2018 10:39 AM
Appendix H_P2GH-Spill Response ver.1.1.Revised.pdf - 09/13/2018 10:39 AM
Appendix H_Troy_P2GH-ver1.1.Revised.pdf - 07/12/2019 11:19 AM
Appendix K_2016_RedRunIDEP.Revised.pdf - 07/12/2019 11:19 AM
IDEP-Complaint-Form_Troy.pdf - 07/12/2019 11:19 AM
Troy_ERP v1.1.pdf - 07/12/2019 11:21 AM

Comment
Appendix E - Rouge River Collaborative IDEPAppendix E, Attachment E - IDEP Ordinance TableAppendix H - Pollution Prevention and Good Housekeeping SOPsAppendix K - City of Troy Red Run IDEP

Storm Sewer System Map

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. (e.g., The Department of Public Works office)
Appendix E - Rouge River Collaborative IDEP, Section D. The Master Storm Sewer Map is updated regularly by the City and current maps are available at City Hall. As-built plans for utilities and developments are also maintained by the City.

Illicit Discharge Identification and Investigation
8. The MS4 may be prioritized for detecting non-storm water discharges during the permit cycle. The goal of the prioritization process is to target areas with high illicit discharge potential. If prioritizing, provide the reference to the procedure submitted above with the process for selecting each priority area using the list below. (e.g., Attachment A, page 3, Section b.)
- 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

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
Appendix E - Rouge River Collaborative IDEP, Section C. The Red Run IDEP will not be prioritized.

9. If prioritizing dry-weather screening, provide the reference to the document submitted above with the geographical location of each prioritized area using either a narrative description or map and identify the prioritized areas that will be targeted during the permit cycle.
Appendix E - Rouge River Collaborative IDEP, Section C.

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. Areas not covered by the interagency agreement shall be identified with a schedule for performing field observations included in the procedure.

The focus of the field observation shall be to observe the following:
- Presence/absence of flow
- Water clarity
- Deposits/stains on the discharge structure or bank
- Color
- Vegetation condition
- Odor
- Structural condition
- Floatable materials
- Biology, such as bacterial sheens, algae, and slimes

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
Appendix E - Rouge River Collaborative IDEP, Section D, IDEP #2. Appendix K – Red Run IDEP, Task 1a.

11. Provide the reference to the procedure submitted above 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.
Appendix E - Rouge River Collaborative IDEP, Section D, IDEP #3. Appendix K – Red Run IDEP, Task 1a.

12. Provide the reference to the procedure submitted above 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.
Appendix E - Rouge River Collaborative IDEP, Section D, IDEP #3. Appendix K – Red Run IDEP, Task 1b.

13. Provide the reference to the procedure submitted above 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.
Appendix E - Rouge River Collaborative IDEP, Section D, IDEP #5. Appendix H – P2GH Spill Response, Section B.

14. If prioritizing, provide the reference to the procedure submitted above 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 investigation as appropriate. If not prioritizing, enter "Not Applicable."
Appendix E - Rouge River Collaborative IDEP, Section D, IDEP #5. The Red Run IDEP is not prioritizing.

15. Provide the reference to the procedure submitted above which 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 telephone number: 800-292-4706. (Example threshold reporting quantities: a release of 50 pounds of salt in solid form or 50 gallons in liquid form to waters of the state unless authorized by the MDEQ for deicing or dust suppressant.)
Appendix H - P2GH Spill Response SOP, Section C.

16. If the procedures requested in Questions 8 through 14 do not accurately reflect the applicant's procedure(s), provide the reference to the procedure(s) submitted above describing the alternative approach to meet the minimum requirements.
NA

17. Provide the reference to the procedure submitted above 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.
Appendix E - Rouge River Collaborative IDEP, Section E. Appendix K – Red Run IDEP, Task 1b.

IDEP Training and Evaluation

18. Provide the reference to the program submitted above to train staff employed by the applicant, who, as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge to the regulated MS4, 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.

Provide the reference to the program submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
Appendix E - Rouge River Collaborative IDEP, Section D, IDEP #4.

19. Provide the reference to the procedure submitted above for evaluating and determining the overall effectiveness of the 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.
Appendix E - Rouge River Collaborative IDEP, Section F; Appendix K – Red Run IDEP, Task 3.

Illicit Discharge Ordinance or Other Regulatory Mechanism

20. Provide the reference to the in effect ordinance or regulatory mechanism submitted above that prohibits non-storm water discharges into the applicant's MS4 (except the non-storm water discharges addressed in Questions 21 and 22).
Appendix E – Rouge River Collaborative IDEP, Section D, IDEP #7 and Attachment E.

21. Provide the reference to the ordinance or other regulatory mechanism submitted above that excludes prohibiting the discharges or flows from firefighting activities to the applicant's MS4 and requires 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.
Appendix E – Rouge River Collaborative IDEP, Section D, IDEP #7 and Attachment E.

22. Provide the reference to the ordinance or other regulatory mechanism submitted above that excludes prohibiting 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.)

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
Appendix E – Rouge River Collaborative IDEP, Section D, IDEP #7 and Attachment E.

23. Provide the reference to the ordinance or regulatory mechanism submitted above that regulates the contribution of pollutants to the applicant's MS4 in the attachment above.
Appendix E – Rouge River Collaborative IDEP, Section D, IDEP #7 and Attachment E.

24. Provide the reference to the ordinance or regulatory mechanism submitted above that prohibits illicit discharges, including illicit connections and the direct dumping or disposal of materials into the applicant's MS4 in the attachment above.
Appendix E – Rouge River Collaborative IDEP, Section D, IDEP #7 and Attachment E.

25. Provide the reference to the ordinance or regulatory mechanism submitted above with the authority established to inspect, investigate, and monitor suspected illicit discharges into the applicant's MS4 in the attachment above.
Appendix E – Rouge River Collaborative IDEP, Section D, IDEP #7 and Attachment E.

26. Provide the reference to the ordinance or regulatory mechanism submitted above that requires and enforces elimination of illicit discharges into the applicant's MS4, including providing the applicant the authority to eliminate the illicit discharge in the attachment above.
Appendix E – Rouge River Collaborative IDEP, Section D, IDEP #7 and Attachment E.

Section 8. Construction Storm Water Runoff Control Program

Proposing to work collaboratively on any or all requirements of the Construction Storm Water Runoff Control Program during the permit cycle?
No

Qualifying Local Soil Erosion and Sedimentation Control Programs

Click here to access the list of approved Part 91 Agencies

27. Is the applicant a Part 91 Agency?
Yes

If yes, choose type
Municipal Enforcing Agency

No the applicant relies on the following Qualifying Local Soil Erosion and Sedimentation Control Program (Part 91 Agency)
NONE PROVIDED

Construction Storm Water Runoff Control

Construction Storm Water Runoff Control Program Procedure Attachment
Appendix F_CSWRC.pdf - 03/29/2016 05:54 PM
Appendix L_City Ordinances.pdf - 03/29/2016 05:54 PM
Comment
Appendix F - Construction Site Stormwater Runoff Control SOP Appendix L - City Ordinances

28. Provide the reference to the procedure submitted above 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, including the notification timeframe. 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.
Appendix F - Construction Site Stormwater Runoff Control SOP, Section C. Appendix L – Soil Erosion and Sedimentation Control Ordinance, Section 10. When an issue is discovered the City investigates and enforces the Erosion and Sedimentation Control Ordinance, Permit, and requires clean up.

29. Provide the reference to the procedure submitted above with the requirement to notify the MDEQ when soil, sediment, or other pollutants are discharged to the applicant's MS4 from a construction activity, including the notification timeframe. 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.
Appendix F - Construction Site Stormwater Runoff Control SOP, Section E If pollutants like pesticides, petroleum, or construction chemicals are discharged, the MDEQ PEAS Hotline is contacted.

30. Provide the reference to the procedure submitted above 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.
Appendix F - Construction Site Stormwater Runoff Control SOP, Section B. Appendix L – Soil Erosion and Sedimentation Control Ordinance, Section 7. The City's Site Improvement Plan Review Application requires that a complete SESC Permit Application be submitted at the time of the site plan.

31. Provide the reference to the procedure submitted above 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).
Appendix F - Construction Site Stormwater Runoff Control SOP, Section F All permits (through Part 91, Permit By Rule) are required prior to the start of construction.

Section 9. Post-Construction Storm Water Runoff Program

>>Click here to access the Low Impact Development Manual for Michigan. Chapter 9 of the manual provides a methodology for addressing post-construction storm water runoff.

The MDEQ has the following resources available to assist with development of a Post-Construction Storm Water Runoff Program.
>>Click here to access the Post-Construction Storm Water Runoff Program Compliance Assistance Document

Post-Construction Storm Water Runoff Program Procedures, Ordinances, and Regulatory Mechanisms

Appendix G_Post Construction.pdf - 03/29/2016 05:59 PM
Comment
Appendix G - Post Construction Stormwater Runoff Control SOP

Ordinance or Other Regulatory Mechanism

32. Provide the reference to the in-effect ordinance or regulatory mechanism submitted above 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. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

33. Provide the reference to the ordinance or other regulatory mechanism submitted above that applies 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. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

Federal Facilities
Federal facilities are subject to the Energy Independence and Security Act of 2007. Section 438 of this legislation establishes post-construction storm water runoff requirements for federal development and redevelopment projects.

34. Is the applicant the owner or operator of a federal facility with a storm water discharge
No, skip to Question 36

35. Provide the reference to the regulatory mechanism submitted above with the requirement to implement the post-construction storm water runoff control requirements in Section 438 of the Energy Independence and Security Act. If not available at this time, provide the date the regulatory mechanism will be available.

The United States Environmental Protection Agency (USEPA) has a technical guidance available at the following link.
USEPA Technical Guidance on Implementing the Stormwater Runoff Requirements

Provide the reference to the regulatory mechanism submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
NA

Water Quality Treatment Performance Standard
36. Does the ordinance or other regulatory mechanism include one or more of the following water quality treatment standards?

Treat the first one inch of runoff from the entire project site. Provide the ordinance or regulatory mechanism reference in the attachment above (page and paragraph of attachments): e.g., Attachment A, Pages 1-15
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

Treat the runoff generated from 90 percent of all runoff-producing storms for the project site. Provide the ordinance or regulatory mechanism reference in the attachment above (page and paragraph of attachments): e.g., Attachment A, Pages 1-15
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

If no, provide the date the ordinance or regulatory mechanism will be submitted.
When the OCWRC standards are completed and approved by MDEQ.

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

The MDEQ memo included in the sources below is available at the following link.
March 24, 2006 MDEQ memo providing the 90 percent annual non-exceedance storm statistics

Sources
NONE PROVIDED

Other rainfall data source (page and paragraph of attachments)
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

38. Provide the reference to the ordinance or regulatory mechanism submitted above with the requirement 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 milligrams per liter. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

Channel Protection Performance Standard

39. Provide the reference to the ordinance or regulatory mechanism submitted above with the requirement 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. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

A MDEQ spreadsheet is available to assist with these calculations at the following link.
Calculations for Storm Water Runoff Volume Control Spreadsheet

Provide the reference to the ordinance or regulatory mechanism submitted above.

Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

If pursuing an alternative approach, provide the reference to the ordinance or other regulatory mechanism submitted above describing the alternative to meet the minimum requirements, including an explanation as to how the channel protection standard will prevent or minimize water quality impacts.

Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

40. 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). If applicable, provide the reference to the ordinance or regulatory mechanism submitted above that excludes any waterbodies from the channel protection performance standard. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

Site-Specific Requirements

41. Provide the reference to the procedure submitted above 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.

Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

42. Provide the reference to the ordinance or regulatory mechanism submitted above that requires 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. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

Off-Site Mitigation and Payment in Lieu Programs

43. An applicant may choose to 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 a10-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 proposing to allow for off-site mitigation, provide the reference to the ordinance or regulatory mechanism submitted above with the off-site mitigation requirements. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.

The City of Troy does not currently have an ordinance or regulatory mechanism that meets the optional requirements. The City will not be pursuing this option.

44. An applicant may choose to 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 proposing to allow for payment in lieu, provide the reference to the ordinance or regulatory mechanism submitted above with the payment in lieu requirements. If not available at this time, provide the date the ordinance or regulatory mechanism will be available. If not pursuing the options available in Questions 43 and 44, skip to Question 52.
The City of Troy does not currently have an ordinance or regulatory mechanism that meets the optional requirements. The City will not be pursuing this option.

45. Provide the reference the the ordinance or regulatory mechanism submitted above that establishes criteria for determining the conditions under which off-site mitigation and/or payment in lieu are available and require technical justification as to the infeasibility of on-site management. The determination that performance standards cannot be met on-site shall not be based solely on the difficulty or cost of implementing, but shall be based on multiple criteria related to the physical constraints of the project site, such as: too small of a lot outside of the building footprint to create the necessary infiltrative capacity even with amended soils; soil instability as documented by a thorough geotechnical analysis; a site use that is inconsistent with the capture and reuse of storm water; too much shade or other physical conditions that preclude adequate use of plants. The criteria shall also include consideration of the stream order and location within the watershed/sewershed as it relates to the water quality impacts from the original project site (e.g., the water quality impact from a project site with a discharge to a small-sized stream would be greater than a project site on a large river and an offset downstream of the project site may provide less water quality benefit.) The highest preference for off-site mitigation and in lieu projects shall be given to locations that yield benefits to the same receiving water that received runoff from the original project site. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
NA

46. Provide the reference to the ordinance or regulatory mechanism submitted above that establishes a minimum amount of storm water to be managed on-site as a first tier for off-site mitigation or payment in lieu. A higher offset ratio is required if off-site mitigation or payment in lieu is requested for the amount of storm water identified as the first tier. For example, a minimum of 0.4 inches of storm water runoff shall be managed on-site as a first tier. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
NA

47. Provide the reference to the ordinance or regulatory mechanism submitted above that requires an offset ratio of 1:1.5 for the amount of storm water above the first tier (identified in Question 46) not managed on-site to the amount of storm water required to be mitigated at another site or for which in-lieu payments shall be made. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
NA

48. Provide the reference to the ordinance or regulatory mechanism submitted above requiring that if demonstrated by the developer to the applicant that it is completely infeasible to manage the first tier of storm water identified in Question 47 on-site, the offset ratio for the unmanaged portion is 1:2. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
NA

49. Provide the reference to the ordinance or regulatory mechanism submitted above that requires a schedule for completing off-site mitigation and in-lieu projects. Off-site mitigation and in-lieu projects should be completed within 24 months after the start of the original project site construction. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
NA

50. Provide the reference to the ordinance or regulatory mechanism submitted above that requires that offsets and in-lieu projects be preserved and maintained in perpetuity, such as deed restrictions and long-term operation and maintenance. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
NA

51. Describe the tracking system implemented, or to be implemented, to track off-site mitigation and/or in-lieu projects.
NA

52. If there are 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, provide the reference to the document submitted above describing the exception(s). The applicant shall demonstrate how the exception provides an equivalent or greater level of protection as the performance standards.
None

Site Plan Review

53. Provide the reference to the ordinance or regulatory mechanism submitted above that includes a requirement to submit a site plan for review and approval of post-construction storm water runoff BMPs. If not available at this time, provide the date the ordinance or regulatory mechanism will be available.
Appendix G. The City currently follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

54. Provide the reference to the procedure submitted above for site plan review and approval. If not available at this time, provide the date the procedure will be available.
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

55. Provide the reference to the site plan review and approval procedure submitted above describing the process for determining how the developer meets the performance standards and ensures long-term operation and maintenance of BMPs in the attachment above. If not available at this time, provide the date the procedure will be available.
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

Long-Term Operation and Maintenance of BMPs

56. Provide the reference to the ordinance or regulatory mechanism submitted above that requires the long-term operation and maintenance of all structural and vegetative BMPs installed and implemented to meet the performance standards in perpetuity. If not available at this time, provide the date the procedure will be available.
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

57. Provide the reference to the ordinance or regulatory mechanism submitted above that requires 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. If not available at this time, provide the date the procedure will be available.
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

58. Does the maintenance agreement or other legal mechanism allow the applicant to complete the following? (Check if yes)
Inspect the structural or vegetative BMP
Perform the necessary maintenance or corrective actions neglected by the BMP owner or operator
Track the transfer of operation and maintenance responsibility of the BMP (e.g., deed restrictions)

If any of the boxes above were not checked, provide a response explaining how the maintenance agreement or other legal mechanism allows the applicant to verify and ensure maintenance of the BMP.
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

59. Provide the reference to the procedure submitted above for tracking compliance with a maintenance agreement or other legal mechanism to ensure the performance standards are met in perpetuity in the attachment above.
Appendix G-Post Construction. The City follows its Engineering Standards and Zoning Ordinance for stormwater management. Once the OCWRC completes their Engineering Standards for Storm Water Facilities revisions to meet the new permit requirements, the City will review and consider them for adoption.

Section 10. Pollution Prevention and Good Housekeeping Program

Pollution Prevention and Good Housekeeping Program Procedures

Appendix H_Pollution Prevention and Good Housekeeping.pdf - 03/29/2016 06:10 PM
Appendix M_DPW SWPPP-PIPP.pdf - 03/29/2016 06:10 PM
Appendix N_Police Maintenance Garage SWPPP.pdf - 03/29/2016 06:10 PM
Appendix H_P2GH-Spill Response ver.1.1.Revised.pdf - 07/13/2018 06:26 PM
Appendix H__P2GH-Street Maintenance and Winter Operations ver.1.1. Revised.pdf - 07/13/2018 06:26 PM
DPW Yard.pdf - 07/13/2018 06:27 PM
ELVStormDrainsNeedingExtraAttention.pdf - 07/13/2018 06:27 PM
No Salt Zone Section1.pdf - 07/13/2018 06:28 PM
No_Salt_Zone_Section2.pdf - 07/13/2018 06:28 PM
No_Salt_Zone_Section6.pdf - 07/13/2018 06:28 PM
Appendix H_Troy_P2GH-ver1.1.Revised.pdf - 07/12/2019 11:23 AM

Comment

Appendix H - Pollution Prevention and Good Housekeeping SOPsAppendix M - Department of Public Works Facility SWPPP-PIPPAppendix N - Police Maintenance Garage SWPPP

Municipal Facility and Structural Storm Water Control Inventory

60. Provide the reference to the up-to-date inventory submitted above identifying 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). For example, Attachment A, Page 3, Section B.

Appendix H - P2GH General Procedures SOP, Table 1.

Facilities that may have the high potential to discharge pollutants:

Fleet maintenance facilities
Materials storage and Public Works yards
Salt storage facilities

Check all applicant-owned or operated facilities with a discharge of storm water to surface waters of the state:

Administration buildings and libraries
Cemeteries
Fire Stations
Parks
Police Stations
Public golf courses
Public parking lots

Check all applicant-owned or operated structural storm water controls with a discharge of storm water to surface waters of the state:

Catch basins
Detention basins
Pump Stations
Secondary containment
Vegetated swales
Other structural storm water controls – Provide a description below:

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. The map (or maps) is available at the following location: (e.g., The Department of Public Works office)

The Master Storm Sewer Map is updated regularly and current maps are available at City Hall. As-built plans for utilities and developments are also maintained by the City.

62. Provide the reference to the procedure submitted above 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 in the attachment above. A suggested timeframe for updating/revising the inventory and map(s) is 30 days following adding/removing a facility or structural storm water control.

Appendix H - P2GH General Procedures SOP, Section C.

Facility-Specific Storm Water Management

63. Provide the reference to the procedure submitted above 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

If the applicant does not own a facility that discharges storm water to surface waters of the state in the urbanized area, skip to Question 71.

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
Appendix H - P2GH General Procedures SOP, Section B

If not applicable
NONE PROVIDED

64. Provide the reference to the list of prioritized facilities submitted above 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 choose to demonstrate how a fleet maintenance/storage yard has the low potential to discharge pollutants to surface waters of the state. If demonstrating a low potential, provide the reference to the demonstration submitted above for the fleet maintenance and/or storage yard.
Appendix H - P2GH General Procedures SOP, Section D

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.
Yes, a site-specific SOP is available at each facility with the high potential for pollutant runoff

66. Provide the reference in the SOP, for each facility with the high potential for pollutant runoff, to the following: the list of significant materials stored on-site that could pollute storm water; the description of the handling and storage requirements for each significant material; and the potential to discharge the significant material. (SOP Reference Example: DPW Yard SOP – Section 2)
Appendix M - DPW Facility SWPPP/PIPP, Chapter 4. Appendix N - Police Vehicle Maintenance Garage SWPPP, Chapter 4.

67. Provide the reference in the SOP, for each facility with the high potential for pollutant runoff, identifying the good housekeeping practices implemented at the site. Good housekeeping practices include keeping the facility neat and orderly, properly storing and covering materials, and minimizing pollutant sources to prevent or reduce pollutant runoff. (SOP Reference Example: DPW Yard SOP – Section 2)
Appendix M - DPW Facility SWPPP/PIPP, Chapter 5. Appendix N - Police Vehicle Maintenance Garage SWPPP, Chapter 5.

68. Provide the reference in the SOP, for each facility with the high potential for pollutant runoff, to the description and schedule for conducting routine maintenance and inspections of storm water management and control devices to ensure materials and equipment are clean and orderly and to prevent or reduce pollutant runoff. A biweekly schedule is recommended for routine inspections. (SOP Reference Example: DPW Yard SOP – Section 2)
Appendix M - DPW Facility SWPPP/PIPP, Chapter 5. Appendix N - Police Vehicle Maintenance Garage SWPPP, Chapter 5.

69. Provide the reference in the SOP, for each facility with the high potential for pollutant runoff, to the description and schedule for conducting a comprehensive site inspection at least once every six months. The comprehensive inspection shall include an inspection of all structural storm water controls and a review of non-structural storm water controls to prevent or reduce pollutant runoff. (SOP Reference Example: DPW Yard SOP – Section 2)
Appendix M - DPW Facility SWPPP/PIPP, Chapter 5. Appendix N - Police Vehicle Maintenance Garage SWPPP, Chapter 5.

70. Provide the reference to the procedure submitted above 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.
Appendix H - P2GH General Procedures SOP, Section D

Structural Storm Water Control Operation and Maintenance Activities

71. Provide the reference to the procedure submitted above 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. If the applicant does not own or operate catch basins skip to Question 75.
Appendix H - P2GH General Procedures SOP, Section G

72. Provide the reference to the narrative description or map submitted above with the geographic location of the catch basins in each priority level.
Appendix H - P2GH General Procedures SOP, Section F. Map included.

73. Provide the reference to the procedure submitted above 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. An MDEQ Catch Basin Cleaning Activities guidance document is available at the following link.
Catch Basin Cleaning Activities Guidance Document

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
Appendix H - P2GH General Procedures SOP, Section G

74. Provide the reference to the procedure submitted above for dewatering, storage, and disposal of materials extracted from catch basins. An MDEQ Catch Basin Cleaning Activities guidance document is available at the following link.
Catch Basin Cleaning Activities Guidance Document

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
Appendix H - P2GH General Procedures SOP, Section H

75. If the applicant owns or operates 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, provide the reference to the procedure submitted above for inspecting and maintaining the structural storm water controls. 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.
Appendix H - P2GH General Procedures SOP, Section J

76. Provide the reference to the procedure submitted above 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.
Appendix H - P2GH General Procedures SOP, Section K

Municipal Operations and Maintenance Activities

77. Provide the reference to the procedure(s) submitted above with the assessment of the following operation and maintenance activities, if applicable, 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.

At a minimum, the procedure shall include assessing the following municipal operation and maintenance activities if applicable (check all that apply):
Road, parking lot, and sidewalk maintenance (e.g., pothole, sidewalk, and curb and gutter repair)
Bridge maintenance
Right-of-way maintenance
Unpaved road maintenance
Cold weather operations (e.g., plowing, sanding, application of deicing agents, and snow pile disposal)
Vehicle washing and maintenance of applicant-owned vehicles (e.g., police, fire, school bus, public works)

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
Appendix H - P2GH Street Maintenance and Winter Operations SOP, Section D. Appendix M - DPW Facility SWPPP/PIPP, Chapter 6

78. Provide the reference to the procedure submitted above 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. If the applicant does not own or operate any streets, parking lots, or other impervious infrastructure, skip to Question 82.
Appendix H - P2GH General Procedures SOP, Section I

79. Provide the reference to the narrative description or map submitted above with the geographic location of the streets, parking lots, and other impervious surfaces in each priority level.
Appendix H - P2GH General Procedures SOP, Section I

80. Provide the reference to the procedure submitted above 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.
Appendix H - P2GH General Procedures SOP, Section I

81. Provide the reference to the procedure submitted above for dewatering, storage, and disposal of street sweeper waste material. An MDEQ Catch Basin Cleaning Activities guidance document is available at the following link and includes information on street sweeping requirements.
Catch Basin Cleaning Activities Guidance Document

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
Appendix H - P2GH General Procedures SOP, Section H

Managing Vegetated Properties

82. If the applicant's pesticide applicator does not exclusively use ready-to-use products from the original container, provide the reference to the procedure submitted above 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 certified applicator categories is available at the following link. If the applicant only applies ready-to-use products from the original container, enter "Not Applicable."
Commercial Pesticide Application Certification Categories

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
Appendix H - P2GH General Procedures SOP, Section L. Several City staff employees are applicator certified.

Contractor Requirements and Oversight

83. Provide the reference to the procedure submitted above 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.
Appendix H - P2GH General Procedures SOP, Section N

84. Provide the reference to the employee training program submitted above 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.
Appendix H - P2GH General Procedures SOP, Section M. Appendix M - DPW Facility SWPPP/PIPP, Chapter 5. Appendix N - Police Vehicle Maintenance Garage SWPPP, Chapter 5.

Section 11. Total Maximum Daily Load Implementation Plan

The USEPA has a document to assist with developing a TMDL Implementation Plan available at the following link.
Understanding Impaired Waters and Total Maximum Daily Load (TMDL) Requirements for Municipal Stormwater Programs

Total Maximum Daily Load Implementation Plan
Appendix I - Final Collaborative TMDL 032416.pdf - 03/29/2016 06:33 PM
Troy_RedRun_TMDL.Revised.pdf - 07/12/2019 11:24 AM
Comment
Appendix I – Rouge River Collaborative TMDL Implementation PlanAppendix O – City of Troy Red Run TMDL

Proposing to work collaboratively on any or all activities in the TMDL Implementation Plan during the permit cycle.
Yes

85. If a TMDL(s) was included in the applicant's application notice, provide the name(s) below. If no TMDL was identified, skip to the next section.
Appendix I - Rouge River Collaborative TMDL, Section A Appendix O – City of Troy Red Run TMDL Rouge River Watershed – E. coli Rouge River Watershed – Biota Red Run Drain – E. coli

86. Provide the reference to the procedure submitted above describing the process 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.
Appendix I - Rouge River Collaborative TMDL, Section C. Appendix O - City of Troy Red Run Drain TMDL, Section I

87. Provide the reference to the TMDL BMP Priority List submitted above with 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.
Appendix I - Rouge River Collaborative TMDL, Section D. Appendix O - City of Troy Red Run Drain TMDL, Section I

88. Provide the reference to the TMDL Monitoring Plan submitted above 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.
Appendix I - Rouge River Collaborative TMDL, Section E. Appendix O - City of Troy Red Run Drain TMDL, Section II

Section 12. Phase I only – Industrial Facility Inspection Program

Industrial Facility Inspection Program Procedures
NONE PROVIDED
Comment
NONE PROVIDED

89. Provide the reference to the procedure submitted above describing the process for identifying existing industrial facilities, as defined below, within the applicant's jurisdiction that discharge stormwater to the applicant's MS4.

Industrial facilities include, but are not limited to, the following:

- Industrial facilities that the applicant determines are contributing a substantial pollutant loading to the MS4
- Industrial facilities subject to the Superfund Amendments and Reauthorization Act (SARA)
- Hazardous waste treatment, disposal, storage, and recovery facilities

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
NONE PROVIDED

90. Provide the reference to the inventory of industrial facilities submitted above using the procedure in Question No. 89.
NONE PROVIDED

91. Provide the reference to the procedure submitted above for prioritizing the industrial facilities identified in Question No. 90 for inspection. Each industrial facility shall be evaluated and prioritized based on having a high, medium or low potential to discharge pollutants to the applicant's MS4. The procedure shall include a process for updating and revising the prioritization, including modifying the priority level based on contribution of significant pollutant loading to the MS4, inspection findings, and the potential to discharge pollutants.

The applicant should consider the following factors when prioritizing an industrial facility:
- Pollutant sources stored on site
- Pollutants of concern
- Proximity to impaired surface waters of the state
- The applicant's violation or complaint history with the facility

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
NONE PROVIDED

92. Provide the reference to the list of the prioritized industrial facilities for inspection submitted above.
NONE PROVIDED

93. Provide the reference to the procedure submitted above for inspecting industrial facilities based on the prioritized list in Question No. 92 to evaluate pollutant source controls. The number or percentage of facilities to be inspected (e.g., 20% annually) or the inspection frequency for the different priority levels (e.g., high priority facilities inspected annually) shall be identified with the highest priority facilities receiving more frequent inspections. The procedure shall include a process for inspecting facilities based on complaints concerning pollutants discharged to the applicant's MS4.

At a minimum, inspections shall include an evaluation of BMPs implemented and maintained to control pollutant sources at the industrial facility and for evidence of unauthorized discharges, illicit connections, and potential discharges of pollutants to the applicant's MS4.

The procedure shall include notifying the applicable Water Resources Division District Office if an industrial facility appears to be in violation of the NPDES industrial stormwater program.

Provide the reference to the procedure submitted above (page and paragraph of attachments): e.g., Attachment A, Section b.
NONE PROVIDED

94. Provide the reference to the employee training program submitted above to train employees whose primary job duties are to implement the industrial facility inspection program. The program shall include the training schedule. At a minimum, existing staff shall be trained once during the permit cycle and new hires within the first year of their hire date. The training shall cover facility inspection procedures.
Click here to access the State of Michigan Industrial Stormwater program page

Provide the reference to the program submitted above (page and paragraph of attachments): e.g., Attachment A, Page 3, Section b.
NONE PROVIDED

Section 13. Certify and Submit

Comments (As needed)
NONE PROVIDED

Additional Documents (As needed)

TABLE OF CONTENTS.pdf - 03/29/2016 06:35 PM
Troy_2019_Response_Letter.pdf - 07/12/2019 11:25 AM

Comment

NONE PROVIDED

Status History

	User	Processing Status
7/12/2019 11:09:15 AM	Lynne Seymour	Draft
7/12/2019 11:33:57 AM	Lynne Seymour	Submitted

Revisions

Revision	Revision Date	Revision By
Revision 1	4/1/2016 1:04 PM	Cory Borton
Revision 2	7/13/2018 6:19 PM	Barbara Matthews
Revision 3	7/12/2019 11:09 AM	Lynne Seymour

City of Troy
Municipal Separate Storm Sewer System
Outfalls

Structure No.	Type	Receiving Water
D02790	Outfall	Rouge River, Main 1-2
D02793	Outfall	Rouge River, Main 1-2
D02795	Outfall	Rouge River, Main 1-2
D02796	Outfall	Clinton River, Red Run
D02801	Outfall	Rouge River, Main 1-2
D02802	Outfall	Clinton River, Red Run
D02803	Outfall	Rouge River, Main 1-2
D02804	Outfall	Rouge River, Main 1-2
D02815	Outfall	Clinton River, Red Run
D02818	Outfall	Clinton River, Red Run
D02822	Outfall	Clinton River, Red Run
D02843	Outfall	Rouge River, Main 1-2
D02848	Outfall	Clinton River, Red Run
D02852	Outfall	Clinton River, Red Run
D02857-A	Outfall	Rouge River, Main 1-2
D02857-B	Outfall	Rouge River, Main 1-2
D02857-C	Outfall	Rouge River, Main 1-2
D02872	Outfall	Rouge River, Main 1-2
D02872-A	Outfall	Clinton River, Red Run
D02874	Outfall	Rouge River, Main 1-2
D02877	Outfall	Rouge River, Main 1-2
D02885	Outfall	Clinton River, Red Run
D02890	Outfall	Clinton River, Red Run
D02895	Outfall	Rouge River, Main 1-2
D02925	Outfall	Rouge River, Main 1-2
D02969	Outfall	Clinton River, Red Run
D02970	Outfall	Clinton River, Red Run
D02985	Outfall	Clinton River, Red Run
D02989	Outfall	Clinton River, Red Run
D02997	Outfall	Clinton River, Red Run
D02998	Outfall	Clinton River, Red Run
D03000	Outfall	Rouge River, Main 1-2
D03026	Outfall	Clinton River, Red Run
D03042	Outfall	Rouge River, Main 1-2
D03044	Outfall	Rouge River, Main 1-2
D03046	Outfall	Rouge River, Main 1-2
D03047	Outfall	Rouge River, Main 1-2
D03067	Outfall	Rouge River, Main 1-2
D03069	Outfall	Clinton River, Red Run
D03072	Outfall	Clinton River, Red Run
D03083	Outfall	Clinton River, Red Run
D03084	Outfall	Clinton River, Red Run
D03094	Outfall	Clinton River, Red Run
D03095	Outfall	Clinton River, Red Run

City of Troy
Municipal Separate Storm Sewer System
Outfalls

Structure No.	Type	Receiving Water
D03096	Outfall	Rouge River, Main 1-2
D03098	Outfall	Clinton River, Red Run
D03111	Outfall	Rouge River, Main 1-2
D03121	Outfall	Clinton River, Red Run
D03139	Outfall	Clinton River, Red Run
D03142	Outfall	Clinton River, Red Run
D03150	Outfall	Rouge River, Main 1-2
D03154	Outfall	Clinton River, Red Run
D03204	Outfall	Clinton River, Red Run
D03206	Outfall	Rouge River, Main 1-2
D03213	Outfall	Clinton River, Red Run
D03214	Outfall	Rouge River, Main 1-2
D03214-B	Outfall	Clinton River, Red Run
D03216	Outfall	Rouge River, Main 1-2
D03225	Outfall	Clinton River, Red Run
D03249	Outfall	Rouge River, Main 1-2
D03250	Outfall	Clinton River, Red Run
D03252	Outfall	Rouge River, Main 1-2
D03254	Outfall	Rouge River, Main 1-2
D03282	Outfall	Rouge River, Main 1-2
D03283	Outfall	Rouge River, Main 1-2
D03292	Outfall	Rouge River, Main 1-2
D03293	Outfall	Clinton River, Red Run
D03351	Outfall	Clinton River, Red Run
D03356	Outfall	Clinton River, Red Run
D03397	Outfall	Clinton River, Red Run
D03422	Outfall	Clinton River, Red Run
D03424	Outfall	Rouge River, Main 1-2
D03428	Outfall	Rouge River, Main 1-2
D03430	Outfall	Rouge River, Main 1-2
D03455	Outfall	Clinton River, Red Run
D03456	Outfall	Clinton River, Red Run
D03465	Outfall	Clinton River, Red Run
D03467	Outfall	Rouge River, Main 1-2
D03476	Outfall	Clinton River, Red Run
D03484	Outfall	Clinton River, Red Run
D03494	Outfall	Clinton River, Red Run
D03498	Outfall	Rouge River, Main 1-2
D03506	Outfall	Clinton River, Red Run
D03515	Outfall	Clinton River, Red Run
D03527	Outfall	Clinton River, Red Run
D03537	Outfall	Clinton River, Red Run
D03552	Outfall	Rouge River, Main 1-2
D03556	Outfall	Clinton River, Red Run

City of Troy
Municipal Separate Storm Sewer System
Outfalls

Structure No.	Type	Receiving Water
D03557	Outfall	Rouge River, Main 1-2
D03559	Outfall	Rouge River, Main 1-2
D03565	Outfall	Clinton River, Red Run
D03566	Outfall	Rouge River, Main 1-2
D03567	Outfall	Clinton River, Red Run
D03599	Outfall	Clinton River, Red Run
D03600	Outfall	Clinton River, Red Run
D03612	Outfall	Clinton River, Red Run
D03647	Outfall	Clinton River, Red Run
D03649	Outfall	Clinton River, Red Run
D03679	Outfall	Rouge River, Main 1-2
D03680	Outfall	Clinton River, Red Run
D03704	Outfall	Clinton River, Red Run
D03712	Outfall	Rouge River, Main 1-2
D03713	Outfall	Clinton River, Red Run
D03715	Outfall	Clinton River, Red Run
D03720	Outfall	Clinton River, Red Run
D03723	Outfall	Rouge River, Main 1-2
D03768	Outfall	Clinton River, Red Run
D03782	Outfall	Rouge River, Main 1-2
D03789	Outfall	Rouge River, Main 1-2
D03793	Outfall	Clinton River, Red Run
D03794	Outfall	Rouge River, Main 1-2
D03795	Outfall	Clinton River, Red Run
D03796	Outfall	Clinton River, Red Run
D03830	Outfall	Clinton River, Red Run
D03833	Outfall	Clinton River, Red Run
D03836	Outfall	Clinton River, Red Run
D03846	Outfall	Clinton River, Red Run
D03848	Outfall	Clinton River, Red Run
D03849	Outfall	Rouge River, Main 1-2
D03855	Outfall	Clinton River, Red Run
D03868	Outfall	Clinton River, Red Run
D03889	Outfall	Clinton River, Red Run
D03905	Outfall	Rouge River, Main 1-2
D03912	Outfall	Clinton River, Red Run
D03917	Outfall	Clinton River, Red Run
D03917-D	Outfall	Clinton River, Red Run
D03928	Outfall	Rouge River, Main 1-2
D03952	Outfall	Clinton River, Red Run
D03968	Outfall	Rouge River, Main 1-2
D03978	Outfall	Rouge River, Main 1-2
D03981	Outfall	Rouge River, Main 1-2
D03984	Outfall	Clinton River, Red Run

City of Troy
Municipal Separate Storm Sewer System
Outfalls

Structure No.	Type	Receiving Water
D03985	Outfall	Rouge River, Main 1-2
D03989	Outfall	Clinton River, Red Run
D03995	Outfall	Clinton River, Red Run
D04000	Outfall	Clinton River, Red Run
D04004	Outfall	Clinton River, Red Run
D04019	Outfall	Clinton River, Red Run
D04021	Outfall	Rouge River, Main 1-2
D04022	Outfall	Rouge River, Main 1-2
D04044	Outfall	Clinton River, Red Run
D04125	Outfall	Rouge River, Main 1-2
D04135	Outfall	Clinton River, Red Run
D04156	Outfall	Clinton River, Red Run
D04168	Outfall	Clinton River, Red Run
D04184	Outfall	Rouge River, Main 1-2
D04190	Outfall	Rouge River, Main 1-2
D04192	Outfall	Clinton River, Red Run
D04193	Outfall	Clinton River, Red Run
D04196	Outfall	Clinton River, Red Run
D04199	Outfall	Clinton River, Red Run
D04212	Outfall	Rouge River, Main 1-2
D04213	Outfall	Clinton River, Red Run
D04276	Outfall	Clinton River, Red Run
D04285	Outfall	Rouge River, Main 1-2
D04293	Outfall	Rouge River, Main 1-2
D04302	Outfall	Clinton River, Red Run
D04307	Outfall	Clinton River, Red Run
D04328	Outfall	Clinton River, Red Run
D04331	Outfall	Rouge River, Main 1-2
D04332	Outfall	Rouge River, Main 1-2
D04333	Outfall	Rouge River, Main 1-2
D04334	Outfall	Rouge River, Main 1-2
D04336	Outfall	Rouge River, Main 1-2
D04340	Outfall	Clinton River, Red Run
D04341	Outfall	Clinton River, Red Run
D04342	Outfall	Clinton River, Red Run
D04343	Outfall	Rouge River, Main 1-2
D04344	Outfall	Clinton River, Red Run
D04345	Outfall	Clinton River, Red Run
D04348	Outfall	Clinton River, Red Run
D04349-A	Outfall	Clinton River, Red Run
D04349-B	Outfall	Clinton River, Red Run
D04350	Outfall	Rouge River, Main 1-2
D04351	Outfall	Clinton River, Red Run
D04352	Outfall	Clinton River, Red Run

City of Troy
Municipal Separate Storm Sewer System
Outfalls

Structure No.	Type	Receiving Water
D04353	Outfall	Clinton River, Red Run
D04355	Outfall	Clinton River, Red Run
D04358	Outfall	Rouge River, Main 1-2
D04359	Outfall	Rouge River, Main 1-2
D04360	Outfall	Rouge River, Main 1-2
D04362	Outfall	Rouge River, Main 1-2
D04363	Outfall	Rouge River, Main 1-2
D04366	Outfall	Rouge River, Main 1-2
D04367	Outfall	Rouge River, Main 1-2
D04369	Outfall	Rouge River, Main 1-2
D04370	Outfall	Rouge River, Main 1-2
D04372	Outfall	Rouge River, Main 1-2
D04373	Outfall	Rouge River, Main 1-2
D04375	Outfall	Rouge River, Main 1-2
D04376	Outfall	Rouge River, Main 1-2
D04377	Outfall	Rouge River, Main 1-2
D04381	Outfall	Rouge River, Main 1-2
D04382	Outfall	Rouge River, Main 1-2
D04383	Outfall	Rouge River, Main 1-2
D04384	Outfall	Rouge River, Main 1-2
D04387	Outfall	Clinton River, Red Run
D04388	Outfall	Clinton River, Red Run
D04389	Outfall	Clinton River, Red Run
D04390	Outfall	Clinton River, Red Run
D04392	Outfall	Clinton River, Red Run
D04393	Outfall	Clinton River, Red Run
D04395	Outfall	Clinton River, Red Run
D04396	Outfall	Clinton River, Red Run
D04403	Outfall	Clinton River, Red Run
D04405	Outfall	Clinton River, Red Run
D04406	Outfall	Clinton River, Red Run
D04407	Outfall	Clinton River, Red Run
D04408	Outfall	Rouge River, Main 1-2
D04409	Outfall	Rouge River, Main 1-2
D04410	Outfall	Clinton River, Red Run
D04411	Outfall	Rouge River, Main 1-2
D04415	Outfall	Clinton River, Red Run
D04417	Outfall	Clinton River, Red Run
D04418	Outfall	Rouge River, Main 1-2
D04424	Outfall	Clinton River, Red Run
D04428	Outfall	Clinton River, Red Run
D04428-A	Outfall	Clinton River, Red Run
D04429	Outfall	Clinton River, Red Run
D04433	Outfall	Clinton River, Red Run

City of Troy
Municipal Separate Storm Sewer System
Outfalls

Structure No.	Type	Receiving Water
D04434	Outfall	Clinton River, Red Run
D04439-A	Outfall	Clinton River, Red Run
D04339-B	Outfall	Clinton River, Red Run
D04441	Outfall	Clinton River, Red Run
D04442	Outfall	Rouge River, Main 1-2
D04444	Outfall	Clinton River, Red Run
D04445	Outfall	Clinton River, Red Run
D04446	Outfall	Clinton River, Red Run
D04447	Outfall	Clinton River, Red Run
D04448	Outfall	Clinton River, Red Run
D04452	Outfall	Clinton River, Red Run
D04462	Outfall	Rouge River, Main 1-2
D04465	Outfall	Rouge River, Main 1-2
D04467	Outfall	Clinton River, Red Run
D04469	Outfall	Rouge River, Main 1-2
D04470	Outfall	Rouge River, Main 1-2
D04473	Outfall	Rouge River, Main 1-2
D04478	Outfall	Rouge River, Main 1-2
D04479	Outfall	Clinton River, Red Run
D04483	Outfall	Clinton River, Red Run
D04490	Outfall	Clinton River, Red Run
D04492	Outfall	Clinton River, Red Run
D04500	Outfall	Clinton River, Red Run
D04501	Outfall	Clinton River, Red Run
D04502	Outfall	Clinton River, Red Run
D04503	Outfall	Clinton River, Red Run
D04506	Outfall	Clinton River, Red Run
D04516	Outfall	Clinton River, Red Run
D04524	Outfall	Clinton River, Red Run
D04525	Outfall	Clinton River, Red Run
D04530	Outfall	Clinton River, Red Run
D04535	Outfall	Clinton River, Red Run
D04558	Outfall	Rouge River, Main 1-2
D04560	Outfall	Clinton River, Red Run
D04568	Outfall	Clinton River, Red Run
D04576	Outfall	Clinton River, Red Run
D04577	Outfall	Rouge River, Main 1-2
D04582	Outfall	Clinton River, Red Run
D04588	Outfall	Rouge River, Main 1-2
D04600	Outfall	Clinton River, Red Run
D04603	Outfall	Clinton River, Red Run
D04609	Outfall	Clinton River, Red Run
D04616	Outfall	Clinton River, Red Run
D04619	Outfall	Clinton River, Red Run

City of Troy
Municipal Separate Storm Sewer System
Outfalls

Structure No.	Type	Receiving Water
D04620	Outfall	Clinton River, Red Run
D04621	Outfall	Clinton River, Red Run
D04627	Outfall	Clinton River, Red Run
D04628	Outfall	Clinton River, Red Run
D04629	Outfall	Clinton River, Red Run
D04630	Outfall	Clinton River, Red Run
D04631	Outfall	Clinton River, Red Run
D04632	Outfall	Clinton River, Red Run
D04653	Outfall	Clinton River, Red Run
D04661	Outfall	Clinton River, Red Run
D04669	Outfall	Clinton River, Red Run
D04690	Outfall	Clinton River, Red Run
D04695	Outfall	Clinton River, Red Run
D04698	Outfall	Clinton River, Red Run
D04701	Outfall	Rouge River, Main 1-2
D04704	Outfall	Clinton River, Red Run
D04709	Outfall	Clinton River, Red Run
D04713	Outfall	Rouge River, Main 1-2
D04722	Outfall	Clinton River, Red Run
D04732	Outfall	Clinton River, Red Run
D04734	Outfall	Rouge River, Main 1-2
D04753	Outfall	Rouge River, Main 1-2
D04761	Outfall	Clinton River, Red Run
D36959	Outfall	Rouge River, Main 1-2
D36980	Outfall	Rouge River, Main 1-2
D36992	Outfall	Rouge River, Main 1-2
D37064	Outfall	Clinton River, Red Run
D37144	Outfall	Clinton River, Red Run
D37403	Outfall	Clinton River, Red Run
D37504	Outfall	Clinton River, Red Run
D37531	Outfall	Clinton River, Red Run
D37689	Outfall	Clinton River, Red Run
D37853	Outfall	Rouge River, Main 1-2
D38020	Outfall	Rouge River, Main 1-2
D38059	Outfall	Clinton River, Red Run
D38062	Outfall	Rouge River, Main 1-2
D38444	Outfall	Clinton River, Red Run
D38471	Outfall	Clinton River, Red Run
D39321	Outfall	Clinton River, Red Run
D39322	Outfall	Clinton River, Red Run
D39323	Outfall	Clinton River, Red Run
D39324	Outfall	Clinton River, Red Run
D39373	Outfall	Clinton River, Red Run
D39376	Outfall	Clinton River, Red Run

City of Troy
Municipal Separate Storm Sewer System
Outfalls

Structure No.	Type	Receiving Water
D40601	Outfall	Clinton River, Red Run
D40619	Outfall	Clinton River, Red Run
D40745	Outfall	Rouge River, Main 1-2
D40811	Outfall	Clinton River, Red Run
D40820	Outfall	Clinton River, Red Run
D40851	Outfall	Clinton River, Red Run
D40872	Outfall	Clinton River, Red Run
D41052	Outfall	Clinton River, Red Run
D41053	Outfall	Clinton River, Red Run
D41843	Outfall	Clinton River, Red Run
D43051	Outfall	Rouge River, Main 1-2
D43052	Outfall	Rouge River, Main 1-2
STMH00052	Discharge Point	Clinton River, Red Run
STMH00056	Discharge Point	Clinton River, Red Run
STMH00254	Discharge Point	Clinton River, Red Run
STMH00306	Discharge Point	Clinton River, Red Run
STMH00308	Discharge Point	Clinton River, Red Run
STMH00424	Discharge Point	Clinton River, Red Run
STMH01489	Discharge Point	Clinton River, Red Run
STMH01490	Discharge Point	Clinton River, Red Run
STMH07352	Discharge Point	Clinton River, Red Run
STMH01770	Discharge Point	Clinton River, Red Run
STMH01831	Discharge Point	Clinton River, Red Run
STMH01942	Discharge Point	Clinton River, Red Run
STMH02109	Discharge Point	Clinton River, Red Run
STMH02150	Discharge Point	Clinton River, Red Run
STMH02191	Discharge Point	Clinton River, Red Run
STMH02332	Discharge Point	Clinton River, Red Run
STMH03735	Discharge Point	Clinton River, Red Run
STMH03817	Discharge Point	Clinton River, Red Run
STMH06234	Discharge Point	Clinton River, Red Run
STMH06371	Discharge Point	Clinton River, Red Run
STMH06614	Discharge Point	Clinton River, Red Run
STMH06728	Discharge Point	Clinton River, Red Run
STMH06749	Discharge Point	Clinton River, Red Run
STMH06762	Discharge Point	Clinton River, Red Run
STMH06844	Discharge Point	Clinton River, Red Run
STMH06954	Discharge Point	Clinton River, Red Run
STMH06994	Discharge Point	Clinton River, Red Run
STMH07003	Discharge Point	Clinton River, Red Run
STMH07034	Discharge Point	Clinton River, Red Run
STMH07163	Discharge Point	Clinton River, Red Run
STMH07403	Discharge Point	Clinton River, Red Run
STMH07415	Discharge Point	Clinton River, Red Run

City of Troy
Municipal Separate Storm Sewer System
Outfalls

Structure No.	Type	Receiving Water
STMH07523	Discharge Point	Clinton River, Red Run
STMH07821	Discharge Point	Clinton River, Red Run
STMH07866	Discharge Point	Clinton River, Red Run
STMH07929	Discharge Point	Clinton River, Red Run
STMH37294	Discharge Point	Clinton River, Red Run
STIN03591	Discharge Point	Clinton River, Red Run
STIN05202	Discharge Point	Clinton River, Red Run
STIN07073	Discharge Point	Clinton River, Red Run
STIN18204	Discharge Point	Clinton River, Red Run
STIN09456	Discharge Point	Clinton River, Red Run
STIN10487	Discharge Point	Clinton River, Red Run
STIN10557	Discharge Point	Clinton River, Red Run
STIN11084	Discharge Point	Clinton River, Red Run
STIN14546	Discharge Point	Clinton River, Red Run
STIN15170	Discharge Point	Clinton River, Red Run
STIN15567	Discharge Point	Clinton River, Red Run
STIN16275	Discharge Point	Clinton River, Red Run
STIN17642	Discharge Point	Clinton River, Red Run
STIN17787	Discharge Point	Clinton River, Red Run
STIN18689	Discharge Point	Clinton River, Red Run
STIN18815	Discharge Point	Clinton River, Red Run
STIN37334	Discharge Point	Clinton River, Red Run

STANDARD OPERATING PROCEDURE
ENFORCEMENT RESPONSE

THE CITY OF TROY
500 W. BIG BEAVER ROAD, TROY, MICHIGAN 48084

MARCH 2016

SECTION A – PURPOSE

The Michigan Department Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a procedure for Enforcement Response to address violations of the ordinance(s) or regulatory mechanism(s) identified in the Stormwater Management Plan.

SECTION B – GENERAL PENALTY

Chapter 202 Codified Ordinances of the City of Troy's Code of Ordinances defines the penalties levied by the City for ordinance violations. The section specifically defines penalties for violations of ordinances.

Chapter 1, Section 1.13 – Penalty

Penalty. Unless another penalty is expressly provided by this Code for any particular provision or section, every person convicted of a violation of any provision of this Code or any rule or regulation adopted or issued in pursuance thereof, shall be punished by a fine of not more than five hundred ($500.00) dollars and costs or prosecution or by imprisonment for not more than ninety (90) days, or by both such fine and imprisonment. Each act of violation and every day upon which any such violation shall occur shall constitute a separate offense. The penalty provided by this section, unless another penalty is expressly provided, shall apply to the amendment of any section of this Code whether or not such penalty is re-enacted in the amendatory ordinance.

Chapter 1, Section 1.14 – Severability

Severability. It is the legislative intent of the Council in adopting this Code, that all provisions and sections of this ordinance be liberally construed to protect and preserve the peace, health, safety and welfare of the inhabitants of the City of Troy and should any provision or section of this ordinance be held unconstitutional or invalid, such holding shall not be construed as affecting the validity of any of the remaining provisions or sections, it being the intent that this ordinance shall stand, notwithstanding the invalidity of any provision or section thereof.

The provisions of this section shall apply to the amendment of any section of this Code whether or not the wording of this section is set forth in the amendatory ordinance.

SECTION C – PART 91 MUNICIPAL ENFORCEMENT AGENCY

The City of Troy is an approved Municipal Enforcement Agency under the Part 91 of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as Amended. As an enforcing agency, the City is responsible for implementing and enforcing their Grading and Soil Erosion Control Ordinance.

C.1 Chapter 86, Section 2 – Purpose and Authority

A. *The purpose of this ordinance is to control accelerated soil erosion and sedimentation in all construction practices and other earth change activities within the City, and protect the Waters of the State.*

B. *This ordinance is enacted pursuant to MCL 324.9106. Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act, Act 451 of the Public Acts of 1994, being Sections 324.9101 to 324.9123a of the Michigan Compiled Laws Annotated, and any amendment thereto, and Rules promulgated under Part 91, and any amendments thereto, are hereby incorporated into this ordinance and adopted by reference as part of this ordinance.*

C. *The City of Troy Engineering Design Standards and Details for Soil Erosion and Sedimentation Control as developed by the City Engineer and contained in the City of Troy Development Standards and Standard Detail Sheets are incorporated into this ordinance as the control measures and practices which must be complied with under this ordinance. In addition, the specifications and recommendations regarding soil erosion and sedimentation control measures and practices as provided by the "Guidebook of Best Management Practices for Michigan Watersheds", published by the Water Bureau, Michigan Department of Environmental Quality ("BMP guidebook") or subsequent version may be used for additional information. A complete copy of the BMP guidebook shall be kept available for public inspection at the Engineering Department at City Hall.*

D. *The City of Troy Engineering Department is hereby designated as the municipal enforcing agency responsible for the administration and enforcement of Part 91, the Rules and this ordinance. The Troy City Engineer is authorized to administer and enforce Part 91, the Rules and this ordinance.*

E. *The Troy City Engineer and/or his designees shall be the enforcement agents for this ordinance and are authorized to issue civil infraction tickets, stop work orders or to take any other actions allowed under Part 91, the Rules and this ordinance. The City Engineer and the person(s) designated shall have completed the entire Part 91 soil erosion and sedimentation control training and valid certificate issued by the Michigan Department of Environmental Quality.*

C.2 Chapter 86, Section 4 – Soil Erosion and Sedimentation Control Requirements

A. *It shall be a violation of this ordinance for any person to engage in and/or maintain any earth change activity in such a manner as to allow uncontrolled accelerated soil erosion and sedimentation to be transported off site onto adjacent properties and into the Waters of the State.*

B. *It shall be a violation of this ordinance for any person to engage in and/or maintain any earth change activity, which is not in compliance with Part 91, the Rules and/or the provisions of this ordinance.*

C. *Soil erosion and sedimentation control measures ("SESC") shall be included with plans and specifications for a project, and submitted to the City with site plans and the soil erosion permit application for review. A copy of the approved plans will be kept at the site where it will be available for inspection. SESC plans will contain all*

Rule 1703 information and comply with Part 91 Rule requirements and design standards prepared by the City Engineer.

D. No person shall engage in and/or maintain an earth change activity which will disturb more than 1 acre of land, or which lies within 500 feet of the water's edge of a lake or stream, regardless of the amount of land disturbed, without a valid SESC permit issued under this ordinance.

1. *To assure compliance, all building permit applications will require any construction project to apply for a soil erosion permit. Upon submittal of application, the City Engineer or his/her designee will issue a soil erosion permit, if they meet the requirements found in this subsection.*

C.3 Chapter 86, Section 5 – Permit Applications, Soil Erosion & Sedimentation Control (SESC) Plans; Review Procedures and Requirements

A. After the effective date of this ordinance, no person shall maintain or undertake an earth change on any land within the City that requires a soil erosion permit without a soil erosion permit and approved soil erosion and sedimentation control plan as provided by Part 91, the Rules, and this ordinance.

1. *An application for a soil erosion permit shall be submitted to the City engineer by the owner of the land upon which the earth change is proposed to be made or by the owner's designated agent. The applicant, if not the owner, shall have written authorization from the landowners to sign the soil erosion permit application and secure a soil erosion permit in the landowners' name.*
2. *The application shall be on forms provided by the Engineering Department and accompanied by an application review and inspection fee made payable to the City of Troy in the amount provided in the Development Standards adopted by the resolution of the City Council.*
3. *The application shall also be accompanied by a soil erosion and sedimentation control plan that includes the following required data:*
   a. *A vicinity sketch of the site location and the proximity of any proposed earth change to the surface Waters of the State or to drains or storm water inlets leading directly to the surface Waters of the State.*
   b. *A boundary line survey or legal description of the site.*
   c. *The name, address, and telephone number of the landowner or designated agent, and of the developer, if different form the landowner.*
   d. *A plan of the site at a scale of not more than 100 feet to an inch or as otherwise determined adequate by the City Engineer, showing existing topography or slope description at five-foot intervals.*
   e. *A soil survey map or written description of the soil types of the exposed land area contemplated for the earth change.*
   f. *Details for the proposed each change including:*
      1) *A description of the location of the physical limits of each proposed earth change.*
      2) *A description of the location of all existing and proposed onsite drainage and dewatering facilities.*

3) The timing sequence of each proposed earth change, such as starting and completion dates of the development sequence and time exposure of each area prior to the completion of effective soil erosion and sediment control measures.

4) The location and description for installing and removing all proposed temporary soil erosion and sedimentation control measures and their established cost.

5) A description and the location of all proposed permanent soil erosion and sedimentation control measures and their estimated cost.

6) A statement of the quantity of the excavation and fill involved.

7) A program proposal for the continued maintenance of all permanent soil erosion and sedimentation control measures which remain after the project completion, including the designation of the person or organization responsible for the maintenance. Maintenance responsibilities shall become a part of any sales or exchange agreement for the land on which the permanent soil erosion and sedimentation control measures are located.

4. *The soil erosion and sedimentation plan shall be reviewed by the city Engineer and/or his designee.*
5. *All earth changes shall be designed, constructed, implemented and maintained in accordance with the minimum requirements for earth changes as provided by Part 91, the Rules, and this ordinance, and shall also comply with any structural, vegetative, or managerial practices to effectively prevent or reduce soil erosion and sedimentation as determined necessary by the City Engineer. In determining the adequacy and effectiveness of the design, implementation and maintenance of proposed soil erosion and sedimentation control measures for purposes of this ordinance the City Engineer shall consider:*
   a. *Site-specific factors and information of the type required to be included in the soil erosion and sedimentation control plan for the property; and*
   b. *The specifications and recommendations regarding soil erosion and sedimentation control measures and practices as provided by the "Guidebook of Best Management Practices for Michigan Watersheds", published by the Water Bureau, Michigan Department of Environmental Quality ("BMP guidebook") or subsequent version. A complete copy of the BMP guidebook shall be kept available for public inspection at the Engineering Department at City Hall.*
6. *The City Engineer shall approve, disapprove or require modification of the application for the soil erosion permit and accompanying SESC plan within 30 calendar days following receipt of a complete application. Notification of disapproval shall be made by certified mail. If the application is disapproved, the City Engineer shall advise the applicant of the reasons for disapproval and conditions required for approval. The requirement of notification by certified mail is not necessary if the applicant is personally given written approval or disapproval of the application.*

7. A soil erosion permit shall not be issued where:

a. The proposed work would cause uncontrolled soil erosion and sedimentation; or

b. The proposed work would cause hazards to the public safety and welfare; or

c. The work, as proposed by the applicant, will damage any public or private property or interfere with any existing drainage course in such a manner as to cause damage to any adjacent property or result in the deposition of debris or sediment on any public way or into any Waters of the State or create an unreasonable hazard to persons or property; or

d. The land area for which work is subject to geological hazard to the extent that no reasonable amount of corrective work can eliminate or sufficiently reduce settlement, slope instability or any other such hazard to persons or property; or the land area for which the work is proposed lies within the one hundred (100) year floodplain of any stream, unless a permit from the Michigan Department of Environmental Quality accompanies the application and a hydrologic report prepared by a licensed an professional engineer is submitted to certify that the proposed work will have, in the City Engineer's opinion, no detrimental influence on the public welfare or upon the total development of the watershed.

8. No soil erosion permit shall be issued until the applicant has paid applicable permit and inspection fees to the City Treasurer in accordance with the fee schedule adopted by resolution of the City Council. The City Engineer shall calculate the fee after reviewing the application and plan.

9. Upon a determination by the City Engineer that an applicant has met all applicable requirements under this ordinance and other applicable laws and regulations, and that the applicant has paid all applicable fees, the City Engineer shall issue a permit for the proposed earth change. The permit shall be kept available on the site of the proposed earth change at all times for inspection by the City.

10. If the earth change for which a permit has been issued has not been commenced within one year from the date of issuance of the permit, the permit shall lapse, provided that the City Engineer may extend the time for commencement of the earth change if the permitee requires an extension prior to the expiration of the initial period and no material change of circumstances has occurred.

11. A soil erosion permit issued under this ordinance shall not relieve the permitee from complying with any other applicable statutes, ordinances, rules or regulations.

12. The failure to comply with any term or condition of an approved permit or to timely complete all work as set forth in an approved plan constitutes a violation of this ordinance.

13. An "authorized public agency" as defined by Part 91 is exempt from obtaining a soil erosion permit but shall notify the City Engineering Department in advance of such proposed earth change.

14. An earth change activity that does not require a permit under this ordinance is not exempt from enforcement procedures under this ordinance, Part 91 & the

Rules, if the activity exempted by Part 91, the Rules and/or this ordinance causes or results in a violation of Part 91, the Rules and/or this ordinance.

C.4 Chapter 86, Section 6 – Inspections

A. *The City Engineer or his designee shall inspect all work covered by a soil erosion permit issued pursuant to this ordinance and is hereby authorized to enter property in the City covered by a permit for the purpose of performing any duties under this ordinance. Inspection fees shall be paid as provided according to the fee schedule.*
B. *The City Engineer or his designee may enter at all reasonable times in or upon any private or public property for the purpose of inspection and investigating conditions or practices that may be a violation of Part 91, the Rules, or this ordinance.*

C.5 Chapter 86, Section 11 – Enforcement Authority

Upon a finding that there has been a violation of a provision, requirement or condition of this ordinance or of any permit or plan issued or approved under this ordinance, the City may take any enforcement action authorized by Part 91, the Rules, this ordinance, or by other applicable laws, regulations and ordinances. In addition to other remedies provided in this ordinance, the City Engineer's enforcement authority and/or his designees also includes, without limitation, the ability to issue cease and desist orders and to revoke soil erosion permits. Failure to comply with a cease and desist order or revocation of a soil erosion permit shall constitute a violation of this ordinance.

C.6 Chapter 23, Draft Municipal Separate Storm Sewer System

Illicit discharges and connections are to be corrected within 30 days of notice of violation (as practicable) as will be identified in city's IDEP draft ordinance.

C.8 Post-Construction Ordinance

The City intends to adopt the Oakland County Water Resources Commissioner (OCWRC) Engineering Standards for Storm Water Facilities (storm water management and water quality) once they have been revised and approved by EGLE. The OCWRC standards would take effect at the time the MS4 Permit goes into effect.

SECTION D – ENFORCEMENT TRACKING

City will track all violations and issued permits. The following information will be collected and used for tracking records for each violation that is imposed by the City.

1. Name
2. Date
3. Location of the Violation (address, cross streets, etc.)
4. Business, Agency, Organization as applicable
5. Description of the Violation
6. Applicable Correspondence
7. Follow-up Actions

8. Key Dates
9. Descriptions of the City's Enforcement Response
10. Schedules for Achieving Compliance
11. Date the Violation was Resolved

In addition to the enforcement mechanisms that will be noted in the IDEP ordinance, additional tracking of instances of noncompliance occurs and includes information identified in the Spill Notification/Complaint/Outfall Investigation Reporting Form, attachments included.

SECTION E – PROCESS FOR REVISION

Any questions on this policy and procedure should be directed to the City Engineering Department or the City Manager. This procedure shall be reviewed once per permit cycle by the Stormwater Manager for any updates to streamline the requirements.

ROUGE RIVER COLLABORATIVE PUBLIC PARTICIPATION/INVOLVEMENT PROGRAM (PPP)

Prepared by:

Alliance of Rouge Communities
OURS TO PROTECT
Working together, restoring the river

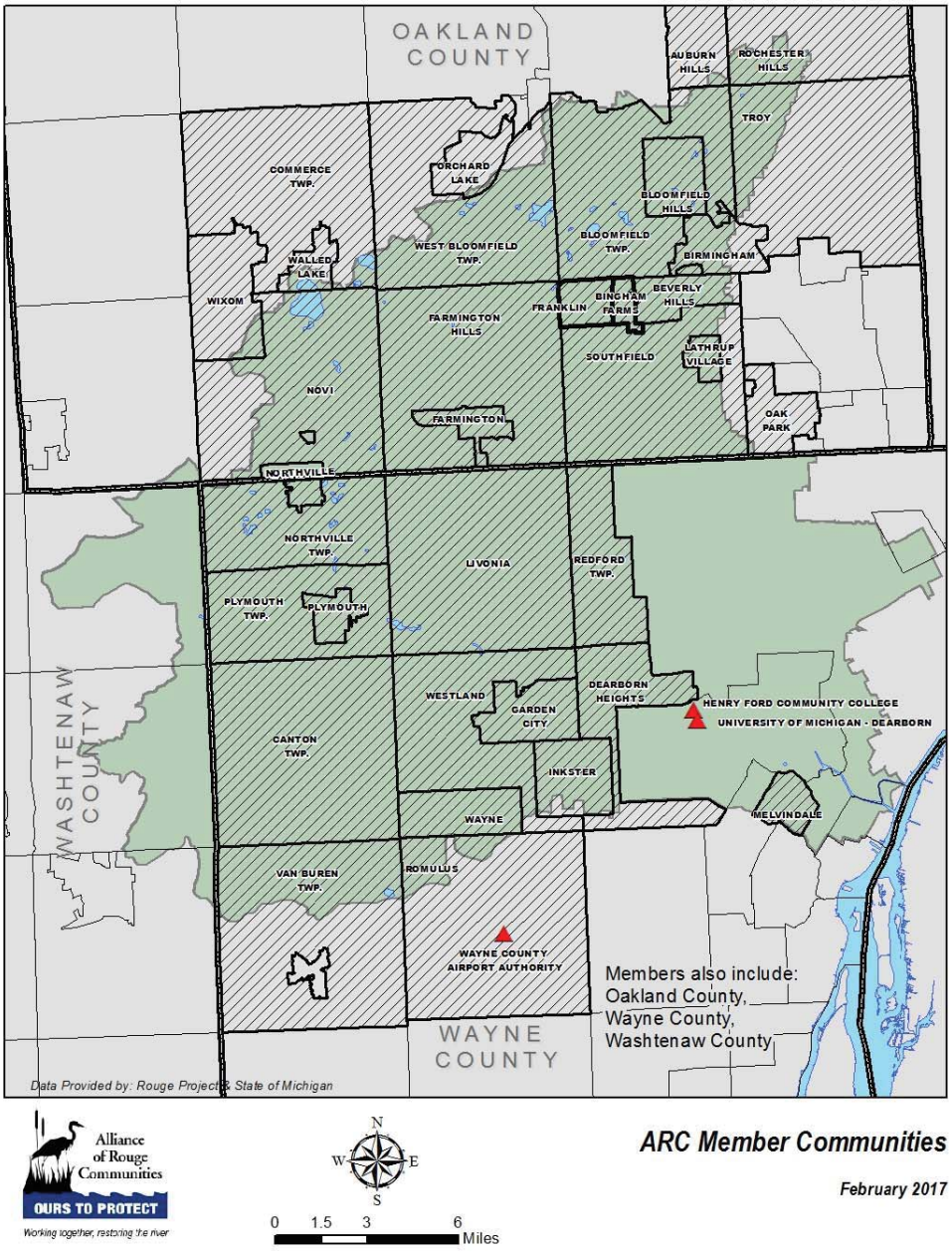
46036 Michigan Ave., Suite 126
Canton, Michigan 48188
www.allianceofrougecommunities.com

Approved by MDEQ on March 28, 2017

INTRODUCTION

The Alliance of Rouge Communities (ARC), a 501(c)(3) organization, is a voluntary public watershed entity currently comprised of municipal governments, counties, schools, and cooperating partners (see Figure 1) as authorized by Part 312 (Watershed Alliances) of the Michigan Natural Resources and Environmental Protection Act (MCL 324.101 to 324.90106) as amended by Act No. 517, Public Acts of 2004. The purpose of the ARC is to provide an institutional mechanism to encourage watershed-wide cooperation and mutual support to meet water quality permit requirements and to restore beneficial uses of the Rouge River to the area residents.

Figure 1: ARC Members



The two primary goals of the Rouge River Watershed Management Plan (RRWMP) are Protect Public Health and Reduce Stormwater Runoff Impacts. Bacteria is one of the priority pollutants identified in the RRWMP. The ARC's collaborative program presents a watershed-wide plan that is being implemented to effectively and efficiently address *E. coli* levels in the Rouge River watershed caused by stormwater runoff. This plan consists of existing and planned activities and strategies that members of the Alliance of Rouge Communities (ARC) are individually and collectively implementing.

This plan was developed by the ARC through its Public Involvement and Education Committee (PIE) in coordination with the ARC Technical Committee in response to the findings and recommendations of the RRWMP as well as the Michigan Department of Environmental Quality's (MDEQ) Total Maximum Daily Load (TMDL) assessment for *E. coli* in the Rouge River Watershed. This plan is intended to meet the Public Participation/Involvement Program (PPP) element required by ARC members' NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s). Those entities that are submitting a separate NPDES permit application, in lieu of this collaborative document, will continue to promote and participate in the activities identified in this plan as a member of the ARC.

This plan will be implemented collaboratively by the ARC participating communities and partners through September 30, 2022, which is the end of the permit cycle for the Rouge River watershed. The list of permittees participating in this Plan include:

Beverly Hills, Village of
Bingham Farms, Village of
Birmingham
Bloomfield Hills
Bloomfield Twp.
Canton Twp.
Dearborn Heights
Farmington
Farmington Hills
Franklin, Village of
Garden City
Inkster
Lathrup Village
Livonia
Melvindale
Northville
Northville Twp.
Novi
Oak Park
Plymouth
Plymouth Twp.
Redford Twp.
Southfield
Troy
Walled Lake
Wayne
Westland
West Bloomfield Twp.
Oakland County*
Washtenaw County*
Wayne County
Henry Ford College
**Participating but this plan is not part of their pending permit application.*

The Rouge River Watershed communities have long realized that the public must be engaged in order to have successful restoration activities in the Rouge River watershed. Public involvement and education has been the foundation of Rouge River restoration activities since the inception of the Rouge River National Wet Weather Demonstration Project in 1992 and continues today through the ARC and its members.

SECTION A – PURPOSE

This plan is to establish procedures for the ARC's Public Participation/Involvement Program (PPP) as required in the Application. The procedure includes a description of the opportunities for the public to participate, comment, and become involved with the implementation of the Stormwater Management Plan.

SECTION B – PROCEDURE FOR PUBLIC INSPECTION AND COMMENT

As required, the approved Stormwater Management Program (SWMP) will be made available to the public via the ARC website and links on each community's websites throughout the permit cycle. Friends of the Rouge (FOTR) will inform its membership of the link to review the SWMP. The public will also be informed through the ARC's and community's social media that the plan is available for inspection and comment. The ARC will be identified as the point of contact to receive public comments. The ARC will survey its members regarding any local public notice requirements and will meet them as appropriate.

SECTION C – MEASURABLES

The ARC staff will compile and track comments from the public by documenting the commenter's name, date, and synopsis of the comment. ARC staff will document SWMP posting dates on both the ARC and community's websites along with recording links to the SWMP documents and collaborative plans. ARC staff will document dates that the public was invited to participate in implementation and review of the SWMP.

SECTION D – PROCEDURE FOR PUBLIC PARTICIPATION IN IMPLEMENTATION AND REVIEW

Links to the SWMP and the collaborative plans will be available on both the community's website and the ARC's website and will be available for public comment throughout the permit cycle. Specifically, the ARC and its members will invite the public to participate in the implementation and periodic review of the SWMP at least 2 times during the permit cycle. This will be advertised on the ARC website and links on the community's websites. The ARC will also use social media to promote the public's involvement and will periodically request FOTR to invite its members to participate in the implementation and periodic review of the SWMP during the permit cycle.

ROUGE RIVER COLLABORATIVE PUBLIC EDUCATION PROGRAM (PEP)

Prepared by:

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TABLE OF CONTENTS

List of Figures

List of Tables

List of Appendices

INTRODUCTION

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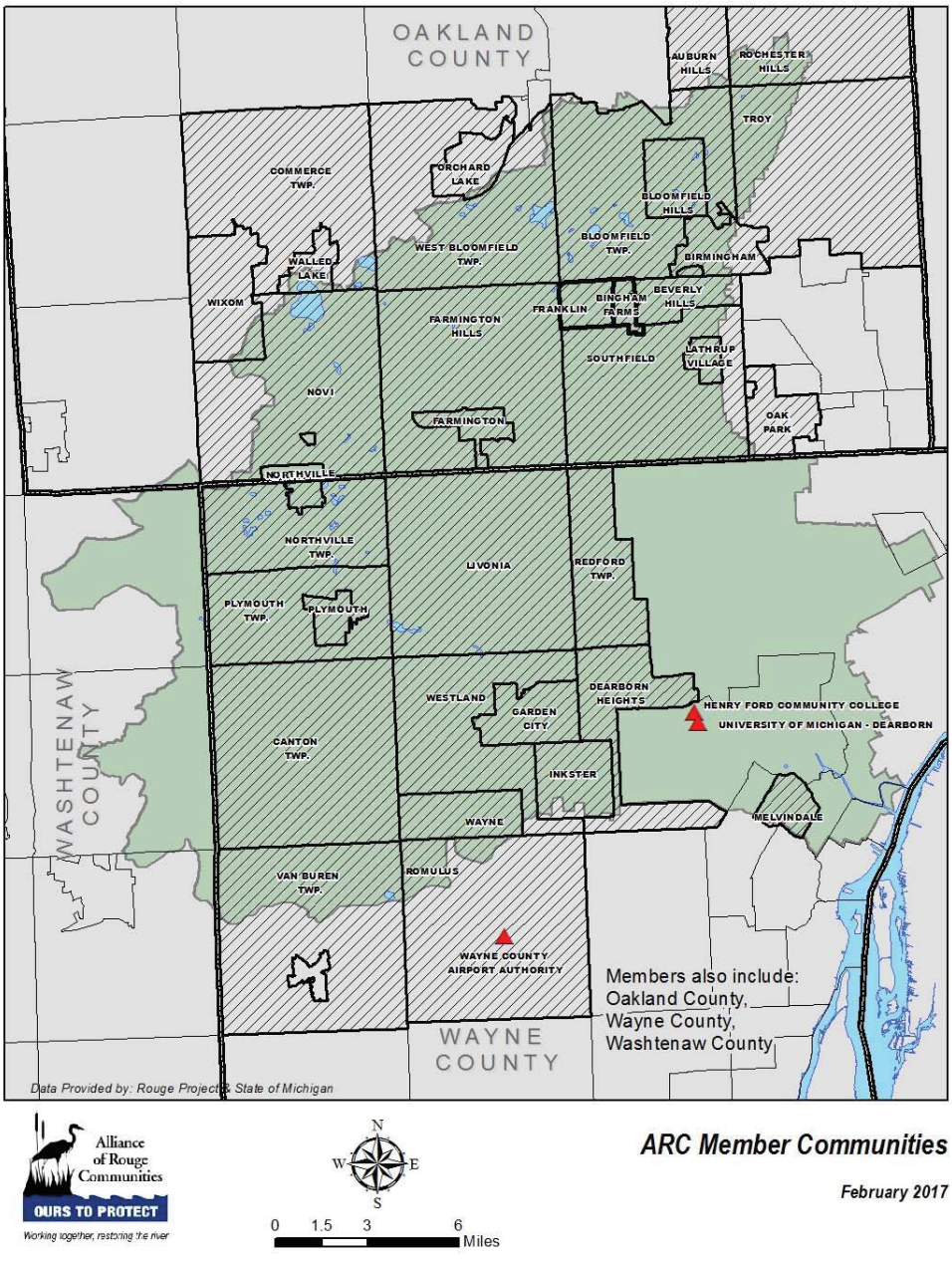

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This plan was developed by the ARC through its Public Involvement and Education Committee (PIE) in coordination with the ARC Technical Committee in response to the findings and recommendations of the RRWMP as well as the Michigan Department of Environmental Quality's (MDEQ) Total Maximum Daily Load (TMDL) assessment for *E. coli* in the Rouge River Watershed. This plan is intended to meet the Public Education Program (PEP) element required by ARC members' NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s). Those entities that are submitting a separate NPDES permit application, in lieu of this collaborative document, will continue to promote and participate in the activities identified in this plan as a member of the ARC.

ARC members and ARC staff continue to participate and collaborate with partners throughout the region, state and nation in an effort to coordinate stormwater permit related public education and other stormwater related initiatives when possible.

This plan will be implemented collaboratively by the ARC participating communities and partners through September 30, 2022 which is the end of the permit cycle for the Rouge River watershed. The list of permittees participating in this Plan can be found in Attachment A.

SECTION A – PROCEDURE FOR HIGH-PRIORITY, COMMUNITY-WIDE AND TARGETED ISSUES

The Rouge River Watershed communities have regularly conducted public opinion surveys to gauge the public's knowledge of watershed-related issues and concerns. Surveys were conducted in 1992 and 1999 by the Rouge River National Wet Weather Demonstration Project and in 2004 by SEMCOG. In 2008, the ARC conducted a survey to assess the public's opinion about the goals for the RRWMP. The survey asked the public:

- To rank the goals in order of importance
- To rank issues, such as flooding, streambank erosion and water quality in order of importance, and
- To discuss any concerns about the river

Using these past surveys, this plan outlines the priority, community-wide and targeted issues that are of most significance to the ARC communities. By focusing on those elements, the ARC will have the greatest impact on public education of watershed issues and will in turn have the greatest behavioral changes to reduce their effects in the Rouge River watershed.

In addition to public awareness, the PEP topics were prioritized based on known targeted issues within the watershed. Table 1 shows the applicable PEP Topics and their priority ranking for the ARC. Table 2 beginning on page 17 summarizes the PEP BMPs.

Table 1: PEP Topics and Priority

PEP TOPICS FROM SW DISCHARGE PERMIT APPLICATION	PRIORITY RANKING
A. Promote public responsibility and stewardship in the Rouge River watershed	High
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	High
C. Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4	High
D. Promote preferred cleaning materials and procedures for car, pavement, and power washing	Medium
E. Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers	High
F. Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter into the MS4	High
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	High
H. Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure	High
I. Educate the public on, and promote the benefits of, green infrastructure and Low Impact Development	High
J. Identify and educate commercial, industrial, educational and institutional entities likely to contribute pollutants to stormwater runoff	Medium

SECTION B – ACTION STRATEGY

The ARC's overall action strategy is to protect and maintain what is healthy, identify and restore what is degraded, and keep working together to continuously improve environmental conditions. The ARC will look to use cost-effective outreach methods and maintain the efficiency of activities by using currently available resources when possible and collaborating with other potential partners.

These activities are consistent with and help realize the goals of the RRWMP and address the *E. coli* and biota TMDLs within the Rouge River watershed.

SECTION C – COLLABORATIVE PEP BMP ACTIVITIES

Each PEP topic from the Stormwater Discharge Permit Application is addressed with various BMP activities and will be implemented collaboratively and parallel to the Collaborative IDEP. These action items are described below and include the target audience, key message, delivery mechanism, year and

frequency implemented, and responsible party (or parties), measurable goal and measures of assessment.

BMP Identifier: **1**

BMP Descriptor: **Distribute pollution prevention literature on various topics through brochures, educational materials, and other media**

Addresses PEP Topic:
A, B, C, D, E, F, G, H, I, J

Target Audience:
Public

Key Message:
The key message is to educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have and the importance of pollution prevention and watershed restoration and stewardship. It may also educate the public on reporting illicit discharges and improper disposal of materials into the Rouge River Watershed, promoting proper disposal practices, identify and promote facilities for collection or disposal of household hazardous wastes (including travel trailer sanitary wastes, chemicals and motor vehicle fluids). Items may also include information on septic system maintenance and how to recognize system failure and may promote preferred cleaning materials and procedures for car, pavement, and power washing. In addition materials may inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers and the proper disposal practices for grass clippings, leaf litter and animal waste that may enter the Rouge River. Materials may also include the benefits of green infrastructure and Low Impact Development and methods for managing riparian lands to protect water quality. It may also include educating commercial, industrial, educational, and institutional entities likely to contribute pollutants to stormwater runoff.

Delivery Mechanism:
ARC members will be provided copies of materials to be displayed at their facilities or used at community events or will be provided electronic material to use on their community website. With ARC oversight, Wayne County and ARC staff will facilitate the selection, procurement and distribution of various watershed restoration and pollution prevention public education materials to support ARC member public education permit compliance. Other or additional copies of some handout materials are available at cost through the Wayne County Publication Clearinghouse. Materials will also be available to view on the ARC's website. The ARC will also promote its message using electronic media outlets which could include cable TV, social media and billboards.

Year/Frequency BMP Implemented:
Current brochures and materials will be provided to ARC members throughout the permit cycle.

Responsible Party:

- ARC Staff will design/distribute materials and make available on the ARC website and develop ARC facebook posts
- Wayne County will assist with material content when appropriate
- Oakland County will assist with material content when appropriate
- Washtenaw County will assist with material content when appropriate
- ARC members listed in Attachment A will assist with material content when appropriate, distribute materials, link to the ARC's website and promote ARC facebook posts

Measurable Goal:

ARC staff, with input from Wayne, Oakland, and Washtenaw County and ARC members, will create at least two (2) new brochures/materials during the permit cycle. The topic of one of the new brochures/material will educate commercial, industrial, educational and institutional entities likely to contribute pollutants to stormwater runoff. ARC staff will develop at least 24 posts annually during the permit cycle on the ARC Facebook page. ARC Communities will make existing and new brochures and materials available for public events and at facilities such as city/township halls, libraries, etc., and provide a link to the ARC's website on their website.

Measures of Assessment:

- Number of materials distributed, topic, location of distribution and event name annually by the ARC and member communities.
- Number of posts/views on the ARC's website and Facebook.
- Viewer numbers will be requested from electronic media companies when used.

BMP Identifier: 2

BMP Descriptor: Coordinate and distribute community articles and ad graphics on pollution prevention and watershed restoration and stewardship

Addresses PEP Topic:

A, B, C, D, E, F, G, H, I, J

Target Audience:

Public and businesses

Key Message:

Articles and ad graphics may include the following topics: The connection of the MS4 to area waterbodies and the potential impacts discharges could have. The importance of pollution prevention and watershed restoration and stewardship. Reporting illicit discharges and improper disposal of materials into the Rouge River Watershed, promoting proper disposal practices, identify and promote facilities for collection or disposal of household hazardous wastes (including travel trailer sanitary

wastes, chemicals and motor vehicle fluids). Septic system maintenance and how to recognize system failure and preferred cleaning materials and procedures for car, pavement, and power washing. Proper application and disposal of pesticides, herbicides, and fertilizers and the proper disposal practices for grass clippings, leaf litter and animal waste that may enter the Rouge River. Benefits of green infrastructure and Low Impact Development and methods for managing riparian lands to protect water quality. It may also include educating commercial, industrial, educational, and institutional entities likely to contribute pollutants to stormwater runoff.

Delivery Mechanism:
With ARC oversight, ARC staff will facilitate the selection (based on an annual theme) and distribution of various articles and/or ad graphics that support watershed restoration and pollution prevention public education themes. Other existing articles or ad graphics will be made available upon request by ARC members. Articles and ad graphics will also be posted on the ARC's website and through social media. ARC members will repost articles and ad graphics to their own social media outlets.

Year/Frequency BMP Implemented:
Five articles will be written during the permit cycle to be promoted on the ARC's website, member websites, social media outlets, and at facilities. Five ad graphics will be created during the permit cycle to be promoted through the ARC's website, member websites, social media outlets, and other means.

Responsible Party:

- ARC Staff will coordinate existing material and develop new materials
- Wayne County will assist with material content and coordination when appropriate
- Okland County will assist with material content and coordination when appropriate
- Washtenaw County will assist with material content and coordination when appropriate
- ARC members listed in Attachment A will assist with material content when appropriate, distribute materials, link to the ARC's website, and promote ARC facebook posts

Measurable Goal:
ARC Staff, Wayne, Oakland, and Washtenaw County and ARC member communities will coordinate and distribute existing articles and ad graphics and will develop one (1) new article (total of five (5) during the permit cycle) and one (1) new ad graphic (total of five (5) during the permit cycle) per year that will be distributed by the ARC Staff and ARC member communities through avenues such as newsletters and/or other publications, websites, and social media. The ARC website and facebook page shall show an increase in views annually.

Measures of Assessment:

- List of articles/ad graphics with title, topic and date distributed by ARC members listed in Attachement A
- List of articles/ad graphics promoted on the ARC's website and Facebook page
- Number of views on the ARC's website and Facebook page

BMP Identifier: **3**

BMP Descriptor: **Provide static displays and posters on pollution prevention and watershed restoration and stewardship**

Addresses PEP Topics:
A, B, C, D, E, F, G, H, I

Target Audience:
Public

Key Message:
Displays and posters may include the following topics: The connection of the MS4 to area waterbodies and the potential impacts discharges could have. The importance of pollution prevention and watershed restoration and stewardship. Reporting illicit discharges and improper disposal of materials into the Rouge River Watershed, promoting proper disposal practices, identify and promote facilities for collection or disposal of household hazardous wastes (including travel trailer sanitary wastes, chemicals and motor vehicle fluids). Septic system maintenance and how to recognize system failure and preferred cleaning materials and procedures for car, pavement, and power washing. Proper application and disposal of pesticides, herbicides, and fertilizers and the proper disposal practices for grass clippings, leaf litter and animal waste that may enter the Rouge River. Benefits of green infrastructure, Low Impact Development, and methods for managing riparian lands to protect water quality.

Delivery Mechanism:
Wayne County has various pollution prevention and/or watershed awareness displays available for loan to ARC members. The ARC plans to update existing and/or create new static displays during the permit cycle. The ARC may create new static displays using SEMCOGs "What You Can Do . . ." series or other topic that will be made available for loan to ARC member communities to use at their facilities or community events in each of the subwatersheds. ARC staff may also be requested to staff displays at community events. The ARC Staff may create new displays if a particular topic is deemed necessary. The ARC is also creating seasonal posters covering a variety of the PEP Topics which will be provided to ARC members for display in their facilities.

Year/Frequency BMP Implemented:
Four (4) seasonal posters will be distributed beginning in 2016 to be displayed at ARC member facilities. Static displays will be created upon permit approval. ARC Staff will promote the use of displays at community events and facilities throughout each subwatershed during the permit cycle.

Responsible Party:

- ARC Staff will create posters and update/create static displays

- Wayne County will assist with material content and coordination when appropriate
- Oakland County will assist with material content and coordination when appropriate
- Washtenaw County will assist with material content and coordination when appropriate
- ARC members listed in Attachment A will assist with material content when appropriate and display posters at facilities and promote static displays at watershed events.

Measurable Goal:
ARC staff will make available four (4) distinct seasonal posters (winter, spring, summer and fall) which will be distributed to ARC member communites to post and rotate during each season. ARC member will post and rotate these posters a minimum of three (3) out of the five (5) years during the permit cycle at higly visible locations such as city/township buildings, libraries, etc. ARC staff will review and update as necessary at least three (3) static displays to be displayed at a minimum of 3-4 ARC member community events per year during the permit cycle. The static displays will be rotated at a minimum of two (2) events in each of the seven (7) subwatersheds during the permit cycle.

Measures of Assessment:
- Name of display, date, location and title of events that static displays were used at annually
- Number of posters distributed, location displayed annually by ARC member communities
- Number of static displays created annually during the permit cycle

BMP Identifier: **4**

BMP Descriptor: **Promote environmental hotlines to educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4**

Addresses PEP Topic:
A, B, C, E, G, J

Target Audience:
Public, municipal employees and businesses

Key Message:
The message will educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have and the importance of pollution prevention and watershed restoration and stewardship. Promote awareness of environmental contaminants and encourage the reporting of observed and/or suspected pollutant sources. It will also include informing the public of collection/disposal sites of household hazardous waste, travel trailer sanitary wastes, chemicals and motor vehicle fluids along with proper disposal practices for grass clippings, leaf litter, and animal wastes.

Delivery Mechanism:
The environmental hotline numbers and collection/disposal information will be advertised by ARC members through available outlets such as the ARC website, county and local community websites, social media, through hotline brochure distribution, as well as being displayed on other topical brochures, distributed at display events and training sessions, electronic media, and other outlets.

Year/Frequency BMP Implemented:
Continuously promoted and distributed annually.

Responsible Party:

- ARC Staff will provide materials promoting hotline and promote hotline on ARC website and facebook page
- Wayne County will distribute materials promoting hotline and link to the ARC's website
- Oakland County will distribute materials promoting hotline and link to the ARC's website
- ARC members listed in Attachment A will distribute materials promoting hotline, link to the ARC's website and promote ARC facebook posts

Measurable Goal:
ARC Staff, Wayne, Oakland, and Washtenaw County, and ARC member communities will distribute materials annually with hotline numbers referenced and promote hotlines on the ARC and ARC member community websites and social media.

Measures of Assessment:

- Number of materials distributed annually with hotline number referenced.
- Number of views on ARC website and Facebook.

BMP Identifier: 5

BMP Descriptor: Distribution of "homeowner" materials to promote the importance of pollution prevention and watershed restoration and stewardship

Addresses PEP Topics:
A, B, C, D, E, F, G, H, I

Target Audience:
Public

Key Message:
The ARC will distribute an educational brochure for homeowners which will include topics regarding the connection of the MS4 to area waterbodies and the potential impacts discharges could have. The importance of pollution prevention and watershed restoration and stewardship. Reporting illicit

discharges and improper disposal of materials into the Rouge River Watershed, promoting proper disposal practices, identify and promote facilities for collection or disposal of household hazardous wastes (including travel trailer sanitary wastes, chemicals and motor vehicle fluids). Septic system maintenance and how to recognize system failure and preferred cleaning materials and procedures for car, pavement, and power washing. Proper application and disposal of pesticides, herbicides, and fertilizers and the proper disposal practices for grass clippings, leaf litter and animal waste that may enter the Rouge River. Benefits of green infrastructure and Low Impact Development and methods for managing riparian lands to protect water quality.

Delivery Mechanism:
The educational materials will be available to ARC members and the public through the ARC website and the ARC's Facebook. A homeowner educational brochure will be distributed and made available to ARC members to use as part of their welcome to the community new resident packets.

Year/Frequency BMP Implemented:
Homeowner brochure will be distributed annually during the permit cycle.

Responsible Party:

- ARC Staff will develop and distribute materials to ARC member communities
- Wayne County will assist with material content and coordination when appropriate
- Oakland County will assist with material content and coordination when appropriate
- Washtenaw County will assist with material content and coordination when appropriate
- ARC members listed in Attachment A will assist with material content when appropriate, distribute materials, link to the ARC's website, and promote ARC Facebook posts

Measurable Goal:
ARC Staff, Wayne and Oakland County, and ARC member communities with develop homeowner materials, including a homeowners brochure within 1 year of permit approval to be included in ARC member community new resident welcome packets.

Measures of Assessment:

- Completion of brochure
- Number of materials distributed annually to ARC member communities
- Number of materials distributed to new home owners by ARC member communities
- Number of views on ARC website and Facebook

BMP Identifier: **6**

BMP Descriptor: **Develop and promote educational workshops and presentations**

Addresses PEP Topic:
A, B, C, D, E, F, G, H, I, J

Target Audience:
Public and businesses
Key Message:
The key message of the workshops and presentations could include the connection of the MS4 to area waterbodies and the potential impacts discharges could have. The importance of pollution prevention and watershed restoration and stewardship. Reporting illicit discharges and improper disposal of materials into the Rouge River Watershed, promoting proper disposal practices, identify and promote facilities for collection or disposal of household hazardous wastes (including travel trailer sanitary wastes, chemicals and motor vehicle fluids). Septic system maintenance and how to recognize system failure and preferred cleaning materials and procedures for car, pavement, and power washing. Proper application and disposal of pesticides, herbicides, and fertilizers and the proper disposal practices for grass clippings, leaf litter and animal waste that may enter the Rouge River. Benefits of green infrastructure and Low Impact Development and methods for managing riparian lands to protect water quality. It may also include educating commercial, industrial, and educational institutional entities likely to contribute pollutants to stormwater runoff.

Delivery Mechanism:
With ARC oversight, Friends of the Rouge (FOTR) and ARC staff will determine the topics, coordinate content, and present 6 workshops during the permit cycle. Workshop topics will vary based on annual education themes and/or needs as determined by the ARC . Workshops and presentations to business associations, chamber of commerce, business organizations, and focus groups could also be included. ARC members may host and participate in these workshops and presentations.

Year/Frequency BMP Implemented:
Six (6) workshops and presentations will be hosted during the permit cycle by ARC members.

Responsible Party:

- ARC staff will plan, coordinate and staff workshops and presentations when appropriate. Promote events on the ARC website and Facebook page
- Wayne County will assist in planning and coordinating and promote workshops and presentations when appropriate
- Oakland County will assist in planning and coordinating and promote workshops and presentations when appropriate

- Washtenaw County will assist in planning and coordinating and promote workshops and presentations when appropriate
- Friends of the Rouge will plan, coordinate, promote and staff workshops and presentations
- ARC members listed in Attachment A will assist in planning and coordinating workshops and presentations when appropriate and promote and/or host workshops and presentations

Measurable Goal:
ARC Staff, Wayne, Oakland and Washtenaw County, and FOTR will conduct six (6) workshops and presentations during the permit cycle; one (1) or more per year; and, at least one (1) per sub-watershed. Each workshop and presentation shall average at least 15 participants. ARC member communities will actively promote the events through various means such as their website calendars and social media and/or host the workshops and presentations. One or more workshops will target businesses.

Measures of Assessment:
- Sign-in sheets documenting number of attendees and communities or type of businesses represented at workshops/presentations.
- Number of materials handed out and documentation of topics presented.
- Results of surveys conducted at the end of workshop and presentation.
- Report of ARC member communities that hosted and promoted workshops/presentations.

BMP Identifier: 7

BMP Descriptor: Promote and support volunteer activities

Addresses PEP Topic:
A, B, C, D, E, F, G, H, I, J

Target Audience:
Public, businesses and schools

Key Message:
Promoting the importance of volunteer activities in the Rouge River Watershed such as River Day, Rouge Rescue, workdays, water festivals, and green schools programs will encourage public responsibility and stewardship in the Rouge River.

Delivery Mechanism:
The ARC members, Wayne, Oakland and Washtenaw County, FOTR and other partners will promote and implement Rouge River awareness and restoration projects such as Rouge Rescue, River Day, workdays, water festivals and green schools programs through websites, social media, distribution of materials and presentations. In addition, four (4) workdays may be organized and coordinated to implement watershed restoration stewardship activities at new or existing green infrastructure project sites during

the permit cycle. ARC members are encouraged to promote FOTR's Rouge Rescue and workdays that are held throughout the watershed.

Year/Frequency BMP Implemented:
ARC members will promote volunteer activities annually. The ARC may host up to 4 workdays during the permit cycle. Communities are encouraged to promote FOTR events in their communities annually.

Responsible Party:

- ARC staff will assist in planning and coordinating volunteer activities when appropriate and promote activities on the ARC website and Facebook page
- Wayne County will assist in planning and coordinating and promote volunteer activities when appropriate
- Oakland County will assist in planning and coordinating and promote volunteer activities when appropriate
- Washtenaw County will assist in planning and coordinating and promote volunteer activities when appropriate
- Friends of the Rouge will plan, coordinate, promote and staff volunteer activities
- ARC members listed in Attachment A will assist in planning and coordinating volunteer activities when appropriate and promote and/or host volunteer activities

Measurable Goal:
ARC Staff, Wayne County and FOTR will coordinate four (4) work days at GI sites during the permit cycle. ARC member communities will promote volunteer and other watershed events. ARC member communities will host, participate or promote volunteer/watershed events.

Measures of Assessment:

- Number of views on ARC website and Facebook annually
- Sign-in sheets showing number of volunteers attending the various events
- Results of surveys conducted at the end of activities
- Report of ARC member communities that hosted/participated/promoted events

BMP Identifier: 8

BMP Descriptor: Promotion of and support for volunteer monitoring activities within the Rouge River Watershed

Addresses PEP Topics:
A, B, C, I, J

Target Audience:
Public and businesses

Key Message:
Promote the importance of pollution prevention and watershed restoration and stewardship through volunteer monitoring. This monitoring may include general macroinvertebrates, stoneflies, and frogs and toads, and/or fish. Volunteer monitoring will provide education, build stewardship, and provided valuable data for the protection and restoration of the Rouge River.

Delivery Mechanism:
The ARC and Oakland and Washtenaw County will promote and support Wayne County and the Friends of the Rouge to implement a watershed-wide volunteer monitoring program through websites, social media, distribution of materials, and presentations. ARC members will actively promote public and business participation and lend support to FOTR as appropriate. ARC members will host monitoring activities at their facilities when appropriate.

Year/Frequency BMP Implemented:
Annually with one (1) Winter Stonefly Search in the winter and one (1) Bug Hunt in the spring or other like programs, and two (2) other volunteer monitoring training exercises and/or workshops. This monitoring may occur on a rotating basis.

Responsible Party:
- ARC staff will assist with planning and coordinating volunteer monitoring activities and promote on the ARC website and Facebook page
- Wayne County will plan, coordinate, promote and staff monitoring activities
- Oakland County will assist in planning and coordinating and promote monitoring activities when appropriate
- Washtenaw County will assist in planning and coordinating and promote monitoring activities when appropriate
- Friends of the Rouge will plan, coordinate, promote, and staff monitoring activities
- ARC members listed in Attachment A will assist in planning and coordinating monitoring activities when appropriate and promote and/or host monitoring activities

Measurable Goal:
FOTR will annually conduct one (1) Winter Stonefly Search, one (1) Bug Hunt and two (2) other volunteer monitoring training exercises. ARC member communities will host, participate or promote volunteer monitoring/training exercises.

Measures of Assessment:
- Number of views on ARC website and Facebook annually
- Sign-in sheets showing number of volunteers attending the various events
- Results of surveys conducted at the end of activities
- Report showing ARC member communities that hosted/participated/promoted events

BMP Identifier: **9**

BMP Descriptor: **Rouge River Watershed signage**

Addresses PEP Topic:
A, B, F, I

Target Audience:
Public

Key Message:
Watershed signage will continue to be made available to ARC members including *River/Road Crossing* signs, *Don't Feed the Geese/Waterfowl* signs, and *Grow Zone* signs. ARC Staff will create one new sign and/or sticker for community use during the permit cycle regarding disposal practices of animal waste or other pollution prevention topic. This activity helps to educate and increase public awareness about the interconnectedness of the watershed and the storm sewer system.

Delivery Mechanism:
Passing vehicles, people biking, walking or running will view the signs and stickers when in the watershed.

Year/Frequency BMP Implemented:
Signage will be offered annually. One new sign and/or sticker or other item will be created during the permit cycle and will be provided to ARC members.

Responsible Party:
- ARC Staff will develop new sign/sticker or other item. Survey signage in watershed, create map and recommendations
- Wayne County will assist in development of new sign/sticker or other item and survey of watershed when appropriate
- Oakland County will assist in development of new sign/sticker or other item and survey of watershed when appropriate
- ARC members listed in Attachment A will assist in development of new sign/sticker or other item and survey of watershed when appropriate. Begin implementing high priority maintenance needs and new signage where appropriate

Measurable Goal:
ARC Staff will develop at least one (1) new sign or sticker during the permit cycle. During 2017 and 2018 ARC Staff, with assistance from Wayne County, Oakland County and ARC member communities, will survey the watershed to 1) document current signage to determine if maintenance is needed, and 2) document where future signage placement would be beneficial. A map will be created during the first permit cycle to document type of sign, location, and condition of signs in the watershed. During the first

permit cycle, ARC Staff, Wayne County, Oakland County, and ARC member communities will implement maintenance needs and/or new signage at high-priority locations, consistent with the findings of the survey.

Measures of Assessment**:**

- Completion of new sticker/sign or other item
- Number of signs/stickers or other item distributed annually
- Survey results, map and recommendations
- Number of signs maintained and new signage installed

SECTION D – PROCEDURE FOR EVALUATING AND DETERMINING EFFECTIVENESS

The ARC will conduct a public awareness survey during the permit cycle and compare it to the previous survey results to evaluate changes in public awareness/behavior. After comparing the results from the surveys, the ARC PIE Committee will determine if any modifications should be made to the PEP to address ineffective implementation.

In addition to analyzing the survey results, the ARC will use the evaluations that are done at all workshops, presentations, workdays, water festivals and other activities hosted by ARC member communities and partners. This will allow the ARC to make any necessary adjustments to the information presented at the ARC supported workshops and presentations during the permit cycle.

Lastly, continued participation in regional partnership activities will allow the ARC Staff to make recommendations if these partnerships provide avenues to assist with implementing and improving the PEP.

STORM WATER DISCHARGE PERMIT APPLICATION

Table 2: Public Education Program Best Management Practices (BMPs)

PEP Topic	BMP Identifier	BMP Descriptor	Partner Collaboration	Target Audience	Key Messages	Delivery Mechanism	Year	Frequency	Responsible Party	Measurable Goal & Measure of Assessment
A B C D E F G H I J	1	Distribute pollution prevention literature on various topics through brochures, educational materials and other media	ARC member communities, counties and cooperative partners	General public, businesses	Educating on public connection of MS4 to area waterbodies, public reporting illicit discharge, septic system care and failure, proper disposal of pesticides, herbicides and fertilizers, public responsibility and stewardship in the Rouge River watershed, proper disposal of grass, leaf and animal wastes, promote HHHW including trailer, motor vehicle and chemical waste, GI and LID, cleaning materials and proper car, pavement and power washing.	Brochures, educational materials and electronic media	Ongoing	Current and new items annually	ARC Staff Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	Goals: • Create at least 2 brochures/materials during permit cycle including one to educate commercial/industrial/educational & institutional entities • Develop at least 24 Facebook posts • Materials available at ARC member facilities Assessment: • Number of materials distributed/topic/location/event name • Number of posts/views on ARC Facebook • Viewer numbers from electronic media when used
A B C D E F G H I J	2	Coordinate and distribute community articles and ad graphics on pollution prevention and watershed restoration and stewardship	ARC member communities, counties and cooperative partners	General public, businesses	Educating on connection of MS4 to area waterbodies, public reporting illicit discharge, septic system care and failure, proper disposal of pesticides, herbicides and fertilizers, public responsibility and stewardship in the Rouge River watershed, proper disposal of grass, leaf and animal wastes, promote HHHW including trailer, motor vehicle and chemical waste, GI and LID, cleaning materials and proper car, pavement and power washing and educate commercial, industrial and educational institutional	Articles and ad graphics	Ongoing	Current items annually; five new articles and/or ad graphics during the permit cycle	ARC Staff Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	Goals: • Coordinate/distribute existing articles/ad graphics • Develop 1 new article/1 new ad graphic per year (total of 5 during permit cycle • Increase in ARC website traffic and Facebook views Assessment: • List of articles/ad graphics with title, topic and date • List of articles/ad graphics promoted on ARC website/Facebook • Number of views on ARC website/Facebook

PEP Topic	BMP Identifier	BMP Descriptor	Partner Collaboration	Target Audience	Key Messages	Delivery Mechanism	Year	Frequency	Responsible Party	Measurable Goal & Measure of Assessment
					entities about pollution prevention.					
A B C D E F G H I	3	Provide static displays and posters on pollution prevention and watershed restoration and stewardship	ARC member communities, counties and cooperative partners	General public	Educating on connection of MS4 to area waterbodies, public reporting illicit discharge, septic system care and failure, proper disposal of pesticides, herbicides and fertilizers, public responsibility and stewardship in the Rouge River watershed, proper disposal of grass, leaf and animal wastes, promote HHHW including trailer, motor vehicle and chemical waste, GI and LID, cleaning materials and proper car, pavement and power washing.	Static displays and posters in each subwatershed	Current displays – ongoing; new posters in 2016 and then annually; new static displays during the permit cycle	Current displays annually; up to 4 new posters in 2016 and then annually; new static displays annually upon completion	ARC Staff Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	Goals: • Distribute 4 seasonal posters, post & rotate seasonally at least 3 out of 5 years during permit cycle. • Update/create at least 3 static displays and used at 3-4 ARC member community events per year during the permit cycle with a minimum of 2 events in each of the 7 subwatersheds during the permit cycle. Assessment: • Report of display/date/location and title of events where displays were used • Number of posters distributed and location • Number of static displays created annually
A B C E G J	4	Promote environmental hotlines to educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4	ARC member communities, Wayne County, Oakland County, Washtenaw County, State of Michigan	General public, municipal employees and businesses	Educating on connection of MS4 to area waterbodies, public reporting illicit discharge, public responsibility and stewardship in the Rouge River watershed, proper disposal of pesticides, herbicides and fertilizers, promote HHHW including trailer, motor vehicle and chemical waste, educate commercial, industrial and educational institutional entities about pollution prevention.	Websites, social media, brochures, electronic media, at events and trainings	Ongoing	Annually	ARC Staff Wayne County Oakland County ARC members listed in Attachment A	Goals: • Distribute materials annually with hotline referenced • Promote on ARC and ARC member community website and Facebook Assessment: • Number of materials distributed annually • Number of views on ARC website and Facebook
A B C D E F G H I	5	Development of "homeowners" materials to promote the importance of pollution prevention and watershed	ARC member communities, counties and cooperative partners	General public	Educating on connection of MS4 to area waterbodies, public reporting illicit discharge, septic system care and failure, proper disposal of pesticides, herbicides and fertilizers, public responsibility and stewardship in the Rouge River watershed, proper disposal of grass, leaf and	Brochure	During the permit cycle	Annually	ARC Staff Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	Goals: • Develop homeowner materials within 1 year of permit approval Assessment: • Completion of brochure • Number of materials distributed annually • Number of materials distributed to new home

PEP Topic	BMP Identifier	BMP Descriptor	Partner Collaboration	Target Audience	Key Messages	Delivery Mechanism	Year	Frequency	Responsible Party	Measurable Goal & Measure of Assessment
		restoration and stewardship			animal wastes, promote HHHW including trailer, motor vehicle and chemical waste, GI and LID, and cleaning materials and proper car, pavement and power washing					owners by ARC member communities • Number of views on ARC website and Facebook
A B C D E F G H I J	6	Develop and promote educational workshops and presentations	ARC member communities, Friends of the Rouge and counties and cooperative partners	General public, businesses	Educating on connection of MS4 to area waterbodies, public reporting illicit discharge, septic system care and failure, proper disposal of pesticides, herbicides and fertilizers, public responsibility and stewardship in the Rouge River watershed, proper disposal of grass, leaf and animal wastes, promote HHHW including trailer, motor vehicle and chemical waste, GI and LID, cleaning materials and proper car, pavement and power washing and educate commercial, industrial and educational institutional entities about pollution prevention.	Workshops and presentations	Ongoing	6 during the permit cycle	ARC Staff Friends of the Rouge Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	<u>Goals</u>: • Conduct six workshops/ presentations during the permit cycle, 1 or more per year and at least 1 per sub-watershed. • Each event will average at least 15 participants. • ARC member communities will promote and/or host events • One or more will target businesses <u>Assessment:</u> • Sign-in sheets with number of attendees and type • Number and topics of materials handed out and presented • Survey results • Report of ARC member communities promoting/hosting events
A B C D E F G H I J	7	Promote and support volunteer activities	ARC member communities, Wayne County, Oakland County, Washtenaw County, Friends of the Rouge, Cranbrook Institute of Science, University of Michigan - Dearborn	General public, businesses and schools	Promoting the importance of volunteer activities in the Rouge River Watershed such as River Day, Rouge Rescue, workdays, water festivals and green schools programs will encourage public responsibility and stewardship in the Rouge River.	Website/social media, materials distributed and presentations and workdays	Ongoing	Promotion of activities will be annually and up to 4 workdays may be hosted during the permit cycle	ARC Staff Friends of the Rouge Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	<u>Goals:</u> • Coordinate 4 work days during permit cycle • ARC member communities will promote, participate or host volunteer and other watershed events <u>Assessment</u>: • Number of views on ARC website and Facebook annually • Sign-in sheets documenting volunteer attendance • Survey results • Report of ARC member communities that hosted, participated or promoted events

PEP Topic	BMP Identifier	BMP Descriptor	Partner Collaboration	Target Audience	Key Messages	Delivery Mechanism	Year	Frequency	Responsible Party	Measurable Goal & Measure of Assessment
A B C I J	8	Promotion and support volunteer monitoring activities within the Rouge River Watershed	ARC member communities, Wayne County, Oakland County, Washtenaw County, Friends of the Rouge	General public and businesses	Promote the importance of pollution prevention and watershed restoration and stewardship through volunteer monitoring. This monitoring may include general macroinvertebrates, stoneflies, and frogs and toads and/or fish. Volunteer monitoring will provide education, build stewardship and provided valuable data for the protection and restoration of the Rouge River.	Website/social media, materials distributed and presentations	Ongoing	1 Winter Stonefly Search and 1 Bug Hunt or other like programs, and 2 other volunteer monitoring training exercises and/or workshops annually	ARC Staff Friends of the Rouge Wayne County Oakland County Washtenaw County ARC members listed in Attachment A	<u>Goals:</u> • Conduct 1 winter stonefly search, 1 bug hunt and 2 other volunteer monitoring training exercises annually • ARC member communities will promote, participate or host volunteer events <u>Assessment</u>: • Number of views on ARC website and Facebook • Sign-in sheets showing number of volunteers • Survey results • Report of ARC member communities that hosted, participated or promoted events
A B F I	9	Rouge River Watershed signage	ARC member communities, Wayne County, Oakland County, and Washtenaw County	General public	River/Road Crossing signs, Don't Feed the Geese/Waterfowl signs, and Grow Zone signs and disposal practices of animal waste or other pollution prevention topic. This activity helps to educate and increase public awareness about the interconnectedness of the watershed and the storm sewer system.	Signs and sticker	Ongoing and one new sign and/or bumper sticker during the permit cycle	Annually	ARC Staff Wayne County Oakland County ARC members listed in Attachment A	<u>Goals</u>: • Develop at least 1 new sign or sticker during permit cycle • During first 2 years survey watershed signage for maintenance and future sign needs • Create map during permit cycle documenting survey results • Implement maintenance and/or new signage at high-priority locations during the first permit cycle <u>Assessment:</u> • Complete at least 1 new sign/sticker or other item • Number of signs/stickers or other items distributed annually • Survey results, map and recommendations • Number of signs maintained and new signage installed

ATTACHMENT A
Responsible Communities and Partners

This Collaborative PEP is submitted on behalf of the below listed MS4 permit holders with support from the ARC Staff and its cooperating partners that participate in the Storm Water Education Program facilitated by the Alliance of Rouge Communities (ARC).

RESPONSIBLE PARTY	SPECIFIC BMP IDENTIFIER
ARC Staff (under contract to the ARC)	1, 2, 3, 4, 5, 6, 7, 8, 9
Friends of the Rouge (under contract to the ARC)	6, 7, 8
Communities	
Beverly Hills, Village of	1, 2, 3, 4, 5, 6, 7, 8, 9
Bingham Farms, Village of	1, 2, 3, 4, 5, 6, 7, 8, 9
Birmingham	1, 2, 3, 4, 5, 6, 7, 8, 9
Bloomfield Hills	1, 2, 3, 4, 5, 6, 7, 8, 9
Bloomfield Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Canton Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Dearborn Heights	1, 2, 3, 4, 5, 6, 7, 8, 9
Farmington	1, 2, 3, 4, 5, 6, 7, 8, 9
Farmington Hills	1, 2, 3, 4, 5, 6, 7, 8, 9
Franklin, Village of	1, 2, 3, 4, 5, 6, 7, 8, 9
Garden City	1, 2, 3, 4, 5, 6, 7, 8, 9
Inkster	1, 2, 3, 4, 5, 6, 7, 8, 9
Lathrup Village	1, 2, 3, 4, 5, 6, 7, 8, 9
Livonia	1, 2, 3, 4, 5, 6, 7, 8, 9
Melvindale	1, 2, 3, 4, 5, 6, 7, 8, 9
Northville	1, 2, 3, 4, 5, 6, 7, 8, 9
Northville Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Novi	1, 2, 3, 4, 5, 6, 7, 8, 9
Oak Park	1, 2, 3, 4, 5, 6, 7, 8, 9
Plymouth	1, 2, 3, 4, 5, 6, 7, 8, 9
Plymouth Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Redford Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Southfield	1, 2, 3, 4, 5, 6, 7, 8, 9
Troy	1, 2, 3, 4, 5, 6, 7, 8, 9
Walled Lake	1, 2, 3, 4, 5, 6, 7, 8, 9
Wayne	1, 2, 3, 4, 5, 6, 7, 8, 9
Westland	1, 2, 3, 4, 5, 6, 7, 8, 9
West Bloomfield Twp.	1, 2, 3, 4, 5, 6, 7, 8, 9
Counties	
Wayne County	1, 2, 3, 4, 5, 6, 7, 8, 9
Oakland County*	1, 2, 3, 4, 5, 6, 7, 8, 9
Washtenaw County*	1,2, 3, 5, 6, 7, 8
Schools	
Henry Ford College	1, 2, 3, 4, 5, 6, 7, 8, 9

*Participating but this plan is not part of their pending permit application.

Table 1 – City of Troy Ordinances as they relate to IDEP enforcement

Permit Item	Permit Item Description	Corresponding Ordinance/Code
20	Prohibits non-stormwater discharges.	Chapter 16, Item 2.3 – Duties of Owners, Occupants Chapter 19, 19-05-01 to 19-05-05 – Prohibited Uses Chapter 48, 6.102 – Litter in Public Places Chapter 48, 6.104 – Sweeping Litter into Gutters Chapter 88, 9-13 to 9-16 – Littering Future Municipal Separate Storm Sewer System Ordinance
21	Allows flows from firefighting activities unless they are significant pollution source to waters	Future Municipal Separate Storm Sewer System Ordinance
22	Allow flows from various activities unless they are significant pollution source to a MS4	Future Municipal Separate Storm Sewer System Ordinance
23	Regulates the contribution of pollutants.	Chapter 16, Item 2.3 – Duties of Owners, Occupants Chapter 19, 19-05-01 to 19-05-05 – Prohibited Uses Chapter 48, 6.102 – Litter in Public Places Chapter 48, 6.104 – Sweeping Litter into Gutters Chapter 88, 9-13 to 9-16 – Littering Future Municipal Separate Storm Sewer System Ordinance
24	Prohibits IDs and direct dumping to the MS4.	Chapter 16, Item 2.3 – Duties of Owners, Occupants Chapter 19, 19-05-01 to 19-05-05 – Prohibited Uses Chapter 48, 6.102 – Litter in Public Places Chapter 48, 6.104 – Sweeping Litter into Gutters Chapter 88, 9-13 to 9-16 – Littering Future Municipal Separate Storm Sewer System Ordinance
25	Establishes authority to inspect, investigate, and monitor suspected IDs to the MS4.	Chapter 19, 9.19 – Abatement Future Municipal Separate Storm Sewer System Ordinance
26	Requires the elimination of ID and provide the MS4 the authority for enforcement.	Chapter 48, 6.107 – Enforcement Future Municipal Separate Storm Sewer System Ordinance

Based on review of the following City Codes/Ordinances/Regulations:
Chapter 16 – Municipal Solid Waste and Recycling
Chapter 19 – Sanitary Sewer Service
Chapter 48 - Litter
Chapter 88 – Nuisances
Future Municipal Separate Storm Sewer System (to be written and adopted)

ROUGE RIVER COLLABORATIVE ILLICIT DISCHARGE ELIMINATION PLAN (IDEP)

Alliance of Rouge Communities
OURS TO PROTECT
Working together, restoring the river

Prepared by:

46036 Michigan Ave., Suite 126
Canton, Michigan 48188

September 25, 2017

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
SOUTHEAST MICHIGAN DISTRICT OFFICE

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

September 29, 2017

Via E-Mail and U.S. Mail

Ms. Brandy Siedlaczek
Chair, Alliance of Rouge Communities
Storm Water Manager, City of Southfield
26000 Evergreen Road
Southfield, Michigan 48076

Dear Ms. Siedlaczek:

SUBJECT: Municipal Separate Storm Sewer System (MS4)
National Pollutant Discharge Elimination System (NPDES) Permit application
Rouge River Collaborative Illicit Discharge Elimination
Plan (IDEP) IDEP Approval Letter

The Michigan Department of Environmental Quality (DEQ), Water Resources Division (WRD), received the revised Rouge River Collaborative Illicit Discharge Elimination Plan (IDEP) dated September 25, 2017, submitted in response to our remaining review comments dated August 24, 2017. On several occasions, the DEQ colleagues and I met with you and several other members of the ARC Technical Committee to seek clarification on the IDEP procedures and to discuss our concerns about the proposed IDEP.

Based on our review of the revised alternative, collaborative IDEP, we determined that the IDEP meets the requirements of the MS4 Permit Application. The collaborating permittees may begin implementing the approved IDEP immediately and do not need to wait for permit re-issuance.

Please note that this approval letter addresses only the collaborative IDEP document; it does not address other application attachments submitted individually. Individual application components will be reviewed and addressed separately.

Thank you for your commitment to protecting and improving the water resources of the State of Michigan. If you have any questions or concerns, please contact me at 586-753-3769; hendgesm@michigan.gov; or MDEQ, WRD, 27700 Donald Court, Warren, MI 48092-2793.

Sincerely,

Martin Hendges

Martin Hendges
Senior Environmental Quality Analyst
Water Resources Division
Southeast Michigan District Office

cc: Mr. Thomas Meszler, Village of Beverly Hills
Ms. Kathryn Hagaman, Village of Bingham Farms
Mr. Paul O'Meara, City of Birmingham
Mr. Jay Craven, City of Bloomfield Hills
Mr. Charles Markus, Bloomfield Township
Mr. Bob Belair, Canton Township
Mr. William Zimmer, Dearborn Heights
Mr. Charles Eudy, City of Farmington
Ms. Karen Mondora, City of Farmington Hills
Mr. James Creech, Village of Franklin
Mr. Kevin Roney, City of Garden City
Mr. Jerome Bivins, City of Inkster
Ms. Pamela Bratschi, City of Lathrup Village
Mr. Donald Rohraff, City of Livonia
Mr. Rick Browning, City of Melvindale
Mr. James Gallogly, City of Northville
Ms. Jill Rickard, Northville Township
Mr. Aaron Staup, City of Novi
Mr. Kevin Yee, City of Oak Park
Mr. Chris Porman, City of Plymouth
Mr. Patrick Fellrath, Plymouth Township
Mr. John Selmi, Redford Township
Mr. Steve Vandette, City of Troy
Ms. Colleen Coogan, City of Walled Lake
Mr. Michael Buiten, City of Wayne
Mr. Hassan Saab, City of Westland
Mr. Ronald Fadoir, Oakland County
Ms. Jacy Garrison, Oakland County
Mr. James Wineka, Oakland County
Ms. Kelly Cave, Wayne County
Mr. Noel Mullett, Wayne County
Mr. Mike Wieczorek, Henry Ford Community College
Ms. Annette Demaria, ECT
Ms. Meghan Price, ECT
Mr. Cory Borton, HRC
Ms. Elizabeth Thacker, OHM
Ms. Christe Alwin, DEQ-WRD MS4 Specialist
Ms. Melinda Steffler, DEQ-WRD
Ms. Lishba Varughese, DEQ-WRD
Ms. Hae-Jin Yoon, District Supervisor, DEQ-WRD
MS4 File /Collaborating Permittee/ PDF

Table of Contents

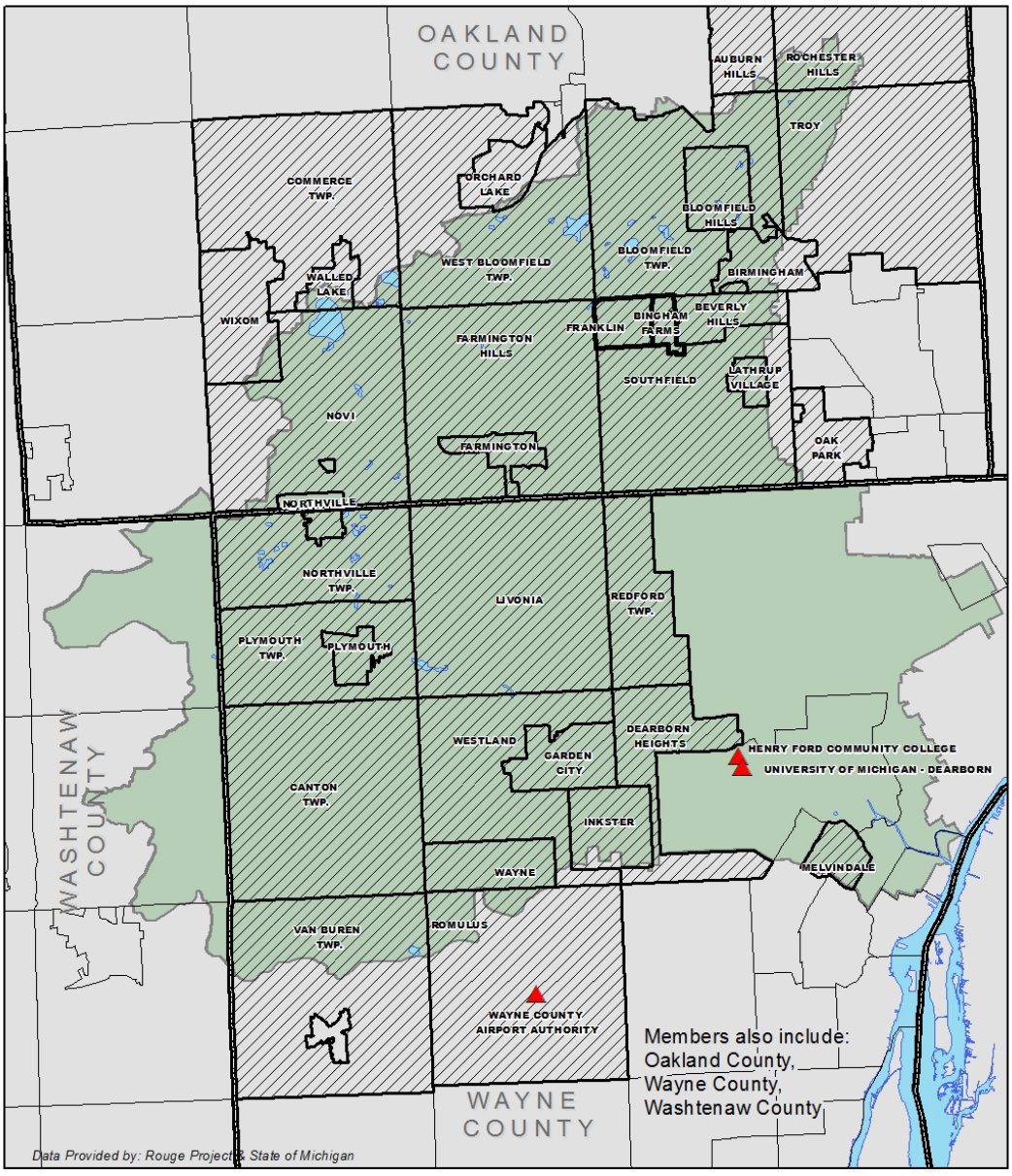
Figures

Tables

Attachments

A. Introduction

The Alliance of Rouge Communities[1] (ARC), a 501(c)(3) organization, is a voluntary public watershed entity currently comprised of municipal governments, counties, schools, and cooperating partners as authorized by Part 312 (Watershed Alliances) of the Michigan Natural Resources and Environmental Protection Act (MCL 324.101 to 324.90106) as amended by Act No. 517, Public Acts of 2004. The purpose of the ARC is to provide an institutional mechanism to encourage watershed-wide cooperation and mutual support to meet water quality permit requirements and to restore beneficial uses of the Rouge River to the area residents.



[1] The ARC is currently exploring a merger with Friends of the Rouge. Regardless of the outcome of those investigations, the permittees intend to fulfill the activities outlined in this plan with the assistance of the ARC or the yet to be determined new organization.

This Collaborative Illicit Discharge Elimination Plan (Plan) presents the watershed wide approach that is being implemented to effectively and efficiently address illicit discharges in the Rouge River watershed. This Plan was developed by the Technical Committee of the ARC in response to requirements under the State of Michigan's Permit Application for Discharges of Storm Water to Surface Waters of the State from a Municipal Separate Storm Sewer System (MS4) revised October 2015. This Plan is intended to meet the illicit discharge elimination program (IDEP) elements required by the permit. Specifically, this Plan covers questions 7 – 14, and 16 – 26 within the permit application. Item 15 will be addressed in each permittee's individual stormwater management plan.

The two primary goals of the Rouge River Watershed Management Plan (WMP) are Protect Public Health and Reduce Stormwater Runoff Impacts. Bacteria is one of the priority pollutants identified in the WMP and prevents 1.35 million watershed residents from safely recreating (swimming, boating, etc.) in the river and its tributaries. Due to the potential human health impacts indicated by elevated bacteria levels, identifying human sources of *Escherichia coli (E. coli)* is the primary focus of this Plan, although other pollutant sources will be investigated as issues are identified.

This Plan will be implemented by the participating communities through the end of the permit cycle for the Rouge River watershed. The list of permittees participating in this Plan can be found in **Attachment A**.

For the purposes of this plan, "ARC staff" will mean the consultant or individual completing the Executive Director Services contract for the ARC. "ARC contractor" will mean consulting firms, municipal agencies or others contracted by the ARC to complete specific tasks. As an example, ARC contractors may include Oakland and Wayne counties and Friends of the Rouge.

B. Background

From 1992 through 2014, the Rouge Project successfully controlled numerous sources of *E. coli* in the watershed. This includes the construction of 88 combined sewer overflow/sanitary sewer overflow control projects, the identification of over 2,008 illicit discharges that have been or are in the process of elimination, and the identification and correction of 898 failed septic systems (RPO, 2014). Nonetheless, there is evidence that human sewage is still impacting the Rouge River and its tributaries based on the data contained in the following studies:

- Total Maximum Daily Load for *E. coli* for the Rouge River (MDEQ, 2007), and
- Alliance of Rouge Communities Bacterial Source Tracking (BST) Final Report (RPO, 2006).

From 2010 through 2015, ARC members have been collaboratively conducting advanced IDEP investigations in targeted areas to locate human sources of *E. coli*. These efforts have led to the identification of 33 illicit connections and 9 illicit discharges that contributed approximately **2.2 million gallons** of untreated wastewater to the river annually (ARC, 2014). Based on our previous success, the ARC recommends this collaborative approach to conducting IDEP activities in the Rouge River watershed.

The ARC's recent IDEP successes build upon the accomplishments of the Rouge River Wet Weather Demonstration Project (Rouge Project) where, since 1987, we have prevented more than **1 billion gallons** of polluted water from entering surface waters just through our facility dye-testing program. This estimate does not include the results of Wayne County's septic system time-of-sale inspection, household hazardous waste, illegal dumping, complaint response, field staff training, monitoring, public education, and pollution prevention good housekeeping (e.g. road sweeping, catch basin cleaning, drain trash rack cleaning, etc.) programs. In 2014 alone, these efforts resulted in more than **13,000 tons** of material being properly disposed of or recycled; and an estimated **4 million gallons** of polluted water being prevented from entering waters of the state county-wide (WCDPS, 2016).

Since 2000, **2,329 municipal staff and thousands of volunteers have been trained** on how to identify and report illicit discharges through the efforts of the ARC, Rouge Project, and Friends of the Rouge (WCDPS, 2016). This has resulted in hundreds of pollution complaint calls from the public and municipal staff which led to the identification of numerous illicit discharges. For example, in 2013, Wayne County responded to 39 pollution complaint calls resulting in the identification of eight illicit discharges (ARC, 2014).

Beyond being a collaborative approach, this Plan meets the Michigan Department of Environmental Quality's (MDEQ) definition of an Alternative Approach as defined within the current permit application guidelines. The primary reason that this Plan is classified Alternative is because it covers multiple permittees who will pool their resources to investigate suspected illicit discharges.

As allowed by the permit, permittees will identify, screen and sample high priority outfalls instead of all outfalls. This will allow for more resources to be targeted to conduct investigations to locate illicit discharge sources. This is being suggested because our experience indicates that individual outfall surveys are inefficient: they identified very few illicit discharges while being very expensive (ARC, 2007). Nonetheless, the permit requires outfall surveys to be completed, so the approach offered herein is a compromise between the permittees and MDEQ.

C. Priority Areas

The ARC has identified several initial priority areas to target which were selected based on available water quality data as described in **Attachment B**. The priority areas are as follows (See **Figures 1 and 2**) and cover almost 25,700 acres which represents 14% of the watershed (based on the separate sewer areas for communities participating in this plan):

- Initial Wayne County Priority Areas (Figure 1):
    A. North Branch Tonquish Creek and the Middle Rouge in Plymouth/Plymouth Township from the north side of Joy Road just west of Lilley Road (4,163 acres).
    B. Tributary to the Bell Branch at the north end of Bicentennial Park which north of 7 Mile Road and west of Gill Road in Livonia (1,730 acres).

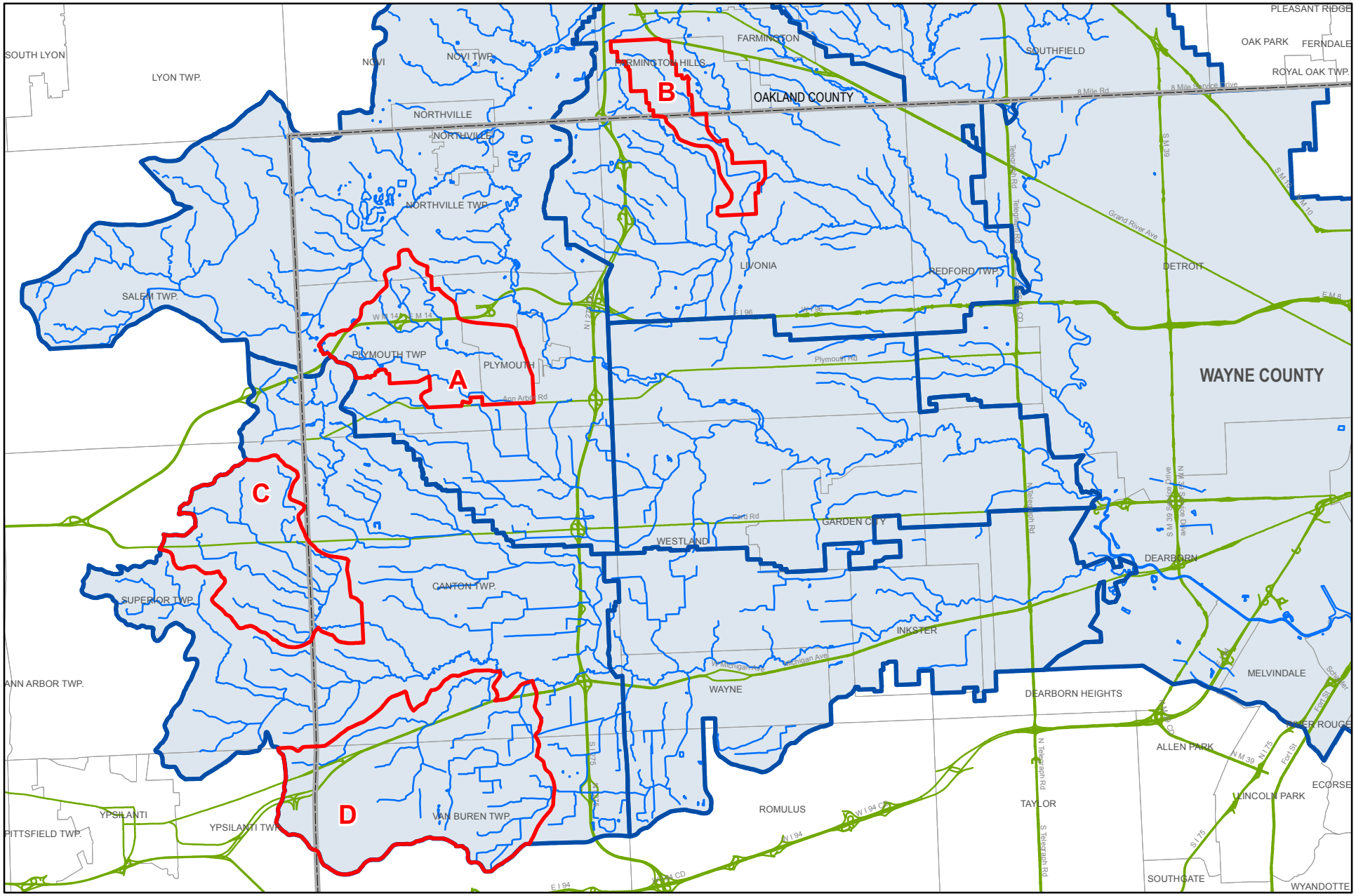
C. Lower Rouge in Canton Township from Proctor and Denton roads west including Superior Township (5,241 acres).
D. Sines and Arnold Drain in Canton Township at Sheldon Road 0.5 miles north of Michigan Ave and the McKinstry Drain in Canton Township south of Michigan Ave between Lilley and Beck roads including Van Buren and possibly Ypsilanti townships (9,290 acres).

- Initial Oakland County Priority Areas (Figure 2):
  E. US 16 drainage area in Farmington (200 acres),
  F. Claude Stevens No. 1, 3, 4 and 10, Bloomfield Highlands and Devonshire drainage areas in Bloomfield Township (784 acres).
  G. Austin, Eight Mile Road, Fracassi, Flannery and Owens Relief drainage areas in Southfield (3,661 acres)

The ARC is currently in the process of collecting instream *E. coli* data at 90 sites across the watershed. This data will provide the most comprehensive assessment of bacteria conditions in the watershed since 2005. This data will be evaluated and new priority areas will be selected as described in IDEP# 2.

Every 5 years, ARC staff will review available water quality data, outfall screening data and outfalls investigations and reassess the priority areas. ARC staff will identify the priority outfalls and seek input from ARC members. County and municipal staff will review the priority outfalls and their complaint files and add any sites where they suspect the presence of illicit connections/discharges. The draft list will be presented to the Technical Committee for review. Technical Committee input will be addressed and a final priority list will be submitted to the MDEQ for review and approval. The final approved list shall then be distributed for investigations.

In addition, permittees will have an opportunity to request areas for inclusion on the priority outfall list outside the 5-year cycle. This will occur annually at a Technical Committee meeting and include rationale for inclusion. Committee members will review the request and determine if it should be granted. Considerations for adding a site would include: suspected or known impact to water quality and history of the issue.



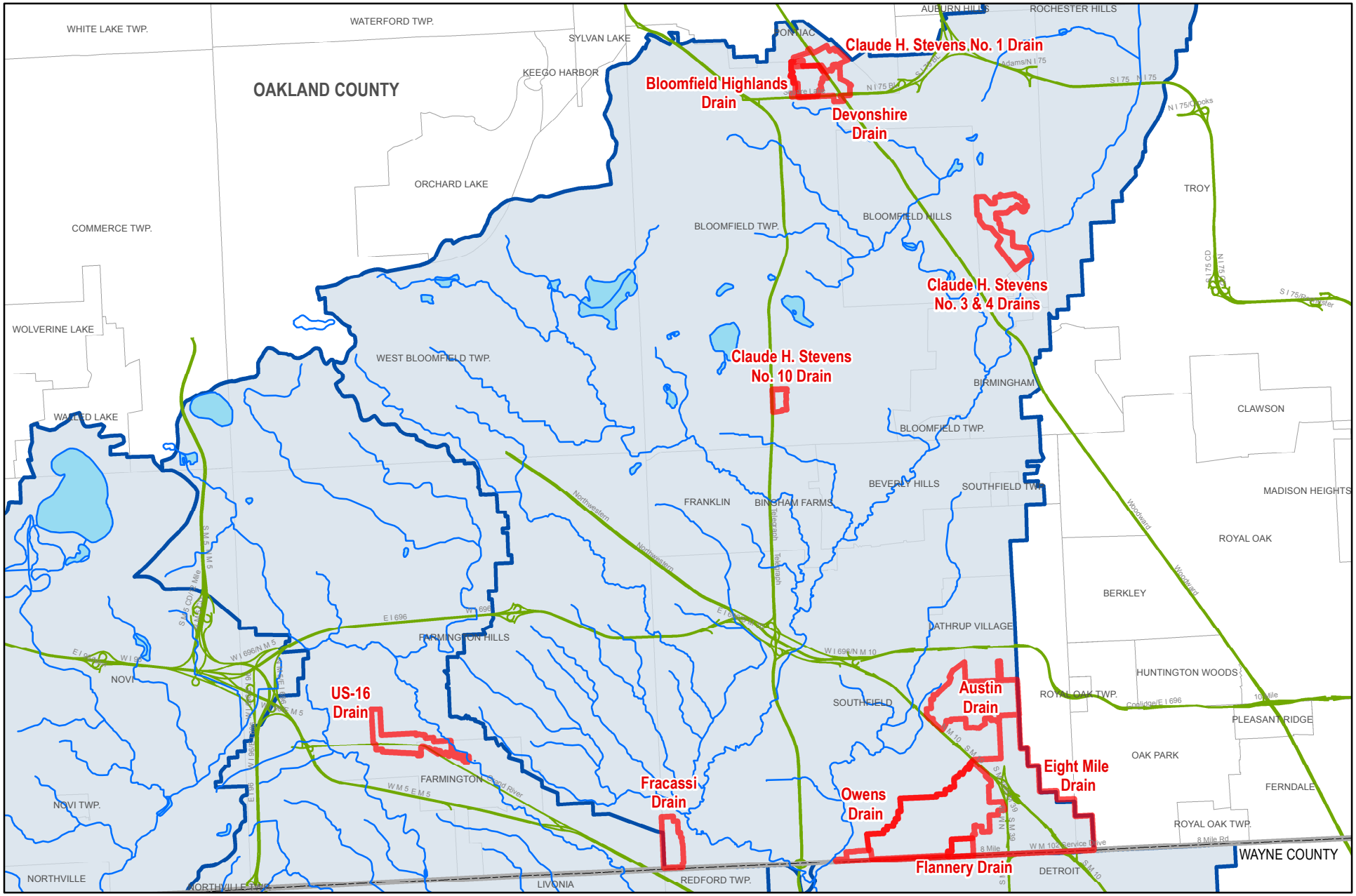
Wayne County Rouge River Watershed
IDEP Priority Areas
June 2016

Rouge River & Tributaries
Main Roads
Priority Areas
Rouge Subwatersheds
County Boundary
Township and City Boundaries

N

0 1.5 3 Miles

ECT Environmental Consulting & Technology, Inc.



Oakland County Rouge River Watershed
IDEP Priority Areas
May 2017

Rouge River & Tributaries
Main Roads
Priority Areas
Rouge Subwatersheds
County Boundary
Township and City Boundaries

N

0 1 2 Miles

ECT Environmental Consulting & Technology, Inc.

D. Action Strategies

Each strategy listed in this section includes a description, responsibility and schedule for completion. The Counties, Cities, Villages, Townships, and Schools listed in the Responsibility Sections refer to those who are participating in this Plan as listed in **Attachment A**. The timelines presented herein are contingent on plan approval by October 1, 2017.

IDEP #1: Mapping of Storm Sewer Systems

Description: Storm sewer maps for individual jurisdictions are available in various formats and at various levels of detail. For the purposes of this Plan, a storm sewer map will include the location of outfalls, enclosed and open storm drains, roads, and waters of the state. For each permittee, the physical location of these maps is provided in **Table 1**.

In addition, a watershed-wide GIS database of the storm sewer system maps will be developed. This activity will centralize data and facilitate source-tracking investigations and ease reporting to the MDEQ over time.

For Wayne and Oakland counties, this requirement will be dealt with under their individual stormwater management plans.

ARC Member Responsibilities and Schedule:

- ARC staff:
  - Update the watershed's Storm Sewer GIS by July 30, 2020.
- Cities, Villages, Townships:
  - Convert hard copy storm sewer system maps to GIS format. See schedule in **Table 1**.
  - Provide GIS layers to ARC staff within 6 months of completion or major update of GIS database.

Table 1 – Individual Permittee Storm Sewer System Map and Schedule for GIS

Permittee	Physical Location of Storm Sewer Map(s)	Timeline for GIS Storm Sewer Layer
Municipalities		
Beverly Hills	Oakland County WRC	Spring 2020
Bingham Farms	Oakland County WRC	Complete
Birmingham	Oakland County WRC	Complete
Bloomfield Hills	Department of Public Works	Complete
Bloomfield Twp.	Dave Payne Public Services Building	Complete
Canton Twp.	Department of Public Works	On-going (50% complete)
Dearborn Heights	Department of Public Works	Complete (2007)
Farmington	Department of Public Works	Ongoing, complete by 12/30/19
Farmington Hills	Engineering Department	Complete
Franklin	Oakland County WRC	Spring 2020
Garden City	Department of Public Works	Complete
Inkster	Department of Public Works	Complete
Lathrup Village	Oakland County WRC	Complete
Livonia	Department of Public Works	Complete (2015)

Permittee	Physical Location of Storm Sewer Map(s)	Timeline for GIS Storm Sewer Layer
Melvindale	Department of Public Works	Complete
Northville	Department of Public Works	Ongoing, complete by 12/30/19
Northville Twp.	Department of Public Works	Complete
Novi	Department of Public Works	Complete
Oak Park	Department of Public Works	Complete
Plymouth	Department of Public Works	Complete
Plymouth Twp.	Department of Public Works	Complete
Redford Twp.	Department of Public Works	Spring 2023
Southfield	Department of Public Works	Complete
Troy	Department of Public Works	Complete (updates in progress)
Walled Lake	Department of Public Works	Complete
Wayne	Department of Public Works	Complete
West Bloomfield Twp.	Department of Development Services	Complete
Westland	Department of Public Works	Complete (2015)
Schools		
Henry Ford College	HFC Facilities Building	Spring 2020

BMP goals:

- 100% of IDEP Plan participant outfalls in one GIS database

Measures of assessment:

- Portion of watershed (area) where known outfalls are mapped in GIS.

IDEP #2: Outfall Prioritization and Dry Weather Screening

Description: The goal of this activity is to identify and screen priority outfalls in each city and village. Priority outfalls are those that have a high potential to convey an illicit discharge. ARC staff will review outfall information from each city and village to identify at least 20% of their outfalls for screening. This will be done on an individual community basis. The information reviewed will include the previous outfall screening report, size of the outfall, receiving water quality, age of infrastructure and history of the outfall (past illicit discharges, conversion from combined sewer system, etc.).

The prioritization process will be as follows:

1. Identify waterbodies with dry weather geometric mean *E. coli* > 1,000 cfu/100 mL based on most recent data.
2. Identify the outfalls discharging to these waterbodies including outfall size and drainage area, if available. These outfalls will generally be considered priorities.
3. Identify outfalls that discharge within 2,500 feet of public recreation areas (ex: beaches and paddling sites). These outfalls will generally be considered priorities.
4. Review previous outfall screening reports looking for signs of suspicious discharges that were not resolved. These outfalls will generally be considered priorities.
5. Discuss the history of the outfall with local staff.
    - The history will include age of infrastructure, any previous complaints, illicit discharges or sanitary sewer overflows, and whether it was part of a combined sewer system.
6. Prepare a list of priority outfalls that are most likely contributing to the water quality problem with rationale for inclusion.

Screen the priority outfalls for signs of an illicit discharge following the procedures outlined in **Attachment C**. If dry weather flow is present, sample for *E. coli* or other parameters of concern, unless the source of the flow is identified during the inspection. The sampling will likely occur at the time of the inspection, but there may be instances when the inspectors need to come back to the outfall to collect the sample in order to meet sample collection and analysis protocols. In these cases, the outfall will be revisited within 10 days of discovering the dry weather discharge. If the outfall is not discharging upon the subsequent visit, it will be revisited twice more within 30 days. If there is no discharge after three visits, the outfall will not be screened further.

The outfall screening procedure provided above will also be followed when any new outfalls are discovered or constructed.

Based on the screening results, the outfalls will be divided into four categories as follows:

Category A. - Outfalls with E. coli >10,000 cfu/100 mL or unexplained physical characteristics
Category B. - Outfalls with E. coli between 5,001 and 10,000 cfu/100 mL
Category C. - Outfalls with E. coli between 1,001 and 5,000 cfu/100 mL
Category D. - Outfalls with E. coli ≤1,000 cfu/100 mL

Unexplained physical characteristics include:

- Sanitary debris in the flow or near the outfall structure;
- Colored or turbid discharge;

- Discharges with foul odors;
- Unusual stains or deposits on or near the outfall structure;
- Unusual bacterial sheens, algae or slimes; or
- Dead vegetation immediately downstream of the outfall.

Based on the inspection and sample results, the presence of a suspicious discharge will be determined. A suspicious discharge is presumed when an outfall has unexplained elevated *E. coli* counts (>5,000 cfu/100 ml) or unexplained physical characteristics. These characteristics correspond to the Category A and B outfalls which will be subject to advanced investigations as described in IDEP# 3.

Category C outfalls will be resampled up to two more times within 12 months. If any sample is >5,000 cfu/100 mL, it will be elevated to Category B and investigated accordingly. Category D outfalls will not be further investigated without cause.

For Wayne and Oakland counties, this requirement will be dealt with under their individual stormwater management plans.

ARC Member Responsibilities and Schedule:

- ARC staff:
    - Identify priority outfalls by March 30, 2018
- Cities, Villages
    - Perform dry weather screening (inspection and sampling) of priority outfalls by December 30, 2018.
    - Determine outfalls with suspicious discharges within 30 days of completion of screening of all outfalls in a municipality.
- Cities, Villages, Townships
    - Perform dry weather screening of new outfalls within 6 months of construction, taking ownership or discovery.

BMP goals:

- Screen 100% of priority outfalls

Measures of assessment:

- Number priority outfalls identified
- Number of priority outfalls screened and sampled
- Number of suspicious discharges identified (based on outfall screening results)

IDEP #3: Advanced Investigations

Description: The goal of this activity is to locate the source of the suspected illicit discharge(s). The same process will be followed for the initial priority areas specified in Section C and the priority outfalls identified during dry weather screening. Except in the initial priority areas, the tributary MS4 outfalls will first need to be located and screened for suspicious discharges.

The permittees will lead advanced investigations in their respective jurisdictions. Unless an issue is emanating from township property, investigations within townships will be coordinated with the road agency or their designee. When a potential IDEP issue is suspected outside the participating members' jurisdictions, then it will be referred to the appropriate jurisdiction for their follow-up. The referral will occur in writing and include the rationale for the referral.

Once the priority outfall screening data is available, Category A outfalls will be subject to advanced investigations first as their discharges are expected to have the greatest impact on water quality. The investigation of Category B outfalls will begin when at least 50% of the Category A outfalls in the watershed are investigated.

Advanced investigations will include manhole inspection or sampling, dye-testing sewers or structures, smoke testing sewers, or televising sewers to locate the illicit discharge. These investigations will be conducted according to the procedures outlined in **Figure 3** and **Attachment D.**

In order for a priority outfall to be considered investigated, the following efforts must be completed:

- The tributary MS4 has been sampled/inspected at at least ½ mile intervals;
- Advanced investigations have been conducted for drain segments with *E. coli* >10,000 cfu/100 mL or have physical signs of sewage;
- Sources have been identified in drains segments where *E. coli* is >10,000 cfu/100 mL; and
- Referrals have been made to upstream MS4s when *E. coli* counts from their systems are >10,000 cfu/100 mL; and
- Referrals to other MS4 owners have been investigated by the MS4 owner with documentation sent back to the downstream MS4.

Advanced investigations will be tracked using maps and narrative descriptions of the field work which will be summarized annually in a report to the ARC Technical Committee.

Schedule: Investigate initial priority areas through December 30, 2018.
Investigate priority outfalls through the end of the permit.

ARC Member Responsibilities and Schedule:

Entity/Task	Schedule
ARC staff	
Review and approve annual budgets and county (or contractor) work plans to ensure resources are directed to the appropriate areas.	By Nov. 1st each year
WCDPS and OCWRC	
Participate in ARC Technical Committee discussions and provide feedback on the appropriateness of the selected priority areas.	Two times per year

Entity/Task	Schedule
Lead advanced investigations in priority areas to the point where the suspicious discharge is narrowed down to the smallest storm sewer segment as practicable by sampling at manhole and outfall locations. (as contracted by the ARC)	Ongoing
Provide recommended next steps to the MS4 owner for continuing the investigations. This will be done in writing (email is a suitable for this purpose).	Within 2 weeks of completing investigations
Track investigation efforts described above.	Ongoing
WCDPS, OCWRC, Cities, Villages, Townships	
Assist the ARC in conducting advanced investigations by providing maps and staff knowledge of the local system.	As needed
Follow-up on the investigation recommendations of the ARC to identify illicit discharge sources within their jurisdiction. This may include televising, smoke testing, dye testing or other investigation measures as the situation requires.	Begin within 4 weeks of receiving the referral from the ARC/county
Report back to ARC on the status of the investigations.	By Dec 30th each year
Cities, Villages, Townships	
Notify property owners of the presence of an illicit discharge.	Within 2 weeks of verification
Work with property owners to eliminate identified sources per local ordinances/ codes and track correction measures.	As needed
Lead enforcement measures as appropriate.	As needed
Report back to ARC on the number and type of identified illicit discharges.	By Dec 30th each year
Schools	
Follow-up on the investigation recommendations of the county/community to identify illicit discharge sources. This may include televising, smoke testing, dye testing or other investigation measures as the situation requires.	Begin within 4 weeks of receiving the referral from the county/community
Eliminate identified sources and track correction measures.	As needed
Report back to referring agency on the status of the investigations and the number and type of identified illicit discharges.	By Dec 30th each year

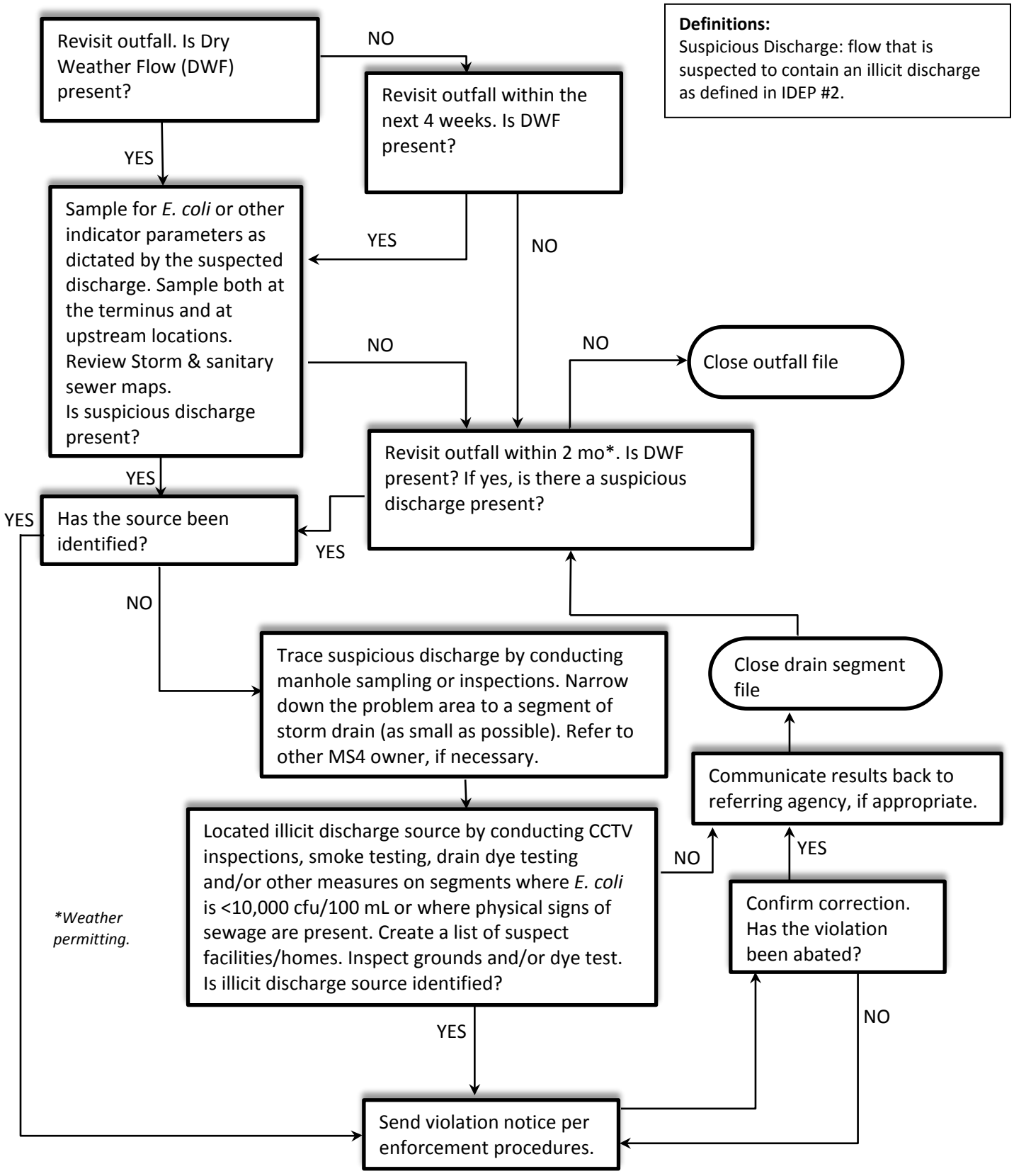
BMP goals:

- Follow the advanced investigation protocol for initial priority areas and priority outfalls.
- 100% of illicit connections/discharges resolved or a plan in place for elimination.

Measures of assessment:

- Portion (square miles/acres) of priority outfall drainage areas in Categories A and B and portion investigated.
- Number and type of illicit connections/discharges identified and resolved.

Figure 3 – Advanced Investigation Protocol



IDEP #4: Staff Training

Description: There are several mechanisms available for IDEP training for various competencies as described below. Each permittee will have at least one person trained at the Investigator Level and 50% of field staff at the Alert Observer Level. Field staff is defined as those working at least 50% of their day out-of-the-office and includes Department of Public Works/Services staff and community building/plumbing inspectors.

Investigator Level

The Wayne County Illicit Discharge Investigator Training (a half day training workshop) where attendees are taught how to identify and investigate the sources of illicit discharges including failing septic systems, seepage from sanitary sewers, illegal dumping, and suspicious discharges from outfalls. A competency exam is also administered at the end of the workshop.

Alert Observer Level

Training at this level can consist of one of the following:

- The Alert Observer IDEP Training (a 30 minute to 1 hour workshop) which provides the goals of the IDEP program, how to recognize illicit discharges and conduct field screenings, and the mechanisms to report suspicious discharges.
- The *Working for Clean Water* municipal staff training (a 15-minute video) where attendees are provided a general overview of the IDEP program, how to recognize illicit discharges, encouraged to report suspicious discharges, and provides pollution prevention and good housekeeping best management practices.

In addition, an IDEP Tip Card for Municipal Staff, which was developed by the Southeast Michigan IDEP Work Group, will be provided to field staff for both training programs. The Tip Card provides photographic examples of illicit discharges and phone numbers to report complaints.

Each community and county already has at least one person who is trained at the Investigator Level. This level of training will be maintained. Wayne County and ARC staff will continue to offer the Investigator Training Workshop to ARC member staff and its regional partners every other year according to the Southeast Michigan Regional IDEP Training Plan (See **Attachment E**). ARC staff will look to extend the training plan another 5 years.

The Working for Clean Water video is available on the ARC's website (http://www.allianceofrougecommunities.com/activitiesevents.html) or by searching "IDEP Municipal Training" on www.YouTube.com. The Alert Observer Training Workshop will be included in the municipal pollution prevention training every other year according to the IDEP Training Plan (See **Attachment E**). Additional training opportunities can be arranged if demand warrants. The Tip Card will be distributed at the Investigator and Alert Observer trainings and can be obtained on the ARC's website (see previous link) or by emailing ARC staff, if customization is desired.

Schedule: One person trained at the Investigator Level, confirm annually by July 30th.
50% of field staff will be trained at the Alert Observer Level by March 31, 2021.
Remind staff of *E. coli* problems in Priority Areas and encourage reporting, once a year.

ARC Member Responsibilities:

- ARC staff

    - Provide trainers for the Investigator and Alert Observer training workshops per the IDEP Training Plan or every year (rotating the workshops every other year)
    - Customize the Tip Card, if requested by a permittee.
    - Maintain a list of IDEP Investigator contacts.
    - Seek to extend the Southeast Michigan Regional Training Plan through 2022. Complete by December 30, 2017.
- Cities, Villages, Townships, Road Agencies, WCDPS, OCWRC and Schools
    - Provide IDEP training to field staff.
    - Provide ARC staff the name of the person trained at the Investigator Level.
    - Provide field staff the IDEP Tip Card for Municipal Staff in conjunction with the training sessions.
    - Document and track staff training needs.
    - For permittees in Priority Areas, remind staff of the *E. coli* problem and encourage the reporting of pollution complaints.

BMP goals:

- 1 person per MS4 trained at Investigator Level.
- 50% of field staff trained at the Alert Observer Level.

Measures of assessment:

- Number of staff trained at various competencies.

IDEP #5: Pollution Complaint Response

Description: Oakland, Wayne, and Washtenaw counties operate environmental hotline numbers and respond to environmental complaints including illegal dumping, spills and suspicious discharges. Local communities also receive pollution complaints directly from residents. As discussed in the ARC Collaborative PEP, local communities (cities, villages, and townships) will promote the use of the hotline numbers to their residents and general public and assist with and/or perform follow up complaint response as appropriate. Community staff may identify a potential pollution issue during their day-to-day activities. These issues will be reported, investigated and tracked just like a pollution complaint from a resident. It should be noted that suspicious discharges within townships, not on township property, will be handled by the county road agency or their designee.

Investigative responses will range from a site visit that fails to confirm a problem to full scale advanced investigation to identify the source of the illicit discharge. When responding to complaints staff will use the Advanced Investigation process outlined in **Figure 3**. For non-emergency spills, the initial complaint response will begin within 48 hours of notification and within regular working hours. Emergency spills will be handled immediately. The spill response protocol for handling complaints, spills and illegal dumping is permittee-specific and, as such, is outlined in each permittee's Stormwater Management Plan.

Any other nonpriority area investigations will also be handled as described in **Figure 3**.

ARC Member Responsibilities and Schedule:

Entity/Task	Schedule
ARC staff	
Maintain a list of IDEP community contacts and update.	By July 30th each year
Cities, Villages, Townships, Road Agencies and Schools	
Provide ARC staff with a contact person for addressing pollution complaints.	By July 30th each year
Track status of complaints using the Spill Notification & Complaint Response form (See **Attachment F**) or similar form. This will include complaints handled internally or those referred by the county.	As they arise.
Investigate and resolve complaints within their MS4.	As they arise.
WCDPS and OCWRC	
Provide technical guidance as requested by local communities.	As requested
Track the status of any pollution complaints that they investigate.	As they arise.
Investigate and resolve complaints within their MS4.	As they arise.

BMP goals:

100% of complaints addressed

Measures of assessment:

- Number of complaints received and referred or investigated.
- Number of issues identified.
- Number of issues resolved.

IDEP #6: Inspection of ARC Member-Owned Facilities

Description: Dye-testing will be conducted on ARC member-owned or operated facilities (within the watershed) for the purpose of identifying any illicit connections or illicit discharges. Each facility will be tested at least once. Facilities that undergo major renovation or reconstruction will be re-dye tested, as well. Any identified issues will be corrected by owner.

ARC Member Responsibilities and Schedule:

Entity/Task	Schedule
Cities, Villages, Townships, Road Agencies, WCDPS, OCWRC and Schools	
Dye test permittee-owned/operated facilities.	See **Table 2**
Dye test permittee-owned/operated facilities that undergo major renovation.	Within 6 months of completion of construction
Repair/correct illicit connections/discharges that were revealed during the site inspection. If the discharge is significant, take immediate steps to stop the illicit discharge.	As needed

Table 2 – Schedule for Initial Municipal Facility Dye Testing

Permittee (listed alphabetically)	Timeline
Municipalities	
Beverly Hills	By Dec 30, 2018
Bingham Farms	NA-1
Birmingham (golf courses only)	By Dec 30, 2018
Bloomfield Hills	By Dec 30, 2018
Bloomfield Twp.	Completed
Canton Twp.	Completed
Dearborn Heights	Completed
Farmington	Completed
Farmington Hills	Completed
Franklin	Completed
Garden City	Completed
Inkster	Completed
Lathrup Village	By Dec 30, 2018
Livonia	Completed
Melvindale	Completed
Northville	Completed
Northville Twp.	Completed
Novi	By Dec 30, 2018
Oak Park	NA-2
Plymouth	Completed
Plymouth Twp.	Completed
Redford Twp.	Completed
Southfield	Completed
Troy	NA-2
Walled Lake	By Dec 30, 2018
Wayne	Completed

Permittee (listed alphabetically)	Timeline
Westland	Completed
Counties	
Wayne County	Completed
Schools	
Henry Ford College	Completed

NA-1=Not applicable because there are no municipal facilities.
NA-2=Not applicable because municipal facilities are not located in the watershed.

BMP goals:

- 100% of ARC Member existing facilities dye tested.
- 100% of issues addressed.

Measures of assessment:

- Number of facilities dye tested.
- Number of issues identified.
- Number of issues resolved.

IDEP #7: IDEP Work Group

Description: A work group will meet twice per year to discuss IDEP-related topics including the annual advanced investigations work plan, progress of advanced investigations, lessons learned, any road blocks encounter with implementing the plan, and recommendations for improving the plan. The group will be comprised of MS4 permittees and be facilitated by ARC staff. Permit participation will be tracked with a sign-in sheet. A summary of the meeting will be prepared and distributed to the group.

Schedule: Two work group meetings per year.

ARC Member Responsibilities:

- ARC staff
  - Schedule and facilitate meetings in cooperation with the Technical Committee Chair
- Cities, Villages, Townships, Road Agencies, WCDPS, OCWRC and Schools
  - Participate in meetings.

BMP goals:

- Hold at least 2 work group meetings per year.
- 80% member participation.
- 2 meeting summaries per year.

Measures of assessment:

- Number of meetings per year.
- Number of members in attendance at meetings.
- Number of meeting summaries.

IDEP #8: Legal Authority

Description: The legal authority that allows permittees to prohibit, investigate and/or enforce the correction of illicit discharges varies depending on the nature of the discharge in question and the jurisdiction of the MS4. For discharges to city and village MS4s, the legal authority is granted via the Plumbing Code, Sewer Use Ordinances, Nuisance Ordinances, and Municipal Civil Infraction Ordinances. Schools and county departments will follow their written policies or codes, as appropriate. **Table 3** provides the list of regulatory mechanisms by type of illicit discharge that are available to local, school and county agencies to investigate and eliminate illicit discharges. In some cases, permittees can seek the assistance of state and federal agencies to investigate and eliminate illicit discharges. Examples include sewage discharges from mobile home parks, discharges from non-municipal facilities that have a NPDES permit and agricultural properties as shown in **Table 4**.

Table 3 – IDEP Regulatory Mechanisms available to Permittees

Discharge Type or Source	Lead Enforcement Agency	Regulatory Authority
Discharges to city and village MS4s (except as noted below)	Local DPWs and Building Depts.	Varies by community. See individual stormwater management plans.
Discharges to school or township MS4s	School or Township	See individual stormwater management plans.
Sanitary sewage and waste matter into County Drains	County Drain or Water Resource Commissions	Section 280.423 of the Michigan Drain Code of 1956, as amended. Under the Michigan Drain Code, pollution of a county drain is a criminal misdemeanor and punishable by a fine of $25,000 or imprisonment. See Items 1-10 of Chapter 18, Section 280.423 of the Michigan Drain Code at: http://legislature.mi.gov/doc.aspx?mcl-280-423 See also Section 280.421: Obstructions; removal; expenses, notice; livestock; criminal complaint of Chapter 18 of the Drain Code at: http://www.legislature.mi.gov/%28S%28fpcedzixcmfe3wvtvqmyto3x%29%29/mileg.aspx?page=getObject&objectName=mcl-280-421.
Discharges to County Road Drains	Road Agencies	Public Highways and Private Roads Act 283, 1909 Sect. 224.19b
Soil Erosion from Construction Sites	Part 91 Authority	Part 91, Soil Erosion and Sedimentation Control (SESC), of NREPA, Public Act 451 of 1994

Discharge Type or Source	Lead Enforcement Agency	Regulatory Authority
Discharges from Onsite Sewage Disposal Systems (OSDS)	Wayne County Dept. of Health, Veterans & Community Wellness Oakland County Health Division	Wayne County: http://www.waynecounty.com/hhs/onsitesewage.htm *Specifications Governing On-Site Disposal of Sanitary Sewage and Human Excreta* as follows: -Prohibit discharges: Article III, Sec. 3.1-3.2 -Right to inspect: Article IV, Sec. 4.3 -Corrective action: Article IV, Sec. 4.5-4.7 -Penalties: Article XVI, Sec. 16.1 *Wayne County On-Site Sewage Disposal Operation and Maintenance Ordinance* as follows: -Right to inspect: Sec. 803 -Corrective action: Sec. 802 -Penalties: Sec. 804-815 Oakland County: Oakland County Sanitary Code -Article III, Sect 2.1-2.2 Public Health Code, Public Act 306 of 1927, Sect. 327.201

Source: Modified from a table included in the Oakland County's MS4 permit application

Table 4 – IDEP Regulatory Mechanisms available to State and Federal Agencies to assist Permittees

Discharge Type or Source	State or Federal Enforcement Agency	Regulatory Authority
Discharges from Mobile Home Parks	MDLEG	Mobile Home Commission Act Public Act 96 of 1987 http://www.legislature.mi.gov/documents/mcl/pdf/mcl-Act-96-of-1987.pdf
Discharges from Part 5 facilities and industrial NPDES regulated facilities	MDEQ-WRD	Part 31, NREPA, PA 451 of 1994
Discharges from agricultural properties and livestock facilities	MDARD	Michigan Right to Farm Act, Public Act 93 of 1981
Releases of Oil and Polluting Materials, Sewage, Flammable and Combustible Liquids, Hazardous Materials, Hazardous Substances, Infectious Substances, Hazardous Wastes, Leaking Above Ground and Underground Storage Tanks, Bulk Commercial Fertilizers and Pesticides, and Liquid Industrial Wastes	MDEQ - WRD & RRD, USEPA, USCG, NRCS, USDOT, MSP, Local Police & Fire Depts., LEPC, LARA, MDARD, Local Health Dept., and CDC	See **Attachment G** for appropriate regulatory authority

Notes: CDC = Center for Disease Control, LARA= Michigan Dept. of Licensing and Regulatory Affairs, LEPC=Local Emergency Planning Commission, MDA=Michigan Dept. of Agriculture & Rural Development, MDEQ WRD=Michigan Dept. of Environmental Quality Water Resources Division, MDEQ RRD= MDEQ Remediation and Redevelopment Division, MDLEG=Michigan Dept. of Labor and Economic Growth, MSP=Michigan State Police, NRCS=Natural Resources Conservation Service, USCG=US Coast Guard, USDOT=US Dept. of Transportation, USEPA=US Environmental Protection Agency. Source: Oakland County Water Resources Commissioner's Office

E. Corrective Action Notification

The procedure for responding to illicit discharges will vary depending on the nature of the discharge (ex: illicit connection to a storm sewer, failing septic system, illegal dumping, etc.) and jurisdiction of the discharge. Similarly, the timeline for eliminating a discharge will vary depending on the geographic extent of the issue, the complexity of the corrective action, responsible party's financial constraints, etc. Deviations to the procedures below may be made on a case by case basis and will be documented in the IDEP record and in the Permit Progress Report. In all cases, corrective action measures will be implemented to the maximum extent practicable and as soon as practicable. The status of corrective actions will be included in the Permit Progress Report to the MDEQ.

E.1. Discharges from Private Sources to MS4s

If the source of an illicit discharge has been determined to be privately owned, discharging to a MS4 and regulated by the MS4, the MS4 owner (city, village, county) will use the procedure below to notify and correct the illicit discharge.

It should be noted that discharges to drains within townships are typically under the jurisdiction of the county road agency. However, corrective action and enforcement for discharges to their MS4 is handled under the local jurisdiction's codes and ordinances, the county health department's sanitary code or other appropriate regulatory authority. In these situations, corrective action notification and enforcement will be led by the township who will coordinate with the health department or other agencies, as needed.

First Notice: Notification of Problem and Correction Needed

Once the source(s) of an illicit discharge has been identified, the MS4 owner will provide the first written notice to the responsible party of the illicit discharge by registered mail within 7 days. The first written notice will notify the responsible party of the illicit discharge, the MS4 owner's regulatory authority to require correction, and the potential enforcement actions if the discharge is not addressed. The responsible party will be required to contact the MS4 owner regarding plans for correction within 14 days. Tracking of all notifications and documentation of registered mail receipts shall be retained by the MS4 owner.

Final Notice

If 14 days have passed from the date of the 1st written notice and no response has been received from the responsible party, a second written notice will be sent. The second written notice will remind the responsible party of the illicit discharge, the prior notice, the regulatory authority to require correction, and the potential enforcement actions that will occur if the discharge is not addressed. The responsible party will be given an additional 14 days to contact the MS4 owner regarding plans for correction.

Enforcement

If 30 days have passed from the date of the first written notice, a citation will be issued. The MS4 owner will issue civil infractions as described in the Enforcement Response Procedure (ERP) for the violation of the applicable IDEP-related ordinances as listed in individual permittee stormwater management plans. A citation shall include fines and may require a court appearance.

Corrections/Repairs

In the event that the owner does not contact the MS4 owner within 14 days of the Final Notice and/or the discharge is not addressed by the owner 30 days after civil infractions have been issued, the MS4 owner will pursue other enforcement actions such as: discontinue water service to the property and designate the property uninhabitable, place a lien on the property, and initiate efforts to complete the necessary repairs, as authorized by law.

E.2. Discharges from Public Properties to MS4s

If the discharge is emanating from a public property (other than the permittee's property), the MS4 owner will request correction or a written corrective action plan be submitted within 60 days of notification. If the discharge cannot be corrected within 60 days of notification, interim measures shall be implemented, as practical, to reduce the impact of the discharge on the receiving water. The corrective action plan will include a schedule for completion with a goal of completion within 18 months of plan approval. The plan will be reviewed by the MS4 owner within 60 days and approved or denied with explanation. Approval of the plan will not waive any local permitting requirements of the community.

E.3. Discharges from Permittee's Properties

For discharges emanating from the permittee's own property, a corrective action plan will be developed within 60 days of discovery of the discharge. The plan will include a schedule for completion with a goal of completion within 18 months of plan completion. If the discharge cannot be corrected within 60 days of discovery, interim measures shall be implemented, as practical, to reduce the impact of the discharge on the receiving water.

E.4. Discharges from Septic Systems

For illicit discharges from failed septic systems, the corrective action procedures of the respective county health departments will be followed. These procedures are documented in the counties' stormwater management plans.

For all other types of discharges, the notification and corrective action procedures will be handled by the lead state or federal agency as identified in **Table 4**.

F. Evaluating Effectiveness

Records for each of the previous IDEP activities will be kept and a summary report will be prepared by ARC staff documenting the tracking metrics indicated in Section D and summarized in **Table 5**. This information will be included in the permittee's Progress Report to the MDEQ. The findings contained within the summary report will also be discussed at a IDEP Work Group meeting.

Table 5 – Tracking Metrics for Evaluating Effectiveness

Item	BMP	Goal	Tracking Measure
A.	IDEP #1: Mapping	100% of permittee outfalls in one GIS database	Portion of watershed (area) where known outfalls are mapped in GIS
B.	IDEP #2: Outfall Prioritization and Dry Weather Screening	Screen 100% of priority outfalls.	Number priority outfalls identified. Number of priority outfalls screened and sampled. Number of suspicious discharges identified (based on outfall screening results).
C.	IDEP #3: Advanced Investigations	Follow the advanced investigation protocol for initial priority areas and priority outfalls. 100% of illicit connections/discharges resolved	Portion (square miles/acres) of priority outfall drainage areas in Categories A and B and portion investigated. Number and type of Illicit connections/discharges identified and resolved.
D.	IDEP #4: Staff Training	1 person per MS4 trained at the Investigator level. 50% of field staff trained at the Alert Observer Level.	Number of staff trained at various competencies.
E.	IDEP #5: Pollution Complaints	100% of complaints addressed	Number of complaints received and referred or investigated. Number of issues identified. Number of issues resolved.
F.	IDEP #6: Inspection of Member Facilities	100% of existing facilities dye tested. 100% of issues addressed.	Number of facilities dye tested. Number of issues identified. Number of issues resolved.
G.	IDEP #7: IDEP Work Group	2 meetings per year. 80% member participation. 2 meeting summaries per year.	Number of meetings per year. Number of members in attendance at meetings. Number of meeting summaries.

Schedule: Metric Summary Report: Due biennially by February 28th starting in 2018.
Watershed-wide Assessment Report: Due every 10 years by June 30th starting in 2018.

ARC Member Responsibilities:

- ARC staff
  - Keep records on Items A, B and H and incorporate into the a biennial IDEP progress report.
  - Collect tracking metrics data from permittees as described below and produce a biennial IDEP progress report.

- Counties (road agencies, WCDPS and OCWRC)
  - Keep records of Items #C, D, E, F and G as listed in Table 5 and provide the information to ARC staff every two years for the IDEP progress report.
- Cities and Villages
  - Keep records of Items #D, E, F and G as listed in Table 5 and provide the information to ARC staff every two years for the IDEP progress report.
- Townships and Schools
  - Keep records of Items #D, F and G as listed in Table 5 and provide the information to ARC staff every two years for the IDEP progress Report.

G. References

Alliance of Rouge Communities (ARC). *Comparison Analysis of Alternatives to finding Illicit Discharges to Storm Water Systems Final Report.* RPO-WMGT-TR66. February 2007.

Alliance of Rouge Communities (ARC). *ARC-Funded IDEP Activities: Summary of Efforts* (presentation to the Full ARC). May 19, 2014.

Alliance of Rouge Communities (ARC). Full ARC Meeting Agenda/Handouts and Summary. November 1, 2011.

Alliance of Rouge Communities (ARC). Full ARC Meeting Agenda/Handouts and Summary. November 7, 2012.

Alliance of Rouge Communities (ARC). Full ARC Meeting Agenda/Handouts and Summary. November 21, 2013.

Alliance of Rouge Communities (ARC). Full ARC Meeting Agenda/Handouts and Summary. November 10, 2014b.

Alliance of Rouge Communities (ARC). Full ARC Meeting Agenda/Handouts and Summary. November 18, 2015.

Michigan Department of Environmental Quality (MDEQ). *Total Maximum Daily Load for the Rouge River, Wayne and Oakland Counties, Michigan*. August 2007.

Michigan Department of Environmental Quality (MDEQ) and Michigan Department of Licensing & Regulatory Affairs (LARA). *Michigan Guide to Environmental, Health, and Safety Regulations, 8th Edition*. June 2014.

Rouge Program Office (RPO). *Alliance of Rouge Communities Bacterial Source Tracking Final Report*. (URBSW7.27). December 2006.

Rouge Program Office (RPO). *Rouge River Restoration Summary: Wayne County Rouge River National Wet Weather Demonstration Project 1992 - 2014*. Undated.

Wayne County Department of Public Services. *Compliance Report: January 1, 2014 – December 31, 2015 Wayne County Certificate of Coverage (COC) MIG610040 General Storm Water Discharge Permit MIG619000 - Draft.* February 29, 2016.

Attachment A

Participating ARC Members

Permittees	
Communities	
Beverly Hills, Village of	Northville, City of
Bingham Farms, Village of	Northville Township
Birmingham, City of	Novi, City of
Bloomfield Hills, City of	Oak Park, City of
Bloomfield Township	Plymouth, City of
Canton Township	Plymouth Township
Dearborn Heights, City of	Redford Township
Farmington, City of	Southfield, City of
Farmington Hills, City of	Troy, City of
Franklin, Village of	Walled Lake, City of
Garden City, City of	Wayne, City of
Inkster, City of	Westland, City of
Lathrup Village, City of	West Bloomfield Township
Livonia, City of	
Melvindale, City of	
Counties	
Oakland County*	
Wayne County*	
Schools	
Henry Ford College	

**Participating in this Plan, but their commitments are outlined in their individual stormwater management plan which is pending MDEQ approval.*

Attachment B

Rationale for Initial Priority Areas

The Rouge River *E. coli* TMDL was reviewed and water quality data collected by Oakland County Water Resources Commissioners Office (OCWRC) and Wayne County Department of Public Services (WCDPS) were analyzed by ARC staff to determine the initial priority areas for illicit discharge investigations. The process used for each county was the similar; however, OCWRC had a more robust data set than WCDPS. The detailed approaches and results are described below for each county.

Wayne County

In 2015, WCDPS sampled the river for *E. coli*. The sampling locations was based on the data from the Rouge River *E. coli* TMDL which identified three sites in Wayne County with elevated dry weather *E. coli* counts with human DNA biomarkers present. These sites were:

- U15-Bell Branch u/s of 6 Mile Road, within Livonia,
- D62-Tonquish Creek u/s of Joy Road within Plymouth and Plymouth Twp,
- G97-Lower Branch u/s of Henry Ruff Road within Wayne, Westland, Romulus and the Lower 1 communities of Canton Twp, Plymouth Twp and Van Buren Twp.

Approximately 50 samples were collected at and upstream of these locations during dry conditions (see Appendix A). Several sites had *E. coli* counts above 1,000 cfu/100 mL as shown in Table 1. These sites have been grouped into four areas (Tonquish Creek, Bell Branch Tributary, Lower Rouge, and McKinstry and Sines and Arnold Drains) totaling 21,054 acres (33 sq miles).

Table 1. Wayne County Locations with *E. coli* above 1,000 cfu/100 mL (data from 2015)

Site ID	*E. coli* Count (cfu/100 mL)	Site Description
Tonquish Creek (4,163 acres)		
D62	1,483	Tonquish Creek at Joy Rd
D62A	1,145 3,255	N. Branch Tonquish at Ford St
D62C	3,654 6,867	S. Branch Tonquish at Main St
D62C.1	>24,196 72,700	Outfall N. side of S. Branch at Harvey St.
D62C.2	>24,192	Crestwood Condos E. of Sheldon
D62D	1,210	S. Branch at Ann Rd (west of Sheldon).
Bell Branch Tributary (1,730 acres)		
U15B	2,187	Tributary to the Bell Branch at the north end of Bicentennial Park which north of 7 Mile Road and west of Gill Road in Livonia
Lower Rouge (5,241 acres)		
G200	1,314	Lower Rouge in Canton Township from Proctor and Denton roads west including Superior Township
G200.1	4,106	Lower Rouge west of Ridge Rd. (DeStanCo property)
McKinstry Drain and Sines and Arnold Drain (9,920 acres)		
L51	4,884	McKinstry Drain at Michigan Ave.
L51A	1,336	McKinstry Drain at Sheldon Rd.
G94A	1,046	Sines and Arnold Drain at Beck Rd.

Based on this data, the following priority areas are recommended for illicit discharge investigations in Wayne County (Figure 1):

A. Tonquish Creek upstream of Joy Road in Plymouth and Plymouth Township. This includes the South Branch from the confluence to Plymouth Park and North Branch from the confluence to Sheldon Road.
B. Tributary to the Bell Branch at the north end of Bicentennial Park which is north of 7 Mile Road and west of Gill Road in Livonia.
C. Lower Rouge in Canton Township from Proctor and Denton roads west including Superior Township.
D. Sines and Arnold Drain in Canton Township at Sheldon Road 0.5 miles north of Michigan Ave and the McKinstry Drain in Canton Township south of Michigan Ave between Lilley and Beck roads including Van Buren and possibly Ypsilanti townships.

Oakland County

OCWRC has been collecting *E. coli* data at select locations since 1999. Samples are collected during dry weather conditions and prioritized (Category A, B, C, or D) for additional sampling according to OCWRC's Dry Weather Screening and Prioritization Criteria (Appendix B). The resulting dry weather screening data are shown in Appendix C. Waterbodies that fell into Categories C and D are shown in Table 2.

Table 2. Oakland County Locations in OCWRC Prioritization Categories C and D

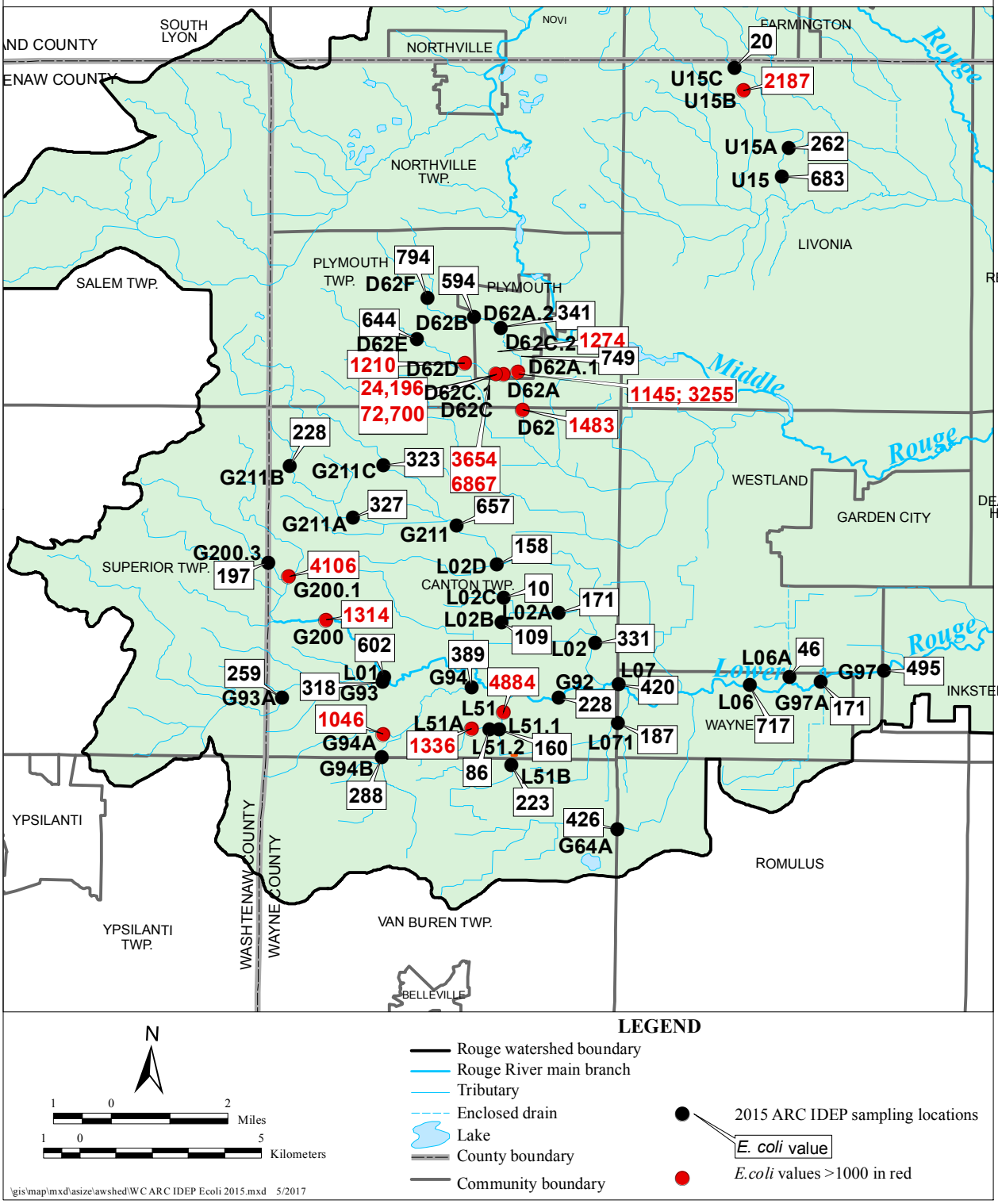
OCWRC Category	Waterbody	Average *E. coli* (cfu/100 mL)	Notes
CAT D	AUSTIN DRAIN	2,005	
CAT C	BLOOMFIELD HIGHLANDS DRAIN	2,121	
CAT D	CLARENCEVILLE DRAIN	1,666	[1]
CAT C	CLAUDE H. STEVENS NO.1 DRAIN	1,371	
CAT C	CLAUDE H. STEVENS NO.10 DRAIN	1,748	
CAT D	CLAUDE H. STEVENS NO.3 DRAIN	7,194	
CAT C	CLAUDE H. STEVENS NO.4 DRAIN	10,909	
CAT C	DEVONSHIRE DRAIN	1,181	
CAT C	EIGHT MILE DRAIN	1,940	
CAT C	FLANNERY DRAIN	1,765	
CAT C	FRACASSI	14,240	
CAT D	HAZEL DRAIN	309	[1]
CAT D	LAW DRAIN	351 – 20,671	[1]
CAT C	OWENS RELIEF DRAIN (BRANCH B)	7,095	
CAT D	OXFORD AVE. DRAIN	4,432	[1]
CAT D	PEARL STREET DRAIN	87,739	[1]
CAT D	U.S. 16 DRAIN	2,269	

[1] Illicit discharges investigated and removed. No further investigations are warranted at this time.

Except for those waterbodies that have already been investigated, the locations in Table 2 require further investigations to determine the presence and location of any illicit discharges. Therefore, the following areas, totaling 4,645 acres (7.3 sq. miles), are recommended for illicit discharge investigations in Oakland County:

Waterbody	**Community**	**Acres**
Austin Drain	Southfield	481
Bloomfield Highlands	Bloomfield Twp	116
Claude H. Stevens No. 1 Drain	Bloomfield Twp	102
Claude H. Stevens No. 10 Drain	Bloomfield Twp	41
Claude H. Stevens No. 3 & 4 Drains	Bloomfield Twp	318
Devonshire Drain	Bloomfield Twp	207
Eight Mile Drain	Southfield	2131
Flannery	Southfield	53
Fracassi Drain	Southfield	124
Owens Relief Drain (3 Branches)	Southfield	872
US-16 Drain	Farmington	200

Appendix A. WAYNE COUNTY ARC IDEP
2015 IDEP Screening *E. coli* Results



Site_Id	General Description	Date	Time	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Water Temperature (°C)	E.coli (MPN)	Total Coliforms (MPN)	Watershed	Community	Water Clarity	Water Color	Odor	Visible Debris/Pollution	Weather Conditions	Comments	notes for follow up
G00.2	Dunhill Way and Hauk Park Lower Rouge west of Ridge	09/25/15	13:45	9.37	1.938	20.5	97	11199	Lower	Canton Township	Slightly Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc		sample taken at Dunhill way and Hauk Park Riversedge sub	conductivity over 1.000
G200	Lower Rouge/Proctor/Denton	07/24/15	11:20	8.32	0.83	22.2	1314	>24196	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc	Sunny		E.coli over 1000
G200.1	Lower Rouge west of Ridge Rd (DeStaCo property)	09/17/15	12:00	6.53	1.149	16.6	4106	>24196	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	None		sample taken at the bridge at the DeStaCo property	E. coli over 1000 and conductivity over 1000 in followup sample
G200.3	3211 Napier Rd unknown tributary	09/25/15	14:05	7.95	0.826	17.5	197	17329	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc		sample taken at 3211 Napier Rd; some tires and springs in creek	
G211	Fellows Creek/Ford Rd	08/17/15	12:50	8.72	0.934	24.1	657	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		some tires at site	
G211A	Fellows Creek at Fairborn Rd Ford Rd east of Ridge Rd	08/17/15	13:05	7.71	0.814	22.7	327	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc			
G211B	Fellows Creek crossing at Poppleton Blvd east of Ridge south of Warren	08/17/15	13:30	8.22	0.795	22.3	228	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc			
G211C	Fellows Creek at Warren Rd/Beck-upstream is LR-9 bug hunt site	08/17/15	13:35	7.87	1.317	23.9	323	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc			conductivity over 1000
G64A	McClaugherty Drain/Hannan Rd	08/06/15	13:00	6.53	1.78	24	426	>24196	Lower	Romulus	Moderately Turbid	Clear	None/Natural	Natural(leaves, limbs etc		floating green scum present	conductivity over 1000
G64A	McClaugherty Drain/Hannan Rd	08/06/15	13:30	6.05	1.517	20.1	262	>24196	Lower	Romulus	Clear	Clear	None/Natural	Natural(leaves, limbs etc		some fixed trash present	conductivity over 1000
G92	Lower Rouge/Haggerty	07/24/15	10:45	8.47	0.936	20.1	228	17329	Lower	Canton Township	Moderately Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc	Sunny		
G93	Fowler Creek at Beck Rd	08/17/15	11:00	5.25	0.67	22.7	318	>24196	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc		riprap present upstream of bridge low flow	
G93A	Fowler Creek at Geddes Rd	08/17/15	9:30	5.98	0.824	22.5	259	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc			
G94	Sines Drain at Sheldon Rd	08/17/15	10:50	5.73	1.064	22	389	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		tire and riprap also present at site	conductivity over 1.000
G94A	Sines and Arnold Drain/Beck Rd	08/17/15	9:45	0.95	1.27	23.2	1046	17329	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		riprap on upstream side of culvert is causing flow blockage	E. coli over 1000, conductivity over 1.000, DO below 5.0mg/L
G94B	Apple Run Drain at Beck Rd	08/17/15	10:05	3.98	0.999	25.1	288	15531	Lower	Canton Township	Opaque	Gray	None/Natural	Natural(leaves, limbs etc			DO below 5.0mg/L

Site_Id	General Description	Date	Time	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Water Temperature (°C)	E.coli (MPN)	Total Coliforms (MPN)	Watershed	Community	Water Clarity	Water Color	Odor	Visible Debris/Pollution	Weather Conditions	Comments	notes for follow up
G97	Lower Rouge/Henry Ruff Rd	07/24/15	10:05	8.08	1.056	20.8	495	>24196	Lower	Westland	Moderately Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc	Sunny		conductivity over 1.000
G97A	outfall enclosed tributary east of Venoy Rd north of Michigan Avenue	08/06/15	13:55	10	2.321	17.2	171	>24196	Lower	Westland	Highly Turbid	Brown: Light	Musty-Faint	Natural(leaves, limbs etc		some floating and fixed trash in trash rack in outfall lots of dry weather flow	conductivity over 1.000
L02	Fellows Creek/Palmer Rd	08/17/15	11:45	4.83	1.11	22.6	331	>24196	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Trash-Fixed		boards dumped at site	conductivity over 1.00 DO below 5.0mg/L
L02A	Fellows Creek/Haggerty Rd	08/17/15	12:00	5.35	0.874	24.1	171	4611	Lower	Canton Township	Clear	Clear	None/Natural	Trash-Fixed			
L02B	Fellows Creek/Morton Taylor Rd	08/17/15	12:15	1.12	0.883	20.7	109	17329	Lower	Canton Township	Slightly Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc		washing machine other trash at site sample taken at enclosed drain outlet	DO below 5.0mg/L
L02C	Fellows Creek/Cherryston e	08/17/15	12:30	4.32	0.941	27.6	10	7270	Lower	Canton Township	Highly Turbid	Brown: Light	None/Natural	None			DO below 5.0mg/L
L02CR	Fellows Creek/Cherryston e	08/17/15	12:30	4.32	0.941	27.6	10	7270	Lower	Canton Township	Highly Turbid	Brown: Light	None/Natural	None		replicate taken at L02C	DO below 5.0mg/L
L02D	Fellows Creek north of Cherry Hill	08/17/15	12:40	0.92	1.442	23	158	8121	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc			conductivity over 1.00 DO below 5.0mg/L
L06	Lower Rouge/Wayne Rd	07/24/15	10:20	8.05	1.03	20.3	717	24196	Lower	Wayne	Slightly Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc	Sunny		conductivity over 1.000
L06A	Lower Rouge tributary in Glenwood Cemetery	08/17/15	11:30	1.1	2.351	17.1	41	15531	Lower	Wayne	Clear	Clear	None/Natural	Natural(leaves, limbs etc		very low flow light film and water stagnant	conductivity over 1.00 DO below 5.0mg/L
L07	Lower Rouge/Hannan	07/24/15	10:35	8.16	0.37	19.7	420	>24196	Lower	Canton Township	Slightly Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc	Sunny		
L51	McKinstry Drain at Michigan Ave	08/17/15	10:40	3.77	1.17	22.4	4884	>24196	Lower	Canton Township	Slightly Turbid	Brown: Light	None/Natural	None			E.coli over 1,000, DO below 5.0mg/L, and conductivity over 1.000
L51	McKinstry Drain at Michigan Ave	09/17/15	11:00	4.43	1.035	15.8	122	15531	Lower	Canton Township	Highly Turbid	Brown: Medium	None/Natural	None			conductivity over 1.00 DO below 5.0mg/L
L51.1	McKinstry Drain at end of Morton Taylor	09/17/15	11:10	9.42	0.977	16	160	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		end of Morton Taylor Rd. There is some flow here. Beware of dog	
L51.2	McKinstry Drain at Washburn Rd	09/17/15	11:30	6.68	1.535	17	86	>24196	Lower	Canton Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc		sample taken at the end of Washburn Rd (past gate)	conductivity over 1.000
L51A	McKinstry Drain at Sheldon Rd	08/17/15	10:30				1336	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		extremely low water levels, temperature, DO and conductivity could not be measured	E. coli over 1000
L51B	McKinstry Drain at Van Born Rd	08/17/15	10:20	1.03	0.685	22.7	223	>24196	Lower	Van Buren Township	Opaque	Green	None/Natural	Natural(leaves, limbs etc		duckweed, algae present	
LO1	Lower Rouge/Beck	07/24/15	11:05	6.5	0.866	21.3	602	24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc	Sunny		

Site_Id	General Description	Date	Time	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Water Temperature (°C)	E.coli (MPN)	Total Coliforms (MPN)	Watershed	Community	Water Clarity	Water Color	Odor	Visible Debris/Pollution	Weather Conditions	Comments	notes for follow up
LO71	Lower Rouge tributary at Hannan south of Michigan Ave	08/06/15	13:20	7.2	2.168	20.4	187	>24196	Lower	Canton Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		floating and fixed trash present	conductivity over 1.000
NA		09/25/15	13:50	5.14	4.083	17			Lower	Canton Township	Moderately Turbid	Brown: Light	None/Natural	Natural(leaves, limbs etc		Napier at Cherry Hill. Unmapped drain. This sample was not submitted to the lab	conductivity over 1.000
U15	Six Mile/east of Farmington	07/24/15	14:30	7.19	1.247	19.7	683	>24196	Upper	Livonia	Clear	Clear	Musty-Faint	Natural(leaves, limbs etc		sample taken on downstream side of Six Mile. Water low at site. Iron bacteria present at seeps	conductivity over 1.000
U15A	Curtis, west of Farmington, north of Six Mile	07/24/15	14:20	7.91	0.958	20.8	262	24196	Upper	Livonia	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sample taken upstream of enclosure	
U15B	north end of Bicentennial Park	07/24/15	14:00	3.46	0.754	21.2	2187	19863	Upper	Livonia	Clear	Clear	None/Natural	Natural(leaves, limbs etc			E.coli over 1000, conductivity over 1.000
U15C	Memorial Gardens/Eight Mile	07/24/15	13:50	9.33	0.796	27	20	7701	Upper	Livonia	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sample taken at base of dam in cemetery. Stream rerouted south of 8 Mile in Glen Eden memorial gardens	
D62	Tonquish Creek/Joy Rd	07/24/15	11:50	7.58	1.843	20.4	1483	>24196	Middle	Plymouth Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		some floating trash	E.coli over 1000, conductivity over 1.000
D62A	North Branch Tonquish Creek at Ford St	07/24/15	12:05	8.07	2.375	20.4	3255	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc			E.coli over 1000, conductivity over 1.000
D62A	North Branch Tonquish Creek at Ford St	09/17/15	12:30	8.49	2.119	18.2	1145	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc			E.coli over 1000, conductivity over 1.000
D62A.1	Tonquish Creek at Kellogg Street outlet	09/17/15	12:45	9.13	2.003	17.7	749	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sample taken at the south end of Kellogg St outlet	
D62A.2	Tonquish Creek at Harvey St	09/17/15	13:00	8.8	1.752	17.4	341	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sample taken at the upstream side of enclosure at Harvey/north of Ann Arbor Trail	conductivity over 1.000
D62B	Tonquish Creek/Sheldon Rd south of Penniman Rd	07/24/15	13:15	10.51	1.033	23.9	594	>24196	Middle	Plymouth Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc			conductivity over 1.000
D62B-R	Tonquish Creek/Sheldon Rd south of Penniman Rd	07/24/15	13:15				644	>24196	Middle	Plymouth Township						field replicate taken of D62B	
D62C	South Branch Tonquish at Main St	07/24/15	12:15	8.36	1.074	20.7	3654	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		some dripping from outfall right bank	E.coli over 1000, conductivity over 1.000*
D62C	South Branch Tonquish at Main St	09/17/15	13:10	8.15	1.374	18.6	6867	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		Main St at Rite Aid. Very steep banks	E.coli over 1000, conductivity over 1.000*
D62C.1	outfall north side of South Branch Tonquish Creek at Harvey St	09/17/15	13:30	7.26	1.206	19.1	>24196	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sample collected at Harvey outfall in culvert from Norh side	E. coli elevated (sewage source), conductivity over 1.000

Site_Id	General Description	Date	Time	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Water Temperature (°C)	E.coli (MPN)	Total Coliforms (MPN)	Watershed	Community	Water Clarity	Water Color	Odor	Visible Debris/Pollution	Weather Conditions	Comments	notes for follow up
D62C.1	outfall north side of South Branch Tonquish Creek at Harvey St	09/25/15	14:35		0.982	20.7	72700	141360	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		Harvey Street outfall lots of small fish. Surfactant: >0.25ppm; Ammonia 0.5 ppm	E. coli elevated (sewage source), conductivity over 1.000
D62C.2	Crestwood Condos east of Sheldon (south branch Tonquish creek)	09/17/15	13:55	8.75	0.904	18.2	1274	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		sampled in Crestwood condos, east of Sheldon Rd. lots of small minnows in deep pools	E. coli over 1000
D62C.2R	Crestwood Condos east of Sheldon (south branch Tonquish creek)	09/17/15	13:55	8.75	0.904	18.2	1259	>24196	Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		replicate of site above	
D62D	S. branch Tonquish at Jo Ann Road west of Sheldon Rd	07/24/15	12:30	8.2	0.687	20.7	1210	19863	Middle	Plymouth Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		minnows at site	E. coli over 1000
D62E	South Branch Tonquish Creek in Plymouth Township Park	07/24/15	12:50	8.2	0.3668	21.4	644	9208	Middle	Plymouth Township	Clear	Clear	None/Natural	Natural(leaves, limbs etc		lots of little fish/minnows	
D62F	North Territorial Road west of Sheldon	07/24/15	13:05	8.04	1.856	21	794	>24196	Middle	Plymouth Township	Slightly Turbid	Clear	None/Natural	Natural(leaves, limbs etc			conductivity over 1.000
City of Plymouth IDEP Harvey Street (with ALS Lab)																	Plymouth investigation samples below
Linden/Harvey	Linden/Harvey	09/29/15	10:15				130		Middle	Plymouth City	Clear	Clear	None/Natural	None		Ammonia >2.0, Surfactant <0.25	
1046 Palmer	1046 Palmer	9/29/2015	11:20				60		Middle	Plymouth City	Clear	Clear	Musty-Faint	None		surfactant 3.0ppm; Ammonia 0.75ppm	
1096 Palmer	1096 Palmer	09/29/15	11:00				TNTC		Middle	Plymouth City	Moderately Turbid	Milky/White	Sewage-Stong	Sewage Solids-Floating		toilet paper in storm; sanitary odor, sewage fungus present' TNTC with 100 dilutions Surfactant: <0.25, Ammonia <0.25	
1097 Hartsough	1097 Hartsough	09/29/15	14:15				NA		Middle	Plymouth City	Highly Turbid	Brown: Light	Musty-Faint	None	Overcast	rain intensifying, first flush starting in manhole; looks like old sanitary; storm sewer in middle of block. Hardly any flow	
1108 Beech	1108 Beech	09/29/15	9:45				80		Middle	Plymouth City	Clear	Clear	None/Natural	None		10 dilution of sample; Ammonia 0.25, Surfactant 1.5	
1124 Carol (West)	1124 Carol (West)	09/29/15	14:35				NA		Middle	Plymouth City	Clear	Clear	None/Natural	None	Raining	raining' sample not analyzed by the lab; water clear, some first flush	
656 Harvey	656 Harvey	09/29/15	10:30				10		Middle	Plymouth City	Clear	Clear	None/Natural	Natural(leaves, limbs etc		Ammonia: 0ppm; Surfactant> 0.25	
918 Hartsough	918 Hartsough	09/29/15	14:06				NA		Middle	Plymouth City	Highly Turbid	Gray	Musty-Strong	Trash-Floating		lab sample at this loction not analyzed; cigarette butts, highly turbid water; Ammonia >2.0, Surfactant 1.0	

Site_Id	General Description	Date	Time	Dissolved Oxygen (mg/L)	Conductivity (mS/cm)	Water Temperature (°C)	E.coli (MPN)	Total Coliforms (MPN)	Watershed	Community	Water Clarity	Water Color	Odor	Visible Debris/Pollution	Weather Conditions	Comments	notes for follow up
Beech/Harvey G62C.2	Beech/Harvey G62C.2	09/29/15	9:30				TNTC		Middle	Plymouth City	Slightly Turbid	Gray	Sewage-Stong	None		sewage fungus present; strong sewage odor; TNTC with 100 dilutions; Ammonia 0.25 ppm; Surfactant 0.25ppm	
1104 Sutherland		09/29/15					NA		Middle	Plymouth City						no sample analyzed at the lab	
																	*triggered follow up investigation

Appendix B. OCWRC Dry Weather Screening and Prioritization Criteria

The following is a portion of Oakland County's Stormwater Permit Application that was submitted in 2016.

Appendix J:

Attachment 2: WRC Alternative IDEP, Sampling Points and DWS Prioritization Criteria

IDEP Sampling Points

WRC has been collecting visual observation and water quality sampling data on County Drains since 1999. Dry weather Screening and water quality sampling procedures have been developed under the Voluntary Storm Water NPDES Permit for the Rouge Watershed in 1999 and the Oakland County General Stormwater NPDES Permit issued in 2003. Procedures are included in WRC Work instruction, EU 1702, " Illicit Discharge Elimination Program". (APPENDIX E)

Sampling points have been selected as to monitor the entire length of all open and enclosed County drains for illicit discharge sources. The following are taken into consideration when selecting sampling site locations; Drainage District and Oakland County boundaries; the length of the drain including significant branch and segment connecting points; points of discharge to surface waters or connected storm drains outside WRC's jurisdiction and; locations with a high potential for illicit discharge. The potential for illicit discharge is based on historical DWS and sampling results, complaints, historical discharges, spills or other water quality concerns. IDEP sampling points have been selected over time and are continually evaluated by the IDEP Coordinator. Sampling locations, DWS and sampling location and frequency can be adapted to meet the illicit discharge Investigation and water quality data needs of WRCs IDEP Program. Sampling point locations are subjective and can include MS4 Outfall and Discharge Point locations but are not mutually inclusive or exclusive of County Drain MS4 designations or MS4 Outfall or Discharge Point Locations. WRC currently performs routine DWS and sampling on 367 open and enclosed County Drains at 879 locations. A map and list of current 2014 sampling site locations are included as attachments.

Criteria for Prioritization and Scheduling of DWS and Illicit Discharge Investigations

Drains are prioritized and a frequency for DWS and scheduling of IDEP investigations on County Drains is established by on an ongoing review of current and historical DWS screening and sampling data, complaint investigation information and other surface water quality concerns received by WRC. A frequency for ongoing Dry Weather Screening and the need for IDEP Investigations are based on physical evidence of pollutants and or concentrations of *E.coli* found in the drain. A Table listing the criteria used for establishing DWS frequency and prioritizing of Illicit Discharge Investigation of the drains appears below. A schedule for going DWS of WRC IDEP Sampling points for the proposed permit period is attached.

Table 1 MS4 Sampling Categories & DWS Frequencies (based on average E. coli sampling values)

DWS Sampling Frequency	(1)Sampling Average	CAT-A	CAT-B	CAT-C	CAT-D	Sampling Criteria
1st Sampling						
5 years	1	X				No flow, E. coli less than 300, no visible pollutants
3 years	1	X				E. coli between 300 and 1,000
6 months	1	X				E. coli between 1,000 and 10,000
(2) Monthly	1	X	X			E. coli greater than 10,000 / other significant pollutant parameters
2nd sampling						
5 years	2	X				No flow, *E. coli* less than 300, no visible pollutants
1 years	2	X				*E. coli* between 300 and 1,000
6 months	2	X				*E. coli* between 1,000 and 10,000
Monthly	2	X	X	X		*E. coli* greater than 10,000 / other significant pollutant parameters
3rd sampling						
5 years	3	X				No flow, *E. coli* less than 300, no visible pollutants
1 year	3	X				*E. coli* between 300 and 1,000
6 months	3	X	X			*E. coli* between 1,000 and 10,000
Monthly	3	X	X	X	X	*E. coli* greater than 10,000 / other significant pollutant parameters

(1) Ongoing DWS of County Drains and scheduling for IDEP Investigation are based on a minimum of 3 consecutive sampling cycles, expect in cases where a discharge of pollutants is clearly evident and an immediate response is required (see below). Where consecutive samplings for averages E.coli exceed the minimum thresholds the frequency between DWS increases. Where 3 consecutive sampling indicate an average exceeding the E.coli threshold the Drain is scheduled for IDEP investigation

(2) The Table does not apply to IDEP Investigations, Complaint Investigations and Emergency Spill Response situations. The presence of sewage or other significant pollutants automatically places the suspect Drain / MS4 in Categories B-D. Drains placed in IDEP Investigation categories are removed from the schedule for DWS until an IDEP Investigation has been completed, and any illicit discharges sources been corrected. Drains that have completed an illicit discharge Investigation are placed on the back on the DWS list on a monthly schedule until 3 consecutive samplings indicate no visible signs of pollutants and average E.coli concentration less than 300 CFU / 100 ml. The last 3 consecutive samplings will be used to evaluate and schedule the drain for DWS going forward.

Drain Categories

A – Continued DWS and monitoring, as scheduled.

B – Scheduled Segmentation of Drain and upstream sampling to identify MS4s / DPs with suspect discharges. Sampling plan required.

C – Scheduled Illicit Discharge Investigations to locate and identify sources of pollutant discharge(s). Plan and approved budget required.

D - Ongoing Advanced IDEP investigation, source Identification, and Illicit Discharge Elimination. Plan, schedule, budget and funding source are TBD (To Be Determined).

Appendix C. 1999 - 2015 Oakland County Dry Weather Screening Results (cfu/100 mL)

Asset ID	Drain Name	Date 1	Result 1	Date 2	Result 2	Date 3	Result 3	Date 4	Result 4	Date 5	Result 5	Average E.coli	Category
8614	AMY DRAIN	6/24/2008	36,521	6/26/2009	22,349	6/27/2008	24,081	6/29/2010	141	11/19/2014	50	2681	CAT A
5175	AUSTIN DRAIN	4/19/2008	984	8/16/2012	2,008	7/29/2013	4,079					2005	CAT D
0	Bingham Farms Extension No. 1 Drain	9/26/2000	NA										CAT A
1387	BLOOMFIELD HIGHLANDS DRAIN	11/6/2007	2,121	4/1/2010	NA							2121	CAT C
6094	BLUE HERON	5/1/2008	50	8/17/2015	250							112	CAT A
13319	BORDEN DRAIN	7/30/2003	NA	4/15/2010	50							50	CAT A
5525	BORDEN DRAIN	7/30/2003	NA	5/11/2010	948							948	CAT A
0	BREN0N DRAIN	5/7/2008	50									50	CAT A
0	CADDELL DRAIN	12/18/2005	NA	12/21/2007	50							50	CAT A
14048	CADDELL DRAIN	12/18/2005	NA	12/21/2007	50	3/3/2009	1570	4/1/2010	100	7/23/2015	2368	369	CAT B
6070	CASE DRAIN	5/30/2008	472	1/20/2012	265							354	CAT A
0	CHESTER DRAIN (BRANCH A)	3/12/2008	100									100	CAT A
0	CHESTER DRAIN (BRANCH B)	7/6/2006	NA										CAT A
0	CHESTER DRAIN (BRANCH C)	3/12/2008	100									100	CAT A
5686	CLARENCEVILLE DRAIN	7/29/2016	1666									1666	CAT D
5567	CLAUDE H. STEVENS NO.1 DRAIN	6/23/2008	422	7/20/2012	1,078	10/11/2013	1,680	12/1/2014	4,623			1371	CAT C
6523	CLAUDE H. STEVENS NO.10 DRAIN	6/18/2008	50	10/11/2013	61,128							1748	CAT C
9050	CLAUDE H. STEVENS NO.11 DRAIN	6/18/2008	50	10/4/2013	100							71	CAT A
5700	CLAUDE H. STEVENS NO.3 DRAIN	5/1/2008	NA	10/11/2013	7,194							7194	CAT D
6558	CLAUDE H. STEVENS NO.4 DRAIN	5/1/2008	NA	10/11/2013	10,909							10909	CAT C
6099	CLAUDE H. STEVENS NO.5 DRAIN	5/30/2008	176	10/4/2013	50							94	CAT A
6159	CLAUDE H. STEVENS NO.6 DRAIN	5/1/2008	NA	10/11/2013	155							155	CAT A
6102	COY DRAIN	5/1/2008	745	10/15/2012	375	7/22/2015	1124					680	CAT B
5011	DALY DRAIN	6/18/2008	240									240	CAT A
8555	DECONICK DRAIN	1/0/1900	NA	4/1/2010	50	8/19/2015	50					50	CAT A
5417	DEVONSHIRE DRAIN	1/19/2005	4,401	2/6/2009	4,472	6/3/2009	1,974	3/31/2010	50			1181	CAT C
4670	DONAHUE DRAIN	9/11/2015	820									820	CAT A
82835	DONAHUE DRAIN	9/11/2015	394									394	CAT A
581844	DONAHUE DRAIN	9/11/2015	50									50	CAT A
0	DOROTHY WEBB DRAIN	6/19/2002	368	4/27/2010	200	8/19/2015	224					255	CAT A
0	EARLMOOR DRAIN	6/25/2008	219									219	CAT A
3279	EDWARDS RELIEF DRAIN	12/9/2005	640	5/1/2008	540	7/15/2010	1,032	8/4/2012	50			365	CAT A
905280	EIGHT MILE DRAIN	2/18/2005	252	6/2/2008	4,237	3/26/2010	493	7/8/2016	26,922			1940	CAT C
0	EVANS DRAIN	6/3/2008	6,411	7/1/2010	253							1274	CAT B
0	EVERGREEN RD. DRAIN	5/6/2008	50									50	CAT A
232	FLANNERY DRAIN	3/18/2009	352	7/12/2016	8,855							1765	CAT C
6217	FRACASSI DRAIN	4/25/2008	3,485	6/20/2008	3,453	10/20/2008	26,437	12/20/2013	2,427	12/22/2014	35,397	14240	CAT D
16069	FRANCIS DRAIN	7/22/2009	NA	6/15/2010	NA	8/15/2012	50	7/21/2015	612			175	CAT A

Asset ID	Drain Name	Date 1	Result 1	Date 2	Result 2	Date 3	Result 3	Date 4	Result 4	Date 5	Result 5	Average E.coli	Category
0	FRANCIS DRAIN	2/14/2008	NA	7/22/2009	2070	6/15/2010	1003	8/15/2012	466	7/21/2015	100	558	CAT B
	FRANKLIN SUBWATRESHED DRAIN	9/10/2015	375									375	CAT A
	FRANKLIN SUBWATRESHED DRAIN	9/10/2015	278									278	CAT A
6360	GRAVES DRAIN	6/19/2008	NA										CAT A
0	GRONKOWSKI DRAIN	4/28/2008	50									50	CAT A
6131	HAMLIN DRAIN	7/10/2001	2,128	2/2/2005	512	6/25/2008	1,605	3/31/2010	315	7/20/2012	158	614	CAT A
9514	HAZEL DRAIN	3/26/2009	255	7/29/2016	375							309	CAT D
0	HOLLANDAR DRAIN	8/6/2010	1,415									1415	CAT A
3357	JACOBS DRAIN	4/1/2010	500	9/10/2015	823							641	CAT A
3357	JAMIAN DRAIN	4/1/2010	50	9/10/2015	1,054							230	CAT A
0	JILBERT DRAIN	5/7/2008	100									100	CAT A
593737	KEMP DRAIN	4/27/2010	187	8/19/2015	265							223	CAT A
8223	KEMP DRAIN	4/27/2010	100	8/19/2015	250							158	CAT A
7565	KOLLAR DRAIN	5/1/2008	298	8/17/2015	2,652							889	CAT B
6609	LAW DRAIN	6/30/2005	NA	7/19/2010	1,232	11/20/2012	100					351	CAT A
6610	LAW DRAIN	6/30/2005	NA	7/19/2010	NA								CAT A
6612	LAW DRAIN	6/30/2005	NA	7/19/2010	2,047							2047	CAT A
6608	LAW DRAIN	6/30/2005	NA	7/19/2010	NA	11/20/2012	1,151					1151	CAT A
6604	LAW DRAIN	6/30/2005	NA	7/19/2010	NA								CAT A
6606	LAW DRAIN	6/30/2005	NA	7/19/2010	NA								CAT A
6603	LAW DRAIN	6/30/2005	NA	7/19/2010	NA								CAT A
6611	LAW DRAIN	6/30/2005	NA	7/19/2010									CAT A
6605	LAW DRAIN	6/30/2005	NA	7/19/2010	99,854	7/29/2013	682					8252	CAT B
6607	LAW DRAIN	6/30/2005	NA	7/19/2010	99,854	7/29/2013	4,279					20671	CAT D
0	LUEDERS DRAIN	7/30/2003	NA	6/27/2008	1,153	5/11/2010	2,688					1760	CAT B
0	LUZ DRAIN	11/15/2008	100									100	CAT A
5522	LYNN D. ALLEN DRAIN	6/18/2008	2,123	3/31/2010	198	7/29/2013	644					647	CAT A
8331	MAPLEHURST DRAIN	6/1/2005	NA	7/28/2010	755							755	CAT A
5643	MCCLUNG DRAIN	6/1/2008	653	7/1/2010	919	8/2/1012	4,213	7/30/2013	100	11/19/2014	50	417	CAT A
0	MCDONNEL DRAIN	4/25/2008	224									224	CAT A
1777	MCINTOSH DRAIN	4/30/2008	50	8/17/2015	100							71	CAT A
7575	MINNOW POND DRAIN	5/2/2008	873	8/15/2012	667							763	CAT B
6344	MINNOW POND DRAIN	5/2/2008	873	8/12/2012	1196							1022	CAT B
4620	MORGAN DRAIN	7/13/2007	NA	7/12/2016	278							278	CAT A
0	MORGAN DRAIN	7/13/2007	NA										CAT A
0	MORGAN DRAIN	7/13/2007	NA										CAT A
9688	MULLEN DRAIN	4/30/2008	584	9/10/2015	50							171	CAT A
42	MURPHY DRAIN	6/23/2008	100									100	CAT A
6146	NICHOLS DRAIN	1/25/2005	215	4/21/2005	446	5/30/2008	1,263	4/1/2010	1,479	11/19/2014	50	389	CAT A
7771	NORTHWESTERN DRAIN	4/1/2008	NA										CAT A
0	NORTHWESTERN DRAIN	4/1/2008	NA										CAT A
5631	OAK KNOB DRAIN	6/1/2008	50									50	CAT A
9551	OAKLAND HILLS ORCHARDS DRAIN	8/11/2009	NA	6/17/2010	124	8/15/2012	155	7/21/2015	100			124	CAT A
1316	OWENS DRAIN (BRANCH A)	4/4/2008	NA	7/11/2016	571							571	CAT A

Asset ID	Drain Name	Date 1	Result 1	Date 2	Result 2	Date 3	Result 3	Date 4	Result 4	Date 5	Result 5	Average E.coli	Category
1460	OWENS DRAIN (BRANCH B)	4/4/2008	NA	7/11/2016	7,095							7095	CAT C
5993	OWENS DRAIN (BRANCH C)	4/4/2008	NA	7/11/2016	960							960	CAT A
4969	OXFORD AVE. DRAIN	11/10/2009	NA	7/29/2026	4435							4435	CAT D
0	PEARL STREET DRAIN	2/1/2005	1002500	4/7/2008	7,679							87739	CAT D
7766	PEBBLE CREEK	6/30/2005	NA	8/12/2010	295	7/23/2015	155					214	CAT A
2871	PEBBLE CREEK	6/30/2005	NA	8/10/2010	NA	7/23/2015	400					400	CAT A
0	PERINOFF DRAIN	5/6/2008	747									747	CAT A
0	PETERSON DRAIN	5/5/2008	50									50	CAT A
1228	POWERS DRAIN	4/30/2008	690	8/17/2015	224							393	CAT A
7150	RANDOLPH STREET	7/22/2009	879	7/29/2015	4,380							1052	CAT A
400089	ROBERT A. REID DRAIN	6/18/2008	660									660	CAT A
0	ROBERT J. EVANS DRAIN	6/27/2008	367									367	CAT A
0	RUMMEL RELIEF DRAIN	5/7/2008	100									100	CAT A
8963	SHERMAN DRAIN	6/1/2008	50	7/8/2016	50							50	CAT A
0	SNYDER DRAIN	3/12/2009	200									200	CAT A
1361	SOUTHFIELD RD DRAIN	5/7/2008	100									100	CAT A
0	SPRAGUE BRANCH DRAIN	9/14/2004	NA	7/1/2006	NA								CAT A
0	SPRAGUE DRAIN	7/1/2006	NA										CAT A
0	SPRAGUE DRAIN NO. 2	8/23/1999	50	7/6/2010	1,307							256	CAT A
0	STEWART RELIEF DRAIN	5/5/2008	1,772	3/27/2010	50							298	CAT A
403780	SUMP DRAIN	12/1/2003	NA	7/29/2015	2260							2260	CAT B
7100	SUNKEN BRIDGE DRAIN	11/17/2009	NA										CAT A
0	TAYLOR DRAIN	4/1/2000	NA	6/4/2010	315							315	CAT A
0	TAYLOR DRAIN	4/1/2000	NA	6/4/2010	339							339	CAT A
7795	TOWNLINE DRAIN	7/22/2009	1823	6/17/2010	1177	7/23/2015	264					827	CAT B
0	TULANE DRAIN	11/19/2009	NA										CAT A
7801	U.S. 16 DRAIN	5/5/2008	2414	6/17/2010	1028	8/16/2012	5530	7/31/2013	1931			2269	CAT D
6701	VINEWOOD DRAIN	3/29/2005	NA	5/26/2010	100							100	CAT A
5560	WAGNER DRAIN	6/3/2008	992	8/3/2012	11,454	7/30/2013	155	11/18/2014	324			869	CAT A
8334	WARD DRAIN	4/27/2010	100	8/17/2015	NA							100	CAT A
0	WILCOX DRAIN	5/8/2008	71	4/1/2010	NA							71	CAT A

Attachment C

Outfall Screening Procedure for Identifying Potential Illicit Discharges

OUTFALL SCREENING PROCEDURE FOR IDENTIFYING POTENTIAL ILLICIT DISCHARGES

PREPARED FOR:

THE ALLIANCE OF ROUGE COMMUNITIES
46036 MICHIGAN AVE, CANTON, MICHIGAN 48188

SEPTEMBER 26, 2017

SECTION A – PURPOSE

The purpose of this procedure is to describe the protocols to inspect stormwater outfalls for the presence of illicit discharges. The Michigan Department of Environmental Quality (MDEQ) requires this procedure for stormwater discharges from municipal separate storm sewer systems (MS4) as part of an entity's National Pollutant Discharge Elimination System (NPDES) permit application.

SECTION B – PERFORMING FIELD OBSERVATIONS AT OUTFALLS

Outfalls will be assessed during dry weather conditions focusing on the criteria listed below. This assessment will be conducted following at least 48 hours with no precipitation.

1. Presence/absence of flow
2. Deposits/stains on the discharge structure or bank
3. Vegetation condition
4. Structural condition
5. Biology, such as bacterial sheens, algae, and slimes
6. Water clarity
7. Color
8. Odor
9. Floatable materials

A field form (See Figure 1) that documents the condition of the outfall and any discharge will be completed. In addition to the assessment of the field screening criteria, GPS positioning will be obtained for new or previously unscreened outfalls.

SECTION C – PERFORMING FIELD SCREENING

Only individuals that have been trained to do so will perform field screening activities. Acceptable training includes the following elements: goals of the IDEP program, how to recognize illicit discharges and sampling techniques. Four months of IDEP field experience consisting of outfall screening and/or advanced investigations can be substituted for classroom training.

If the visual observations indicate a potential illicit discharge, flow is observed and the source of the flow is not immediately identifiable then sampling will be performed. Based on the suspected discharge or the pollutant of concern, some or all of the following parameters will be assessed:

1. pH will be sampled if an industrial discharge is suspected. A pH measurement will be obtained using calibrated portable field meter such as pH pen or multi-parameter probe.
2. Detergents will be sampled if flow is observed to have foam or suds or if a sanitary discharge is suspected. The sample will be field screened for surfactants using a colormetric method such as CHEMets kit # K-9400 (www.chemetrics.com). The operating range of the test should be between 0 and 3 mg/L.
3. *E. coli* will be sampled if a sanitary discharge is suspected. These samples will be collected in a sterile 100 mL bottle, stored on ice, and transported to a laboratory for analysis. The analytical range should be between 10 and approximately 24,000 colonies/100 mL. Care should be taken not to disturb any accumulated sediment when collecting the *E. coli* sample.

4. Other parameters – Additional samples may be collected depending on the suspected source.

Disposable gloves will be worn to collect all samples. Gloves will be changed out between sampling sites. *E. coli* samples must be collected directly into the laboratory container, while sample collection cups may be used for pH and surfactants. Decontamination procedures for reusable sample collection containers consists of a triple rinsed with site water prior to taking a measurement.

E. coli samples shall be delivered to the laboratory with sufficient time for the samples to be analyzed within the method specific hold time. Confirmation of method specific hold times shall be obtained from the laboratory at the onset of sampling efforts. For *E. coli* analysis, the goal of the sampling team will be to deliver samples to the laboratory within 6 hours of collection where sample processing will occur within 2 hours for a total hold time of 8 hours. However, as these samples are intended to be used for screening purposes, a total hold time of 24 hours will be acceptable if it is not cost effective to meet the shorter hold time.

If sample result exceeds the threshold(s) provided in Table 1, then additional investigations are recommended to locate the source of the suspicious discharge.

Field screenings will be conducted in conjunction with field observation procedures as described in Section B. Screenings may also be conducted on an as needed basis if suspicious discharges are discovered by field staff during day-to-day operations, or if a pollution complaint or referral is received from the public or other agencies.

Table 1 – Guidance for Screening Results

Parameter	Follow-up Threshold
Typical Parameters	
pH	>9 or <6.5
Surfactants (mg/L)	>0.75
E. coli (cfu/100 mL or MPN/100 mL)	>5,000
Physical signs	unusual odor, color, clarity, floatables, deposits, stains, vegetation change, outfall structural damage
Additional Parameters	
Ammonia (mg/L)	>1
Conductivity (uS/cm)	>1,000
Turbidity (NTU)	>5
TDS (mg/L)	>500
Dissolved oxygen (mg/L)	< 5
Temperature (°F)	+5 warm water stream [1] +2 cold water stream [1]

SECTION D – PROCESS FOR REVISION

Any questions on this procedure should be directed to the entity's Stormwater Manager. This procedure shall be reviewed once per permit cycle by ARC staff for any updates.

Figure 1 – Outfall Screening Form

(Logo)

Outfall Inventory Form

Date: _____ Field Crew: _____

Weather: _____ ☐ 48 hrs no precip

1) IDENTIFICATION:

Outfall ID: _____ Size: _____ Material: _____

Location: _____

2) OBSERVATIONS:

Damage (circle all that apply):	None	Cracking	Spalling	Corrosion	Other
Describe:					
Vegetation (circle one):	None	Inhibited	Excessive		
Describe:					

Flow: _____ Known industrial or commercial uses in drainage area: Yes or No

Other: _____

(Circle all that apply)

Odor:	None	Sewage	Detergents	Sulfide	Oil/Gas	Rancid-Sour
Other:						
Color:	None	Clear	Gray	Black	Green	Brown Other:
Turbidity:	None	Cloudy	Opaque			
Floatables:	None	Sewage	Oil Sheen	Algae	Other:	
Biological:	None	Bacterial sheen	Algae	Slime		
Deposits:	None	Sediment	Other:			
Sample Obtained:	Yes or No					
Additional Observations:						

3) ANALYSES:

Temperature:			Equipment used:
Conductivity:	µS/cm		Equipment used:
pH Value:		pH mV:	Equipment used:
Ammonia:	ppm		Equipment used:
Detergents:	ppm		Equipment used:
Follow up:	Yes or No	Reason:	

4) PHOTOGRAPH:

Photo ID:

5) COMMENTS:

Attachment D

Advanced Investigation Procedure for Locating the Source of Suspicious Discharges

ADVANCED INVESTIGATION PROCEDURE FOR LOCATING THE SOURCE OF SUSPICIOUS DISCHARGES

PREPARED FOR:

THE ALLIANCE OF ROUGE COMMUNITIES
46036 MICHIGAN AVE, CANTON, MICHIGAN 48188

SEPTEMBER 25, 2017

SECTION A – PURPOSE

The purpose of this procedure is to describe the protocols to conduct advanced investigations in storm sewer systems to identify the source of a suspicious discharge. These investigations would be performed based on the results of field screening procedures or based on a pollution complaint. The Michigan Department of Environmental Quality (MDEQ) requires this procedure for stormwater discharges from municipal separate storm sewer systems (MS4) as part of an entity's National Pollutant Discharge Elimination System (NPDES) permit application.

SECTION B – PERFORMING SOURCE INVESTIGATIONS

Investigations will be carried out by someone who is trained as an IDEP Investigator. The minimum training requirements for an Investigator are 1) four hours of classroom instruction on how to identify and investigate sources of illicit discharges including failing septic systems, seepage from sanitary sewers, illegal dumping, and suspicious discharges from outfalls, and 2) knowledge of stormwater collection systems. Four months of IDEP advanced investigations field experience can be substituted for classroom training.

The investigation parameters will be selected based on the nature of the complaint or initial field screening results according to the parameters and threshold values indicated in the Field Screening Procedure for Identifying Potential Illicit Discharges Standard Operating Procedure. If working within a river/stream/open drain, then samples or observations will be taken at the origin of the suspicious discharge and at upstream locations. This will continue until the source is found or an enclosed storm sewer is located.

B.1 Determining Ownership

For complaint-based investigations, the owner/operator of the enclosed storm sewer will be determined. If it is suspected that a discharge originates from another jurisdiction, the other jurisdiction will be notified in writing of the suspicious discharge and any pertinent information about the discharge. This will occur within 10 working days of the discovery of the discharge from the other jurisdiction.

For investigations based on outfall screening results, the ownership step is not required because it is assumed that outfall screening was completed by the owner/operator.

For investigations based on instream sampling results and the owner/operator is participating in the Rouge River Collaborative IDEP Plan, the owner/operator will be notified of the suspicious discharge and storm and sanitary sewer maps will be obtained. Investigations will continue with the assistance of the owner/operator. If the owner/operator is not participating in the Rouge River Collaborative IDEP Plan, then they will be notified in writing of the suspicious discharge and any pertinent information about the discharge. This will occur within a timeframe ranging from immediately/within 24 hours (for sources posing an imminent threat) or for non-emergency issues up to 5 working days of the discovery of the discharge from the other jurisdiction.

B.2 Source Investigations

Enclosed drain investigations will proceed, following discovery of a suspicious discharge. The site of the discharge will be resampled during dry conditions for the appropriate indicator parameter. The sample parameters will be the same as those used during the initial field screening. If no flow is present, a second site visit will be conducted within 4 weeks of discovery, weather permitting. If no flow is present during

the second site, a third site visit will be conducted within 2 months of the date of the second visit, weather permitting.

Additional sampling/observations will be conducted upstream within the drainage system to narrow down the section of pipe from which the suspicious discharge is emanating. Sampling will be conducted as outlined in the Field Screening Procedure for Identifying Potential Illicit Discharges SOP.

Ideally, the sampling data or observations will allow staff to isolate a section of storm sewer to employ advanced investigation techniques. These techniques include televising the storm sewer, smoke testing, and conducting dye testing of homes, facilities, or sewers to verify a suspected illicit connection or discharge. The lead investigator will determine which of these techniques (or other technique) will be employed.

SECTION C – CLOSED CIRCUIT TELEVISING (CCTV)

CCTV inspections may be performed to determine if illicit connections are present in a storm drain. This allows for inspectors to identify suspicious taps to the drain. This work will be performed by a qualified staff or contractor. If possible, a video recording of the inspection will be performed. If possible, the lead investigator will be present during the CCTV inspection in order to direct additional efforts.

SECTION D – SMOKE TESTING

Smoke testing may be performed to determine if a residence or facility is illicitly connected to the storm drain. This work will be performed by a qualified staff or contractor. This testing requires homeowner notification to ensure all plumbing traps are filled with water and to make them aware of the potential intrusion of smoke into their homes. The local fire department should also be notified prior to testing. Non-toxic smoke is used. The drain may be plugged at various locations to ensure the testing is limited to the area of interest. Smoke found exiting a building plumbing vent indicates that the home is illicitly connected to the storm sewer. Care must be taken to perform this testing during the appropriate weather conditions in order not to mistaken steam from a heating system or fog as smoke. This testing may also identify improper connections between the storm and sanitary system.

SECTION E – DYE TESTING

Dye testing may be performed on plumbing fixtures (i.e. sinks, toilets, floor drains, etc.) within facilities/structures that are suspected of illicitly discharging non-stormwater flows into the MS4 to determine if they are properly connected to the appropriate sewer. Prior to administering a tracer dye, the lead investigator will submit a Notice of Intent to the MDEQ under General Rule 97 Certification of Approval Authorizing Tracer Dyes in Surface Waters. In addition, the following agencies shall be notified 48 hours prior to the application:

- Local Municipality
- Local Health Department
- Downstream Municipalities and Health Departments potentially affected
- Local Fire Department

Once approved, tracer dye will be applied to the appropriate plumbing fixture(s) per the manufacturer's recommendations and in a manner that will minimize potential effects to surface water. The following item will be documented when conducting a dye test:

- Facility or Building Name
- Date
- Location where dye is applied (i.e. second floor men's restroom)
- Time the dye is applied
- Time dye is observed in the field
- Location where dye is observed (i.e. sanitary manhole, northeast of building)
- Time of Travel
- Follow up action, if needed

SECTION F – PROCESS FOR REVISION

Any questions on this procedure should be directed to the entity's Stormwater Manager or ARC staff. This procedure shall be reviewed once per permit cycle by ARC staff for any updates.

Attachment E

Southeast Michigan Regional IDEP Training Plan

Southeast Michigan Regional
Illicit Discharge Elimination Program Training Plan
February 19, 2013

Introduction

Southeast Michigan is a seven county region with a population exceeding 4.7 million and comprising 16 watersheds. Five of the counties (Wayne, Washtenaw, St. Clair, Macomb and Oakland), comprising 11 watersheds, have a stormwater discharge permit. The permit requires training in various aspects of illicit discharge elimination. Recent audits of permittees by the Michigan Department of Environmental Quality have requested documentation of such training. This document lays out a plan for training municipal staff that is consistent with the language in the forth coming stormwater permit. The plan provides background information, objectives, details, and a cost-share arrangement to provide stormwater-related training to the permitted communities.

Background

The Alliance of Rouge Communities (ARC) has sponsored the Basic/Advanced IDEP Training for the last few years. This training was made available to ARC members without charge. The participation in the training has decreased over the years. Wayne County has provided training to non-ARC members in southeast Michigan on a cost recovery basis, e.g. contracts with Eastern Michigan University, Washtenaw County.

In 2011, SEMCOG sponsored five municipal training sessions across Southeast Michigan that targeted pollution prevention actions at municipal facilities. These ½ day sessions also included an illicit discharge identification component designed to educate a broad audience on basic recognition and reporting techniques. Staff from Washtenaw, Livingston, St. Clair, Oakland, Macomb and Wayne counties helped to develop the content of the training and co-host the session at one of their facilities. The sessions were also co-hosted by the DEQ, which provided Industrial Operator Training at no cost in the afternoon of each session. Over 350 people attended the five training sessions and 107 people took the DEQ Industrial Operator.

Objective

The goal of this plan is to provide training to the southeast Michigan region focused on illicit discharge elimination and storm water pollution prevention. There are three main objectives of this plan. The first objective is to establish a framework that shares responsibility and costs of training on a regional basis. The second objective is to be efficient by maximizing class size not duplicating efforts and spreading the costs over the region. The third objective is to make it unnecessary to charge a fee for the training.

Plan

The plan calls for an alternating five year schedule of training between Wayne County's IDEP training program and SEMCOG's municipal facility training and illicit discharge recognition training provided by the host county. The training would be provided once a year. The period covered by this plan is January 2013 through December 2017.

Every other year beginning with 2013, Wayne County's IDEP Training will be provided to the region. Table 1 lists the responsibilities and schedule for each IDEP training session. In 2014 and 2016, SEMCOG's municipal facility training with illicit discharge recognition training will be provided. Table 2 lists the responsibilities for the SEMCOG municipal facility and illicit discharge recognition training.

Note: This schedule is consistent with the language concerning training in the new State stormwater permit.

Cost Sharing

The goal is to distribute cost among the region by rotating sites for the training, so that the trainings can be offered at no charge. This would reduce the cost to the ARC since the IDEP training registration would be handled by others and since it would be offered every other year. This will also reduce the cost to other permittees, since the IDEP training charge would be offered at no charge (a savings of around $75 per attendee).

Table 1: Traditional IDEP Training Schedule and Responsibilities

Year	Staff Cost[1]	Facility/Refreshments[2]	Registration[3]	Print and Mail Certificates
2013	ADW, ARC	Wayne County	Wayne County	Wayne County
2015	ADW, ARC	Washtenaw County	Washtenaw County	Wayne County
2017	ADW, ARC	Macomb County	Macomb County	Wayne County

1- Will provide trainers for the event at no charge to the municipalities or other counties.
2- Will arrange for a training location and provide refreshments/snack
3- Will handle advanced registration and sign-in the day of the event and create an advertisement for distribution to the region. Distribution will occur via email to the county stormwater coordinators.

Table 2: SEMCOG Municipal Facility and Illicit Discharge Training Schedule and Responsibilities

Year	Staff Cost	Facility/Refreshments[3]	Registration[4]
2014	Host County[1], SEMCOG[2]	St. Clair County	SEMCOG
2016	Host County[1], SEMCOG[2]	Oakland County	SEMCOG

1- Will provide or arrange for trainers for the event in collaboration with SEMCOG.
2- SEMCOG donated time
3- Will arrange for a training location and provide refreshments/snack
4- Will handle advanced registration and sign-in the day of the event and create an advertisement for distribution to the region. Distribution will occur via email to the county stormwater coordinators.

By signing below, the parties agree to participate in the plan as outlined in Tables 1 and 2. The plan will become effective once all parties have signed it.

Macomb County Representative

Signature	Name/Title	Date
W Mustonich	W. MISTENOVICH CHIEF DEPUTY MACOMB COUNTY PUBLIC WORKS COMMISSIONER	05-17-2013

Oakland County Representative

Signature	Name/Title	Date

St. Clair County Representative

Signature	Name/Title	Date

Washtenaw County Representative

Signature	Name/Title	Date

Wayne County Representative

Signature	Name/Title	Date

SEMCOG Representative

Signature	Name/Title	Date

Alliance of Rouge Communities Representative

Signature	Name/Title	Date

Alliance of Downriver Watersheds Representative

Signature	Name/Title	Date

By signing below, the parties agree to participate in the plan as outlined in Tables 1 and 2. The plan will become effective once all parties have signed it.

Macomb County Representative

Signature	Name/Title	Date

Oakland County Representative

Signature	Name/Title	Date
	JAMES WINEKA / ASST. CHIEF ENG.	4/17/13

St. Clair County Representative

Signature	Name/Title	Date

Washtenaw County Representative

Signature	Name/Title	Date

Wayne County Representative

Signature	Name/Title	Date

SEMCOG Representative

Signature	Name/Title	Date

Alliance of Rouge Communities Representative

Signature	Name/Title	Date

Alliance of Downriver Watersheds Representative

Signature	Name/Title	Date

By signing below, the parties agree to participate in the plan as outlined in Tables 1 and 2. The plan will become effective once all parties have signed it.

Macomb County Representative

Signature	Name/Title	Date

Oakland County Representative

Signature	Name/Tile	Date

Saint Clair County Representative

Signature	Name/Tile	Date
Steve Tank	Environmental Health Director	4-29-13

Washtenaw County Representative

Signature	Name/Title	Date

Wayne County Representative

Signature	Name/Title	Date

SEMCOG Representative

Signature	Name/Title	Date

Alliance of Rouge Communities Representative

Signature	Name/Title	Date

Alliance of Downriver Watersheds Representative

Signature	Name/Title	Date

By signing below, the parties agree to participate in the plan as outlined in Tables 1 and 2. The plan will become effective once all parties have signed it.

Macomb County Representative

Signature	Name/Title	Date

Oakland County Representative

Signature	Name/Title	Date

St. Clair County Representative

Signature	Name/Title	Date

Washtenaw County Representative

Signature	Name/Title	Date
Evan Pratt	Evan Pratt Water Resources Commissioner	5/8/12

Wayne County Representative

Signature	Name/Title	Date

SEMCOG Representative

Signature	Name/Title	Date

Alliance of Rouge Communities Representative

Signature	Name/Title	Date

Alliance of Downriver Watersheds Representative

Signature	Name/Title	Date

By signing below, the parties agree to participate in the plan as outlined in Tables 1 and 2. The plan will become effective once all parties have signed it.

Macomb County Representative

Signature	Name/Title	Date

Oakland County Representative

Signature	Name/Tile	Date

Saint Clair County Representative

Signature	Name/Tile	Date

Washtenaw County Representative

Signature	Name/Title	Date

Wayne County Representative

Signature	Name/Title	Date
Kelly A Cave	KELLY A CAVE WAYNE CO STORM WATER COORDINATOR	11 APRIL 13

SEMCOG Representative

Signature	Name/Title	Date

Alliance of Rouge Communities Representative

Signature	Name/Title	Date
Kevin L. Buford	Kevin Buford, ARC Chair	3/28/13

Alliance of Downriver Watersheds Representative

Signature	Name/Title	Date

By signing below, the parties agree to participate in the plan as outlined in Tables 1 and 2. The plan will become effective once all parties have signed it.

Macomb County Representative

Signature	Name/Title	Date

Oakland County Representative

Signature	Name/Title	Date

St. Clair County Representative

Signature	Name/Title	Date

Washtenaw County Representative

Signature	Name/Title	Date

Wayne County Representative

Signature	Name/Title	Date

SEMCOG Representative

Signature	Name/Title	Date

Alliance of Rouge Communities Representative

Signature	Name/Title	Date

Alliance of Downriver Watersheds Representative

Signature	Name/Title	Date
	Mark Gahry, Chairman	May 7, 2013

By signing below, the parties agree to participate in the plan as outlined in Tables 1 and 2. The plan will become effective once all parties have signed it.

Macomb County Representative

Signature	Name/Title	Date

Oakland County Representative

Signature	Name/Title	Date

St. Clair County Representative

Signature	Name/Title	Date

Washtenaw County Representative

Signature	Name/Title	Date

Wayne County Representative

Signature	Name/Title	Date

SEMCOG Representative

Signature	Name/Title	Date
Kathleen Lomalco	Kathleen Lomalco	8/14/2013

Alliance of Rouge Communities Representative

Signature	Name/Title	Date

Alliance of Downriver Watersheds Representative

Signature	Name/Title	Date

Attachment F

Pollution Complaint Tracking Form

and

Suspicious Observation Documentation

Community Name

Pollution Complaint Tracking Form **Illicit Discharge Elimination Program**

Complaint made by: _____ Phone #: _____

Date:_____ Time: _____

Location of Problem: _____Offending Party (if known) _____

Nature of Problem (i.e. paper waste, odor, color, etc.): _____

_____

_____

Is this an Emergency? ☐ No
☐ Yes (then call 911)
Nature of Emergency: _____

_____

Initial Contact made to:
- ☐ 911
- ☐ City Dept. _____
- ☐ Wayne County (888) 223-2363
- ☐ Oakland County (248) 858-0931
- ☐ PEAS Hotline (State) 1-800-292-4706
- ☐ Other _____

Additional Comments:

_____
_____
_____
_____
_____
_____
_____
_____

Investigation Summary
- ☐ Initial Investigation
- ☐ Follow-up Investigation

Date of Investigation:_____
Investigating Agency: _____
Location of Discharge:

_____

Crew Members:

_____

Investigation Location:

_____
_____

Observations (odor, color, volume, etc.):

_____
_____
_____
_____
_____

Actions Taken (dye testing, notification letter, etc.):

_____
_____
_____
_____
_____
_____
_____

Were photos taken: ☐ Yes ☐ No

Agency Referred to: _____
Agency Contact: _____
Method of Communication:
☐ E-mail* ☐ Letter/memo* ☐ Phone
*Attached copies

Content of Communication:

_____
_____
_____
_____
_____

Date Corrected or Resolved: _____

Community Name

Pollution Complaint Tracking Form **Illicit Discharge Elimination Program**

Recommended Procedure

1. Take down complaint information.
2. Inform the caller that the problem will be further investigated and thank him/her for calling in.
3. If the problem is related to oil or fuel, please phone 911.
4. If the Problem is related to a construction site and there is sediment leaving that site, call Oakland County or Wayne County or the local soil erosion control enforcement agency.
5. All other types of complaints should be referred to the local public works department staff or their designee for investigation.
6. Please file completed form.
7. Every 2 years, provide the ARC with the number of complaints investigated, the type (sewage, oil, etc.) of illicit discharge found, if any, and the location (closest cross streets) of the discharge.

Attachment G

State and Federal Regulatory Mechanisms

Source: MDEQ, 2014

SECTION ONE: Environmental Regulations

Release Notification Requirements in Michigan*				
Act & Regulation	**Reporting Criteria**	**Initial Notification**	**Written Follow-up Report**	**Notes**
SARA Title III Section 304 40 CFR 355.40 (**EHS & Hazardous Substances**)	Release of a CERCLA **hazardous** substance (40 CFR 302, Table 302.4) or **Extremely Hazardous** Substance (EHS) (40 CFR 355, Appendix A) from a facility (all buildings, equipment, etc. located on a single site or adjacent sites owned or operated by the same person) at which a hazardous chemical (as defined under 29 CFR 1910.1200(c)) is used, produced or stored (including motor vehicles, rolling stock, and aircraft) in a quantity equal to or greater than its corresponding reportable quantity in any 24-hr period that migrates beyond the facility boundaries. Includes continuous release reportable under CERCLA Section 103. Excludes release that is federally permitted or that results in exposure to persons solely within the boundaries of the facility. See 67 FR 18899 (4/17/02) for guidance on the CERCLA federally permitted release definition for certain air emissions. Does not apply to the application, handling, and storage by an agricultural producer of a pesticide product registered under FIFRA. Excludes release < 1000 lbs of NOx released to the air from combustion or combustion-related activities.	Immediate (within 15 minutes after discovery): to LEPC(s) of any area(s) potentially affected, and SERC (DEQ PEAS line accepts notification on behalf of SERC) by owner or operator. Continuous releases must be identified as such and are reported initially and when there is a significant change in the release. See 73 FR 76948 (12/18/08): Only CAFOs are required to report continuous releases to the air from animal waste. Transportation related releases can be reported to 911.	As soon as practicable (within 30 days) after release: to LEPC(s) and SERC. Not required for releases that occur during transportation or from storage incident to transportation. For continuous releases: Initial written within 30 days after initial telephone notification: to LEPC(s) and SERC. Michigan SARA Title III Program accepts reports on behalf of the SERC.	PEAS: 800-292-4706 Contact your LEPC for a phone number to report releases. Call 911 if your LEPC is not active. For further information & LEPC contact information, contact Michigan SARA Title III Program 517-284-7272
CERCLA Section 103 40 CFR 302 (**Hazardous Substances**)	Release into the environment of a CERCLA **hazardous** substance (40 CFR 302, Table 302.4) or hazardous constituent in a mixture or solution (including hazardous waste streams) from a vessel or facility (any building, structure, etc. including motor vehicles, rolling stock, aircraft, pipe, pipeline, well, pond, lagoon, impoundment, ditch, landfill, or site where a hazardous substance has come to be located) in a quantity equal to or greater than its corresponding reportable quantity in any 24-hour period. Excludes petroleum, including oil, or any fraction thereof. See 40 CFR 302.6 for notification requirements for radionuclide releases. Includes continuous release: occurs without interruption or abatement or that is routine, anticipated, and intermittent and incidental to normal operations or treatment processes. See 67 FR 18899 (4/17/02) for guidance on the CERCLA federally permitted release definition for certain air emissions. See 71 FR 58525 (10/4/06) re Exemption for NOx releases to the air of < 1000 lbs from combustion or combustion-related activities. Does not apply to the application, handling, and storage by an agricultural producer of a pesticide product registered under FIFRA.	Immediate (within 15 minutes after discovery): to NRC by person in charge of vessel or offshore or onshore facility. Continuous releases must be identified as such and are reported initially and when there is a significant change in the release. See 73 FR 76948 (12/18/08) re Exemption from reporting continuous releases to the air from animal waste.	For continuous releases only: Initial written within 30 days after initial telephone notification & Follow-up within 30 days of first anniversary of initial written notification: to EPA Region 5.	NRC 800-424-8802 or online at **www.nrc.uscg.mil** For further information contact Michigan SARA Title III Program 517-284-7272 or EPA's Superfund, TRI, EPCRA, RMP, and Oil Information Center 800-424-9346

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
*****This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**.
Additional reporting requirements might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
NREPA 1994 PA 451 Part 201, **Environmental Remediation**	(i) Unpermitted release into the environment over a 24-hour period of a **hazardous** substance (*July 1, 2012, edition* of the CERCLA list, 40 CFR 302, Table 302.4) in a quantity equal to or greater than its corresponding reportable quantity. Does not include release solely from UST systems regulated under Part 213, and release solely from disposal area licensed under Part 115 and discovered through disposal area's hydrogeological monitoring plan. Release of substance regulated by MI Dept of Agriculture & Rural Development (MDARD) (fertilizer, soil conditioner, or pesticide) excluding normal agricultural practices: *also* report to MDARD.	Within 24 hours after discovery: to DEQ-RRD district office (PEAS after hours) by owner or operator or person holding easement interest. Report agricultural release to MDARD.	Upon request: Provide a response activity plan to DEQ-RRD district supervisor.	PEAS: 800-292-4706 MDARD Agriculture Pollution Emergency Hotline: 800-405-0101 For further information contact DEQ-RRD
NREPA 1994 PA 451 Part 201, **Environmental Remediation** (Continued)	(ii) The owner or operator has reason to believe that one or more **hazardous** substances are migrating or have migrated from his or her property and are present beyond the property boundary at a concentration in excess of cleanup criteria for unrestricted residential use. (iii) The release is a result of an activity that is subject to permitting under NREPA Part 615 and the owner or operator is not the owner of the surface property and the release results in **hazardous** substance concentrations in excess of cleanup criteria for unrestricted residential use. Hazardous substance means a hazardous substance defined in CERCLA (40 CFR 302), hazardous waste as defined in NREPA part 111, petroleum as defined in NREPA part 213, or any substance demonstrated to pose an unacceptable risk to public health, safety, welfare, or the environment. Cleanup criteria for unrestricted residential use means criteria that satisfy the requirements in section 20120a(1)(a) or (16); or as defined under NREPA part 213.	Within 30 days after discovery: to DEQ-RRD district office and owners of property to which hazardous substances migrated or owner of surface property by owner or operator of property where release occurred. Specific form required for: "Notice of Migration of Contamination" (Form EQP4482).	Upon request: Provide a response activity plan to DEQ-RRD district supervisor.	For further information contact DEQ-RRD
NREPA 1994 PA 451 Part 83, Pesticide Control Regulation 640, Commercial Pesticide Bulk Storage (**Agricultural**)	Release to the environment of a commercial **pesticide** >5 gallons or 100 pounds. Reportable agrichemical spills as defined in the provisions of SARA Title III section 304 and CERCLA section 103 shall be immediately reported to PEAS and the NRC. The term "release" excludes normal agricultural practices.	Immediate: to PEAS* Also notify NRC for spills reportable under SARA Title III & CERCLA. *MDARD prefers direct notification to their hotline. PEAS forwards all agriculture calls to MDARD.	Within 90 days: to MDARD Pesticide and Plant Pest Management Div. a revised site plan.	MDARD Agriculture Pollution Emergency Hotline: 800-405-0101 PEAS: 800-292-4706 NRC 800-424-8802 or online at www.nrc.uscg.mil For further information contact MDARD 517-284-5644

SECTION ONE: Environmental Regulations

Release Notification Requirements in Michigan*				
Act & Regulation	**Reporting Criteria**	**Initial Notification**	**Written Follow-up Report**	**Notes**
NREPA 1994 PA 451 Part 85, Fertilizers Regulation 641 Commercial Fertilizer Bulk Storage Regulation 642, On Farm Fertilizer Bulk Storage (**Agricultural**)	Release to the environment of a commercial **fertilizer** >55 gallons liquid or 650 pounds dry, or tank overfills; or an on farm fertilizer > 55 gallons liquid. For storage tank with bladder system instead of diking: also report all overfills and internal spills. The term "release" excludes normal agricultural practices. The term "liquid fertilizer" excludes anhydrous ammonia.	Immediate: to MDARD by commercial bulk storage facility personnel (For farms, the regulation does not specify who makes the report.)	Not required.	MDARD Agriculture Pollution Emergency Hotline: 800-405-0101 For further information contact MDARD 517-284-5644
Fire Prevention Code 1941 PA 207 Section 29.5g	A fire, explosion, spill, leak, accident, or related occurrence that involves the transportation, storage, handling, sale, use, or processing of hazardous material by a firm, person, or vehicle. **Hazardous** material = explosives, pyrotechnics, flammable gas, flammable compressed gas, flammable liquid, nonflammable compressed gas, combustible liquid, oxidizing material, poisonous gas or liquid, LPG, or irritating, etiologic, radioactive, or corrosive material. Act 207 amended 6/19/2006. The State Fire Marshall is in LARA, Bureau of Fire Services.	Immediately following incident, report known details regarding incident: to LARA Bureau of Fire Services *and* organized local fire department by owner of firm or vehicle or the person *and* the chief of first police or organized fire dept upon scene of incident.	Not required.	Contact LARA Bureau of Fire Services by calling the MSP HazMat hotline: 800-525-5555 For further information: contact local fire department
Fire Prevention Code 1941 PA 207 Part 2 of Storage and Handling of Flammable and Combustible Liquids rules (FL/CL code)	A release from an **AST** system of > 55 gal of any **flammable or combustible liquid** (flash point < 200°F) to the ground or within a secondary containment area during any 24 hour period. Note: Many liquid pesticides are combustible (flash point between 100 and 200°F).	As soon as practicable after detection of release: to PEAS by owner or operator.	Within 10 days after release: to LARA Bureau of Fire Services, Storage Tank Division outlining cause, discovery, response to prevent recurrence.	PEAS: 800-292-4706 For further information: contact LARA Bureau of Fire Services, Storage Tank Division 517-335-7211

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
*****This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**.
Additional reporting requirements might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
49 CFR 171 (**Transportation of Hazardous Materials**)	Initial verbal notice: Incident during transportation (including loading, unloading, temporary storage) involving (1) **hazardous** material and resulting in death, injury requiring hospitalization, public evacuation ≥ 1 hour, major transportation artery or facility closure ≥ 1 hour, or flight pattern alteration; (2) fire, breakage, spillage, or suspected radioactive contamination occurs involving a **radioactive** material; (3) fire, breakage, spillage or suspected contamination involving an **infectious** substance other than a regulated medical waste; (4) **marine pollutant** release exceeding 450 L (119 gal) liquid or 400 kg (882 lbs) solid; (5) other per judgment of person in possession of the hazardous material (e.g., continuing danger to life exists at scene of incident); (6) during transportation by aircraft, a fire, violent rupture, explosion or dangerous evolution of heat occurs as a direct result of a battery or battery-powered device. Hazardous material = CERCLA hazardous substance (40 CFR 302, Table 302.4), hazardous waste (40 CFR 262), marine pollutant (49 CFR 172.101 Appendix B), elevated temperature material, listed on Hazardous Materials Table (49 CFR 172.101), or meets criteria for hazard class/division in 49 CFR 173. Written follow-up report: Required for all of above, plus any unintentional release of hazardous material from a package (including tank); or any quantity of hazardous waste discharged during transportation; or structural damage to lading retention system, even if no release, on specification cargo tank with ≥ 1000 gal capacity containing hazardous material; or undeclared hazardous material discovered.	As soon as practical but no later than 12 hours after occurrence of the incident: to NRC by each person in physical possession of the hazardous material. (A reportable incident *must* be reported by telephone, not online.) For infectious substances, notice may be given to the Director, Centers for Disease Control and Prevention, U.S. Public Health Service instead of NRC.	Within 30 days after discovery: to US DOT on DOT Form F 5800.1 (01-2004) "Hazardous Materials Incident Report." Report online at https://hazmatonline.phmsa.dot.gov/incident/ Report must be updated w/i 1 year of incident if: Death results from injury; hazardous material or package info on prior report misidentified; damage, loss or cost not known on prior report becomes known or changes by $25,000 or 10%. See regulation for exceptions to written report.	NRC 800-424-8802 or online at www.nrc.uscg.mil U.S. Public Health Service 800-232-0124 For further information contact US DOT Hazardous Materials Information Center at 800-467-4922 or online at www.phmsa.dot.gov/hazmat
NREPA 1994 PA 451 Part 31, Water Resources Protection (Release to **surface of ground**, **surface water , groundwater** or **public sewer system**)	Unpermitted release directly or indirectly to public sewer system, surface of ground, surface water or groundwater from an oil storage facility or on-land facility of a "**polluting material**" (**oil**, **salt**, or any material specified in table 1 in R 324.2009) in excess of its threshold reporting quantity during any 24-hour period. See Part 5 rules, effective 8/31/01, for details and exemptions. HB 5586 effective 6/15/04 amended the reporting requirements. *Rule revisions pending as of April 2014.*	As soon as practicable after detection: to PEAS *and* 911 by owner, operator or manager. State agencies call 911 if release reported to them by another state or Canada.	Within 10 days after release: to DEQ-WRD district supervisor *and* to the local health department where the release occurred, outlining cause, discovery, response & prevention of recurrence.	PEAS: 800-292-4706 For further information contact DEQ-WRD

SECTION ONE: Environmental Regulations

Release Notification Requirements in Michigan*				
Act & Regulation	**Reporting Criteria**	**Initial Notification**	**Written Follow-up Report**	**Notes**
CWA Section 311 33 CFR 153 (**Navigable waters** – Coast Guard/DOT) Control of Pollution by **Oil** and **Hazardous** Substances, Discharge Removal	Discharge of a harmful quantity of **oil** or a **hazardous** substance from a vessel or onshore or offshore facility into or upon navigable **waters** of the United States or adjoining **shorelines**. Harmful quantity = oil discharge that violates applicable water quality standards, or causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines, or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines; or a CERCLA hazardous substance (40 CFR 302, Table 302.4) in a quantity equal to or greater than its corresponding reportable quantity. Oil = oil of any kind or in any form including petroleum, crude oil, petroleum refined products, sludge, oil refuse, oil mixed with wastes, etc., as well as vegetable and animal oils.	Immediate: to NRC by person in charge of vessel or facility. If direct reporting to NRC not practicable, may report to district Coast Guard or EPA predesignated OSC.	Not required.	NRC 800-424-8802 or online at **www.nrc.uscg.mil** District 9 Coast Guard 216-902-6117 EPA Region 5 for predesignated OSC 312-353-2318 For further information contact EPA Region 5 at 312-353-8200 or District 9 Coast Guard at 216-902-6045
CWA Section 311 40 CFR 110 (**Discharge of Oil**)	Discharges of **oil** that violate applicable **water** quality standards, or cause a film or sheen upon or discoloration of the surface of the water or adjoining **shorelines**, or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines. Oil = oil of any kind or in any form including petroleum, crude oil, petroleum refined products, sludge, oil refuse, oil mixed with wastes, etc., as well as vegetable and animal oils.	Immediate: to NRC by person in charge of vessel or facility.	Not required.	NRC 800-424-8802 or online at **www.nrc.uscg.mil** For further information contact DEQ-WRD
NREPA 1994 PA 451 Part 31, Water Resources Protection (**Sewer Systems**)	Discharge of untreated sewage or partially treated sewage from a **sewer system** onto land or into the waters of the state. "Sewer system" means a sewer system designed and used to convey sanitary sewage or storm water, or both.	Immediate (within 24 hours): to DEQ-ODWMA district office (PEAS after hours); Local health depts.; Daily newspaper circulated in source & affected counties; & Affected municipalities.	At end of discharge: to same parties notified initially on Form EQP 5857 (Rev. 12/2011) "Report of Discharges of Untreated or Partially Treated Sewage." Includes results of E. coli testing.	PEAS: 800-292-4706 For further information contact DEQ-ODWMA
NREPA 1994 PA 451 Part 41, **Sewerage Systems**	Discharges of pollutants from **sewerage systems** (which can include combined sewers) in excess of those authorized by a discharge permit issued by the DEQ to surface water or groundwater as a result of a facility breakdown or emergency. Sewerage systems handle sanitary sewage or other industrial liquid wastes.	Promptly: to DEQ-ODWMA district office (PEAS after hours) by owner.	Within 72 hours: to DEQ-ODWMA district supervisor, outlining cause, discovery, corrective actions taken to minimize impact, restore operations, and eliminate future unpermitted discharges.	PEAS: 800-292-4706 For further information contact DEQ-ODWMA

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
***This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**.
Additional reporting requirements might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
NREPA 1994 PA 451 Part 211, **Underground Storage Tanks** Part 213, Leaking Underground Storage Tanks	Releases of a **regulated substance** of any amount from underground storage tank (UST) systems (includes the emergency shutoff valve on down) subject to registration; overfill from UST fillpipe or vent onto ground; release from aboveground pipe attached to UST system. Regulated substance = petroleum or CERCLA hazardous substance (40 CFR 302, Table 302.4) or substance listed in CAA title 1 part A sect 112. Petroleum includes, but is not limited to, crude oil, motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, and petroleum solvents.	(Part 211) Within 24 hours after discovery: to LARA Bureau of Fire Services, Storage Tank Division by email, or fax on Form EQP 3826 (Rev. 4/12) If free product, Form EQP 3800 (Rev 02/2003) required by UST owner or operator, or employee of owner or operator. Includes releases discovered years after UST system removed	(Part 213) At 180 days Initial Assessment Report on Form EQP3841 (Rev. 02/2003) if not closed; at 365 days Final Assessment Report on Form EQP3842 (Rev. 11/2006) if still not closed; at closure Closure Report on Form EQP3843 (Rev. 02/2003) to DEQ-RRD district project manager.	Email: **deq-std-tanks@michigan.gov** Fax:517-335-2245 For further information contact DEQ-RRD or phone 800-MICHUST
NREPA 1994 PA 451 Part 111, **Hazardous Waste** Management (Generators; Treatment, Storage & Disposal Facilities (TSDF); Transporters)	Any amount of characteristic **hazardous waste** or listed hazardous waste (as defined in R 299.9203 “Hazardous Waste Rule 203”) reaches the surface water or groundwater, or A fire, explosion, or other release of hazardous waste or hazardous waste constituent occurs that could threaten human health or the environment. or A release of >1lb (or ≤1lb if not immediately cleaned up) hazardous waste to the environment from a tank system or associated secondary containment system. Additional hazardous waste reporting requirements under NREPA Part 201 and CERCLA. NREPA Part 111 requires transporters to comply with 49 CFR 171 and 33 CFR 153.	Immediate: to PEAS (or for Tank systems/secondary containment, within 24 hours of discovery: to DEQ-OWMRP) and to NRC if threat to human health or environment outside facility by generator, or owner or operator of TSDF, or transporter.	For large quantity generators and TSDF: Within 15 days after incident IF the contingency plan had to be implemented: to DEQ-OWMRP. For tank/secondary containment systems: Within 30 days of discovery: to DEQ-OWMRP. For transporters: to US DOT if required per 49 CFR 171.	PEAS: 800-292-4706 NRC 800-424-8802 or online at www.nrc.uscg.mil For further information contact DEQ-OWMRP
NREPA 1994 PA 451 Part 121, **Liquid Industrial Waste**	The **liquid industrial waste** spill could threaten public health, safety, welfare, or the environment, or has reached surface water or groundwater. Liquid industrial waste includes nonhazardous brine, by-product, industrial wastewater, leachate, off-spec commercial chemical product, sludge, sanitary or storm sewer clean-out residue, grease trap clean-out residue, spill residue, used oil, or other liquid waste not regulated by other laws.	Immediate: to PEAS and local authorities by generator, transporter, or owner or operator of facility. Refer to MCL 324.12111(1) for required report elements	Prepare within 30 days after incident. Submit upon request: to DEQ-OWMRP district supervisor. Refer to MCL 324.12111(1) for required report elements	PEAS: 800-292-4706 For further information contact DEQ-OWMRP
NREPA 1994 PA 451 Part 55, **Air Pollution** Control	Abnormal condition, start-up, shutdown, or malfunction that results in emissions exceeding permissible (in rule, permit or order) levels of **hazardous air pollutants** (HAPs) (CAA Sect. 112(b)) or **toxic air contaminants** (as specified in permit) for > 1 hour, or any air contaminant for > 2 hours. Written follow-up report only required for emission exceedences lasting > 2 hours.	As soon as possible, but not later than 2 business days after discovery: to DEQ-AQD district office (PEAS after hours) by owner or operator.	Within 10 days after start-up, shutdown, or abnormal condition, malfunction corrected. Or within 30 days of abnormal condition, malfunction discovery- whichever first: to DEQ-AQD district supervisor.	PEAS: 800-292-4706 For further information contact DEQ-AQD

SECTION ONE: Environmental Regulations

Release Notification Requirements in Michigan*				
Act & Regulation	**Reporting Criteria**	**Initial Notification**	**Written Follow-up Report**	**Notes**
NREPA 1994 PA 451 Part 55, **Air Pollution** Control (Permit to Install Exemptions)	Emergency venting of **natural gas** from transmission and distributions systems or **field gas** from gathering lines in amounts > 1,000,000 standard cubic feet per event. Emergency = unforeseen event that disrupts normal operating conditions and poses a threat to human life, health, property or the environment if not controlled immediately. See R 336.1285(mm), effective 6/20/2008, for details.	Within 24 hours of the event: to PEAS by owner or operator.	Not required.	PEAS: 800-292-4706 For further information contact DEQ-AQD
Public Health Code 1978 PA 368 Part 133, **Dry Cleaning**	Condition or incident presents a threat or hazard to **public health** or safety.	Immediate: to DEQ-AQD district office (PEAS after hours) by owner or operator.	Within 30 days after incident: To DEQ-AQD district supervisor.	PEAS: 800-292-4706 For further information contact DEQ-AQD
NREPA 1994 PA 451 Part 615, Supervisor of Wells (**oil and gas production fields**)	A loss, spill or release of (1) any amount of **brine**, **crude oil**, or **oil or gas field waste** *unless* it is less than 42 gallons and occurs while an authorized representative is on site and is completely contained and cleaned up within 1 hour, or (2) any unpermitted amount of **natural gas**, or (3) **chemicals** used in association with oil and gas activities.	Within 8 hours after discovery of: 42 gallons or more of brine, crude oil, or oil or gas field waste, or any amount of chemical or natural gas, or; less than 42 gallons if the spill contacts surface water, groundwater, or other environmentally sensitive resources, or is not completely contained and cleaned up within 48 hours: to DEQ-OOGM district office (PEAS after hours) by permittee.	Within 10 days after discovery of loss or spill: to DEQ-OOGM district supervisor on Form EQP-7233 (Rev 1/2012) "Report of Loss or Spill." by permittee Written report only for less than 42 gallons of brine, crude oil, or oil and gas field waste if spill does not contact surface water, groundwater, or other environmentally sensitive resources, and is completely contained and cleaned up within 48 hours.	PEAS: 800-292-4706 For further information contact DEQ-OOGM
49 CFR 191 Transportation of Natural and Other **Gas by Pipeline**	An incident, meaning: (1) Event that involves a release of **gas** from a pipeline, or of liquefied natural gas, liquefied petroleum gas, refrigerant gas, or gas from an LNG facility that results in: Death or hospitalization; or Property damage ≥ $50,000; or estimated gas loss of ≥ three million cubic feet. (2) Event that results in emergency shutdown of LNG facility. (3) Significant event per operator. Written Incident reports not required for LNG facilities. Applies to pipeline systems and the transportation of gas through those systems in or affecting interstate or foreign commerce. (See 49 CFR 191.3 for details.)	Earliest practicable moment following discovery: to NRC by operator. Notification must be electronic unless there is a safety-related condition to report.	As soon as practicable, and within 30 days after discovery: to US DOT. on DOT Form PHMSA F 7100.1 "Incident Report – Gas Distribution System." or PHMAS F 7100.2 "Incident Report – Gas Transmission and Gathering Systems" or PHMSA F 7100.3 "Incident Report – Liquefied Natural Gas (LNG) Facilities" Supplemental report filed as necessary as soon as practicable.	NRC 800-424-8802 or online at **www.nrc.uscg.mil** For further information contact US DOT Pipeline Safety Information Center at 202-366-4595 or online at http://ops.dot.gov

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
*****This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**.
Additional reporting requirements might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

Release Notification Requirements in Michigan*

Act & Regulation	Reporting Criteria	Initial Notification	Written Follow-up Report	Notes
49 CFR 195 Transportation of **Hazardous Liquids by Pipeline**	Release of hazardous liquid (**petroleum**, **petroleum products**, or **anhydrous ammonia**) or **carbon dioxide** from a pipeline system that results in any of the following: (a) Explosion or fire; (b) Release of ≥ 5 gallons (except if < 5 barrels released due to maintenance and release not otherwise reportable, confined to property, does not pollute water, and cleaned up promptly); (c) Death of any person; (d) Injury requiring hospitalization; or (e) Property damage > $50,000. (See 49 CFR 195.50, revised 1/8/02, for details) Applies to pipeline facilities and the transportation of hazardous liquids associated with those facilities in or affecting interstate or foreign commerce. (See 49 CFR 195.1 for details.)	Earliest practicable moment following discovery: to NRC by operator if Release caused: Death or hospitalization; Fire or explosion; Property damage; Water pollution; or was Significant per the operator.	As soon as practicable, and within 30 days after discovery: to US DOT on DOT Form PHMSA F 7000-1 "Accident Report – Hazardous Liquid Pipeline Systems" Supplemental report must be filed within 30 days after operator receives changes or additions to original report.	NRC 800-424-8802 or online at **www.nrc.uscg.mil** For further information contact US DOT Pipeline Safety Information Center at 202-366-4595 or online at http://ops.dot.gov
1978 PA 368 Part 135, **Radiation** Control	For any emergency. Or for incident involving naturally occurring or accelerator produced **radioactive material**- Immediate notice if: Incident may have caused or threatens to cause: dose to body 25 rems, to skin 150 rems, to extremities 375 rems (per rule 247); 24 hour concentration exceeds 5000 times limits specified in table II of rules 261 to 269; contamination causes operation shut down for 1 week, or property damage >$100,000. Notice within 24 hours if: Incident may have caused or threatens to cause: dose to body 5 rems, to skin 30 rems, to extremities 75 rems (per rule 247); 24 hour concentration exceeds 500 times limits specified in table II of rules 261 to 269; contamination causes operation shut down for 1 day, or property damage >$1000.	Immediate or within 24 hours (see reporting criteria): to DEQ-OWMRP Radiological Protection Section (PEAS after hours) or MSP Operations Division for all **Power Plant** related incidents (day or night). by licensee or registrant.	Within 30 days after release: to DEQ-OWMRP Radiological Protection Section by licensee or registrant. Written report also required if level of radiation or concentration of radioactive material in unrestricted area >10 times any applicable limit. See Rule 250 (R 325.5250) for required report content.	DEQ-OWMRP Radiological Protection Section 517-284-5185 MSP Operations Div 517-241-8000 PEAS: 800-292-4706 For further information contact DEQ-OWMRP Radiological Protection Section
10 CFR 20 (Standards for Protection Against **Radiation**)	For incident involving source, by-product, or special nuclear **radioactive material**- Immediate notice if: Event that may have caused or threatens to cause: effective dose equivalent to individual 25 rems, lens dose equivalent 75 rems, shallow-dose equivalent to skin or extremities 250 rads; individual could receive 5 times annual limit on intake in 24 hours. OR Any lost, stolen, or missing licensed material in an aggregate quantity equal to or greater than 1000 times the quantity specified in appendix C to part 20 under such circumstances that it appears to the licensee that an exposure could result to persons in unrestricted areas. Notice within 24 hours if: Event that may have caused or threatens to cause: an individual in 24 hours to receive effective dose equivalent >5 rems, lens dose equivalent >15 rems, shallow-dose equivalent to skin or extremities >50 rems; individual could receive >1 times annual limit on intake in 24 hours.	Immediate or within 24 hours (see reporting criteria): to USNRC by USNRC Licensee responsible for the incident.	Within 30 days of incident: to USNRC by licensee. Report content specified in 10 CFR 20.2003 Written report also required for occurrences as specified in 10 CFR 20 Section 20.2203 and after the occurrence of any lost, stolen, or missing licensed material becomes known to the licensee, and if at the time the report is filed all licensed material in a quantity greater than 10 times the quantity specified in appendix C to part 20 is still missing.	US Nuclear Regulatory Commission (USNRC) 301-816-5100 For further information contact DEQ-OWMRP Radiological Protection Section 517-284-5185
MIOSHA 1974 PA 154 Section 61, Records & Reports; Notice of **Fatalities or Hospitalization**	Any release that results in one **death** or the **hospitalization** of 3 or more persons.	Within 8 hours: to MIOSHA Hotline.	Not required.	MIOSHA Fatality or Catastrophe Hotline 800-858-0397 For further information contact LARA-MIOSHA 517-322-1831

SECTION ONE: Environmental Regulations

Release Notification Requirements in Michigan*				
Act & Regulation	**Reporting Criteria**	**Initial Notification**	**Written Follow-up Report**	**Notes**
TSCA 40 CFR 761.125 (**PCBs**)	Spills of **PCB**s at concentrations of 50 ppm or more and subject to decontamination requirements under TSCA that: contaminate surface water, sewers, drinking water supplies, grazing lands or vegetable gardens, or exceed 10 pounds. (TSCA specifies that these requirements are in addition to any under CWA or CERCLA. e.g. CERCLA requires spills of 1 pound or more to be reported to NRC.)	As soon as possible after discovery, and within 24 hours: to EPA Region 5.	Not required to be submitted. Records of cleanup and certification of decontamination shall be documented.	EPA Region 5 Corrective Action Section 312-886-7890 For further information contact EPA Region 5 Corrective Action Section
SARA Title III Section 313 40 CFR 372 (**Toxic chemical** release reporting)	Covered facilities as defined in 40 CFR 372 subpart B are subject to **toxic** chemical release reporting for toxic chemicals and chemical categories listed in 40 CFR 372 subpart D.	Not applicable.	Annually by July 1: to EPA & SERC on EPA's Form R "Toxic Chemical Release Inventory Reporting Form" (EPA Form 9350-1, Rev.10/2011) Report aggregate releases (permitted & unpermitted)	Michigan SARA Title III Program accepts reports on behalf of SERC For further information contact Michigan SARA Title III Program 517-284-7272

Acronyms used in table:

AQD = Air Quality Division
AST = Above Ground Storage Tank
CAA = Clean Air Act
CAFO = Concentrated Animal Feeding Operation
CERCLA = Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR = Code of Federal Regulations

CWA = Clean Water Act
DEQ = Michigan Department of Environmental Quality
DOT = Department of Transportation
EHS = Extremely Hazardous Substance
EPA = U. S. Environmental Protection Agency
EPCRA = Emergency Planning & Community Right-to-Know Act
FIFRA = Federal Insecticide, Fungicide, & Rodenticide Act
FL/CL = Flammable and combustible liquids
FR = Federal Register
HAP = Hazardous Air Pollutant

HazMat = Hazardous Materials
HB = House Bill
LARA = Michigan Department of Licensing & Regulatory Affairs
LEPC = Local Emergency Planning Committee
LNG = Liquefied Natural Gas

LPG = Liquefied Petroleum Gas
MCL = Michigan Compiled Laws

MDARD = Michigan Department of Agriculture & Rural Development
MIOSHA = Michigan Occupational Safety and Health Administration
MSP = Michigan Department of State Police
NRC = National Response Center (U.S. Coast Guard)
NREPA = Natural Resources & Environmental Protection Act
ODWMA = Office of Drinking Water & Municipal Assistance

OOGM = Office of Oil, Gas, and Minerals
OPS = Office of Pipeline Safety (US DOT)
OSC = On Scene Coordinator
OWMRP = Office of Waste Management & Radiological Protection

PA = Public Act (Michigan)
PCB = Polychlorinated biphenyl
PEAS = Pollution Emergency Alerting System
PHMSA = Pipeline & Hazardous Materials Safety Administration
RMP = Risk Management Program

RRD = Remediation and Redevelopment Division
SARA = Superfund Amendments and Reauthorization Act of 1986
SERC = State Emergency Response Commission
TRI = Toxic Chemical Release Inventory
TSCA = Toxic Substance Control Act
TSDF = Treatment, Storage & Disposal Facility
US DOT = U.S. Department of Transportation
USNRC = U. S. Nuclear Regulatory Commission

UST = Underground Storage Tank
WRD = Water Resources Division

NOTE: If the release is a **THREAT TO HUMAN HEALTH or SAFETY**, call 911 or your local fire department.
*****This table covers only those reporting requirements found in rules and regulations that apply in Michigan. **Releases might be reportable under multiple regulations**.
Additional reporting requirements might be found **in permits**, licenses, registrations, **contingency and pollution prevention plans**, and local ordinances.

STANDARD OPERATING PROCEDURE
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

THE CITY OF TROY
500 W. BIG BEAVER ROAD, TROY, MICHIGAN 48084

MARCH 2016

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of current and proposed BMPs to meet the minimum control measure requirements for the construction stormwater runoff control program to the maximum extent practicable. The City of Troy does administer a Part 91 program and is a designated municipal enforcement agency. The following standard operating procedure provides a description of the procedures the City employs for construction site runoff control that includes notification procedures and ensuring proper permits are obtained by those disturbing greater than one acre of soil.

SECTION B – APPLICATION PROCEDURE

Prior to any earth disturbance, the City of Troy will ensure that construction activity one acre or greater in total earth disturbance with the potential to discharge to the MS4 does obtain a Part 91 Permit and/or a State of Michigan Permit by Rule or is reviewed by an approved Authorized Public Agency through the site plan review process. These requirements are documented in both the City's Building Code and Grading and Soil Erosion Control Ordinances.

B.1 Chapter 86, Section 5 – Permit Applications, Soil Erosion & Sedimentation Control (SESC) Plans; Review Procedures and Requirements

A. After the effective date of this ordinance, no person shall maintain or undertake an earth change on any land within the City that requires a soil erosion permit without a soil erosion permit and approved soil erosion and sedimentation control plan as provided by Part 91, the Rules, and this ordinance.

1. An application for a soil erosion permit shall be submitted to the City engineer by the owner of the land upon which the earth change is proposed to be made or by the owner's designated agent. The applicant, if not the owner, shall have written authorization from the landowners to sign the soil erosion permit application and secure a soil erosion permit in the landowners' name.

2. The application shall be on forms provided by the Engineering Department and accompanied by an application review and inspection fee made payable to the City of Troy in the amount provided in the Development Standards adopted by the resolution of the City Council.

3. The application shall also be accompanied by a soil erosion and sedimentation control plan that includes the following required data:

a. A vicinity sketch of the site location and the proximity of any proposed earth change to the surface Waters of the State or to drains or storm water inlets leading directly to the surface Waters of the State.

b. A boundary line survey or legal description of the site.

c. The name, address, and telephone number of the landowner or designated agent, and of the developer, if different form the landowner.

d. A plan of the site at a scale of not more than 100 feet to an inch or as otherwise determined adequate by the City Engineer, showing existing topography or slope description at five-foot intervals.

e. A soil survey map or written description of the soil types of the exposed land area contemplated for the earth change.

f. Details for the proposed each change including:

1) A description of the location of the physical limits of each proposed earth change.

2) A description of the location of all existing and proposed onsite drainage and dewatering facilities.

3) The timing sequence of each proposed earth change, such as starting and completion dates of the development sequence and time exposure of each area prior to the completion of effective soil erosion and sediment control measures.

4) The location and description for installing and removing all proposed temporary soil erosion and sedimentation control measures and their established cost.

5) A description and the location of all proposed permanent soil erosion and sedimentation control measures and their estimated cost.

6) A statement of the quantity of the excavation and fill involved.

7) A program proposal for the continued maintenance of all permanent soil erosion and sedimentation control measures which remain after the project completion, including the designation of the person or organization responsible for the maintenance. Maintenance responsibilities shall become a part of any sales or exchange agreement for the land on which the permanent soil erosion and sedimentation control measures are located.

4. The soil erosion and sedimentation plan shall be reviewed by the city Engineer and/or his designee.

5. All earth changes shall be designed, constructed, implemented and maintained in accordance with the minimum requirements for earth changes as provided by Part 91, the Rules, and this ordinance, and shall also comply with any structural, vegetative, or managerial practices to effectively prevent or reduce soil erosion and sedimentation as determined necessary by the City Engineer. In determining the adequacy and effectiveness of the design, implementation and maintenance of proposed soil erosion and sedimentation control measures for purposes of this ordinance the City Engineer shall consider:

a. Site-specific factors and information of the type required to be included in the soil erosion and sedimentation control plan for the property; and

b. The specifications and recommendations regarding soil erosion and sedimentation control measures and practices as provided by the "Guidebook of Best Management Practices for Michigan Watersheds", published by the Water Bureau, Michigan Department of Environmental Quality ("BMP guidebook") or subsequent version. A complete copy of the BMP guidebook shall be kept available for public inspection at the Engineering Department at City Hall.

6. *The City Engineer shall approve, disapprove or require modification of the application for the soil erosion permit and accompanying SESC plan within 30 calendar days following receipt of a complete application. Notification of disapproval shall be made by certified mail. If the application is disapproved, the City Engineer shall advise the applicant of the reasons for disapproval and conditions required for approval. The requirement of notification by certified mail is not necessary if the applicant is personally given written approval or disapproval of the application.*
7. *A soil erosion permit shall not be issued where:*
    a. *The proposed work would cause uncontrolled soil erosion and sedimentation; or*
    b. *The proposed work would cause hazards to the public safety and welfare; or*
    c. *The work, as proposed by the applicant, will damage any public or private property or interfere with any existing drainage course in such a manner as to cause damage to any adjacent property or result in the deposition of debris or sediment on any public way or into any Waters of the State or create an unreasonable hazard to persons or property; or*
    d. *The land area for which work is subject to geological hazard to the extent that no reasonable amount of corrective work can eliminate or sufficiently reduce settlement, slope instability or any other such hazard to persons or property; or the land area for which the work is proposed lies within the one hundred (100) year floodplain of any stream, unless a permit from the Michigan Department of Environmental Quality accompanies the application and a hydrologic report prepared by a licensed an professional engineer is submitted to certify that the proposed work will have, in the City Engineer's opinion, no detrimental influence on the public welfare or upon the total development of the watershed.*
8. *No soil erosion permit shall be issued until the applicant has paid applicable permit and inspection fees to the City Treasurer in accordance with the fee schedule adopted by resolution of the City Council. The City Engineer shall calculate the fee after reviewing the application and plan.*
9. *Upon a determination by the City Engineer that an applicant has met all applicable requirements under this ordinance and other applicable laws and regulations, and that the applicant has paid all applicable fees, the City Engineer shall issue a permit for the proposed earth change. The permit shall be kept available on the site of the proposed earth change at all times for inspection by the City.*
10. *If the earth change for which a permit has been issued has not been commenced within one year from the date of issuance of the permit, the permit shall lapse, provided that the City Engineer may extend the time for commencement of the earth change if the permitee requires an extension prior to the expiration of the initial period and no material change of circumstances has occurred.*
11. *A soil erosion permit issued under this ordinance shall not relieve the permitee from complying with any other applicable statutes, ordinances, rules or regulations.*

12. *The failure to comply with any term or condition of an approved permit or to timely complete all work as set forth in an approved plan constitutes a violation of this ordinance.*
13. *An "authorized public agency" as defined by Part 91 is exempt from obtaining a soil erosion permit but shall notify the City Engineering Department in advance of such proposed earth change.*
14. *An earth change activity that does not require a permit under this ordinance is not exempt from enforcement procedures under this ordinance, Part 91 & the Rules, if the activity exempted by Part 91, the Rules and/or this ordinance causes or results in a violation of Part 91, the Rules and/or this ordinance.*

B.2 Chapter 86, Section 7 – Permit Required Prior to Issuance of Building Permit

A. *A building permit shall not be issued for any property upon which a soil erosion permit is required until the soil erosion permit has been issued for the property as provided by this ordinance.*

SECTION C – INSPECTIONS/COMPLAINTS

As the Part 91 regulating authority, the City will inspect active construction sites that have obtained a Soil Erosion and Sedimentation Control Permit from the City.

C.1 Chapter 86, Section 6 – Inspections

A. *The City Engineer or his designee shall inspect all work covered by a soil erosion permit issued pursuant to this ordinance and is hereby authorized to enter property in the City covered by a permit for the purpose of performing any duties under this ordinance. Inspection fees shall be paid as provided according to the fee schedule.*
B. *The City Engineer or his designee may enter at all reasonable times in or upon any private or public property for the purpose of inspection and investigating conditions or practices that may be a violation of Part 91, the Rules, or this ordinance.*

Complaints regarding soil erosion and sedimentation issues made by the public will be forwarded to the City Engineering Department. At that time, the City Engineering Department will direct a site inspection to document any violations of the soil erosion and sedimentation/grading permit within 48 hours and pursue enforcement actions as appropriate. See the Enforcement Response Procedure for a summary of the enforcement protocols to ensure compliance with the City's Part 91 program.

SECTION D – MEASUREABLE GOALS

To demonstrate the effectiveness of the Village's Part 91 program, the following metrics will be tracked for reporting purposes:

- Number of Part 91 related complaints received.
- Number of Part 91 permits issued.
- Number of enforcement actions taken to achieve compliance with the Part 91 program.

These metrics will be tracked over the reporting cycle that is specified in the City's Certificate of Coverage for the MS4 Permit.

SECTION E – REPORTABLE DISCHARGES

The City will not report instances of *de minimis* soil discharges to MDEQ. For instances where the discharge of sediment cannot be immediately contained on site, or if there are other pollutants that include pesticides, petroleum derivatives, construction chemicals, and solid waste associated with the discharge in quantities that are consistent with the spill response plan as defined in Appendix H of the Storm Water Management Plan (SWMP), the City will notify the MDEQ through the Pollution Emergency Alert System (PEAS) at 1-800-292-4706.

SECTION F –STATE OF MICHIGAN PERMIT BY RULE

The City shall advise the landowner or recorded easement holder of the State of Michigan Permit by Rule (Rule 323.2190) for storm water discharge from construction activity if the area of the disturbance is greater than 5 acres. These criteria will be identified during the site plan review process and will be included in correspondence with the landowner as appropriate.

SECTION G – PROCESS FOR REVISION

Any questions on this policy and procedure should be directed to the City Engineering Department or the City Manager. This procedure shall be reviewed once per permit cycle by the City Engineering Department for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE
POST CONSTRUCTION STORMWATER RUNOFF CONTROL

PREPARED FOR:

THE CITY OF TROY
500 W. BIG BEAVER ROAD, TROY, MICHIGAN 48084

MARCH 2016

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of current and proposed BMPs to meet the minimum control measure requirements for the post-construction stormwater runoff control program to the maximum extent practicable. Post-construction stormwater runoff controls are necessary to maintain or restore stable hydrology in receiving waters by limiting surface runoff rates and volumes and reducing pollutant loadings from site that undergo development or significant redevelopment.

SECTION B – ADOPTION OF COUNTY STANDARDS

The City of Troy currently follows its Development/Engineering Standards for stormwater management. Once the Oakland County Water Resources Commissioner (OCWRC) has completed the revision to the OCWRC Engineering Standards for Storm Water Facilities to meet the new permit requirements, the City will review and consider them for adoption.

SECTION C – MEASURABLE GOALS

To demonstrate the effectiveness of the post construction stormwater runoff control program, the following metrics will be tracked for reporting purposes:

- Number of stormwater site plan reviews requested and completed
- Number of maintenance violations of constructed BMPs
- Number of instances where the City had to undertake corrective measures

These metrics will be tracked over the reporting cycle that is specified in the City's Certificate of Coverage.

SECTION D – PROCESS FOR REVISION

This procedure shall be reviewed every two years by the City Engineering Department for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE
POLLUTION PREVENTION AND GOOD HOUSEKEEPING

STREET MAINTENANCE
AND WINTER OPERATIONS

THE CITY OF TROY
500 W. BIG BEAVER ROAD, TROY, MICHIGAN 48084

REVISED JULY 2018

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of operation and maintenance activities to meet the minimum control measure requirements for the Pollution Prevention and Good Housekeeping Program to the maximum extent practicable to prevent or reduce the discharge of pollutants from municipal facilities and operations.

SECTION B –INVENTORY AND DESCRIPTION OF MATERIALS AND ACTIVITIES

The City salt dome and materials stockpiles are located at the Department of Public Works Facility located at 4693 Rochester Road. The Pollution Prevention and Good Housekeeping activities that occur at this facility are located in the City of Troy's Department of Public Works Facility Storm Water Pollution Prevention and Pollution Incident Prevention Plan (SWPPP/PIPP). Municipal street maintenance and winter operation activities that occur at the facility include the following:

- Materials Storage
- Salt Storage
- Brine Storage
- Compost and Aggregate Piles

SECTION C – WINTER OPERATIONS

The City's Public Works field staff applies rock salt and liquid brine as part of their deicing procedures during the winter months. Bulk storage of road salt and liquid brine is located at the Public Works Facility.

C.1 Salt Storage and Loading

The City of Troy has a covered salt storage dome structure. The structure is not located within 50 feet of a lake shore, stream bank, or wetland, nor is it located in a 100-year floodplain.

Loading of salt takes place at the structure entrance on a paved surface. This procedure is followed as there is not enough room to have both a loader and a truck inside the structure at the same time. Employees are trained to immediately sweep excess salt from track out or spills back into the Salt Dome for reuse.

C.2 Brine Storage and Loading

The City stores liquid brine in a 8,000-gallon double-walled tank and a 3,000-gallon single-walled tank inside a secondary containment structure. The containment structure consists of a cement floor, with cement walls, that are sealed. The containment unit is inspected regularly to look for potential leaks of the structure in accordance with the DPW SWPPP/PIPP document.

Salt and brine application training is conducted to Public Works staff. Staff has been trained to minimize any track-out from loading operations. Salt application vehicles are calibrated before the winter season. An additional winter maintenance BMP is the use of designated no salt zones.

SECTION D – ROAD, PARKING LOT AND RIGHT-OF-WAY MAINTENANCE

Road and parking lot maintenance activities includes pothole repair, curb and gutter repair, and gravel road maintenance. These services are addressed by the City's Department of Public Works on an as needed basis. Materials are purchased in quantities as needed to reduce waste. In cases where a contractor is retained to perform these activities, a City representative is on site to oversee the work and ensure that left over material, concrete washout, and other associated pollutants are disposed of property. Disposing of concrete washout and other excess repair materials into the storm sewer is strictly prohibited by the City. The City's parking lots and entrance roads are swept once (1) a year.

D.1 Unpaved Road Maintenance

Exposed soil areas are stabilized to prevent soil from eroding during rain events. This is particularly important on steep slopes. Dust suppressants are used to minimize airborne transfer of fine aggregates into the air. Grading is conducted and quality aggregates are used to minimize transfer of fine aggregates onto paved surfaces.

D.2 Right-of-Way Maintenance

Grass areas are mowed and maintained by the City's contractor. Certified applicators for fertilizers and pesticides or other herbicides are contracted by the City for application on properties or road right-of-ways.

D.3 Bridge Maintenance

Bridge and culvert crossings are inspected Biennially by an Engineering Consultant.

SECTION E – PROCESS FOR REVISION

This procedure shall be reviewed once per permit cycle by the City Engineering Department for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE
POLLUTION PREVENTION AND GOOD HOUSEKEEPING

SPILL RESPONSE

THE CITY OF TROY
500 W. BIG BEAVER ROAD, TROY, MICHIGAN 48084

REVISED JULY 2018

SECTION A – PERSONNEL

The following City personnel have been identified as key staff in charge of spill response planning, implementation and maintenance of the Spill Response Plan.

Name	Phone
City of Troy Fire Department	(248) 524-3419
City of Troy Police Department	(248) 524-3477
Public Works Director	(248) 524-3392
Brian Varney – Superintendent of Fleet Maintenance	(248) 524-3392

A.1 Responsibilities

- The **Facility Responsible Personnel** have primary responsibility for coordinating the response to emergencies, including chemical spills
- **Supervisors** should ensure that employees are familiar with these procedures and receive the necessary training
- **All employees** should follow these procedures in the event of a chemical spill

A.2 Emergency Contact Numbers

The following telephone numbers should be posted near telephones and in other conspicuous locations:

Name	Affiliation	Phone
City of Troy Fire Department	Fire Department	(248) 524-3419
City of Troy Police Department	Police Department	(248) 524-3477
Public Works Director	Public Works Director	(248) 524-3392
Brian Varney – Superintendent of Fleet Maintenance	Superintendent of Fleet Maintenance	(248) 524-3392
MDEQ 24-Hour Pollution Emergency Alerting System (PEAS)		1-800-292-4706
MDEQ Southeast Michigan District Office		(586) 753-3700
City of Detroit Wastewater Treatment Plant		(313) 297-9400
National Response Center		1-800-424-8802

SECTION B – CLEAN-UP PROCEDURES

Spilled chemicals should be effectively and quickly contained and cleaned up. Employees should clean up spills themselves ***only if properly trained and protected.*** Employees who are not trained in spill cleanup procedures should report the spill to the Responsible Person(s) listed above, warn other employees, and leave the area.

The following general guidelines should be followed for evacuation, spill control, notification of proper authorities, and general emergency procedures in the event of a chemical incident in which there is potential for a significant release of hazardous materials.

B.1 Evacuation

Persons in the immediate vicinity of a spill should *immediately evacuate* the premises (except for employees with training in spill response in circumstances described below). If the spill is of "medium" or "large" size, or if the spill seems hazardous, immediately notify emergency response personnel.

B.2 Spill Control Techniques

Once a spill has occurred, the employee needs to decide whether the spill is small enough to handle without outside assistance. Only employees with training in spill response should attempt to contain or clean up a spill.

NOTE: If you are cleaning up a spill yourself, make sure you are aware of the hazards associated with the materials spilled, have adequate ventilation, and proper personal protective equipment. Treat all residual chemical and cleanup materials as hazardous waste.

Spill control equipment should be located wherever significant quantities of hazardous materials are received or stored. Material Safety Data Sheets (MSDSs), absorbents, over-pack containers, container patch kits, spill dams, shovels, floor dry, acid/base neutralizers, and "caution-keep out" signs are common spill response items.

B.3 Spill Response and Clean-up

Chemical spills are divided into three categories: Small, Medium and Large. Response and cleanup procedures vary depending on the size of the spill.

Small Spills: Any spill where the major dimension is less than 18 inches in diameter. Small spills are generally handled by internal personnel and usually do not require an emergency response by police or fire department HAZMAT teams.

- Quickly control the spill by stopping or securing the spill source. This could be as simple as up-righting a container and using floor-dry or absorbent pads to soak up spilled material. Wear gloves and protective clothing, if necessary.
- Put spill material and absorbents in secure containers if any are available.

- Consult with the Facility Responsible Person and the MSDS for spill and waste disposal procedures.
- Use Dry Cleanup Methods and **never** wash spills down the drain, onto a storm drain or onto the driveway or parking lot.
- Both the spilled material and the absorbent may be considered hazardous waste and must be disposed of in compliance with state and federal environmental regulations.

Medium Spills: Spills where the major dimension exceeds 18 inches, but is less than 6 feet. Outside emergency response personnel (police and fire department HAZMAT teams) may be called for medium spills. Common sense, however, will dictate when it is necessary to call them.

- Immediately try to help contain the spill at its source by simple measures only. This means quickly up-righting a container, or putting a lid on a container, if possible. Do not use absorbents unless they are immediately available. Once you have made a quick attempt to contain the spill, or once you have quickly determined you cannot take any brief containment measures, leave the area and alert Emergency Responders at 911. Closing doors behind you while leaving helps contain fumes from spills. Give police accurate information as to the location, chemical, and estimated amount of the spill.
- Evaluate the area outside the spill. Engines and electrical equipment near the spill area must be turned off. This eliminates various sources of ignition in the area. Advise Emergency Responders on how to turn off engines or electrical sources. Do not go back into the spill area once you have left. Help emergency responders by trying to determine how to shut off heating, air conditioning equipment, or air circulating equipment, if necessary.
- If emergency responders evacuate the spill area, follow their instructions in leaving the area.
- After emergency responders have contained the spill, be prepared to assist them with any other information that may be necessary, such as MSDSs and questions about the facility. Emergency responders or trained personnel with proper personal protective equipment will then clean up the spill residue. Do not re-enter the area until the responder in charge gives the all clear. Be prepared to assist these persons from outside the spill area with MSDSs, absorbents, and containers.
- Reports must be filed with proper authorities. It is the responsibility of the spiller to inform both his/her supervisor and the emergency responders as to what caused the spill. The response for large spills is similar to the procedures for medium spills, except that the exposure danger is greater.

Large Spills: Any spill involving flammable liquid where the major dimension exceeds 6 feet in diameter; and any "running" spill, where the source of the spill has not been contained or flow has not been stopped.

- Leave the area and notify Emergency Responders (911). Give the operator the spill location, chemical spilled, and approximate amount.
- From a safe area, attempt to get MSDS information for the spilled chemical for the emergency responders to use. Also, be prepared to advise responders as to any ignition sources, engines, electrical power, or air conditioning/ventilation systems that may need to be shut off. Advise responders of any absorbents, containers, or spill control equipment that may be available. This may need to be done from a remote area, because an evacuation that would place the spiller far from the scene may be needed. Use radio or phone to assist from a distance, if necessary.
- Only emergency response personnel, in accordance with their own established procedures, should handle spills greater than 6 feet in any dimension or that are continuous. Remember, once the emergency responders or HAZMAT team is on the job cleaning up spills or putting out fires, the area is under their control and no one may re-enter the area until the responder in charge gives the all clear.
- Provide information for reports to supervisors and responders, just as in medium spills.

SECTION C – REPORTING SPILLS

All chemical spills, regardless of size, should be reported as soon as possible to the Facility Responsible Person. The Responsible Person will determine whether the spill has the potential to affect the environment outside of the facility and must be reported to local, state, or federal agencies. Examples of spills that could affect the outside environment include spills that are accompanied by fire or explosion and spills that could reach nearby water bodies.

C.1 Reporting Thresholds

The spill coordinator will report spills to MDEQ PEAS for spilled that involve the following:

- Salt spills over 50 pounds or 50 gallons of brine onto the ground or into water (required by Part 5 rules)
- Gasoline release of 32 gallons or more onto the ground (required by Part 201)
- Oil release of 50 pounds (approximately 7½ gallons) onto the ground (required by Part 5 rules)
- Any amount of oil or fuel that reaches surface water or shorelines, call MDEQ PEAS and the National Response Center (as required by the Clean Water Act and Part 31)
- Any spill that is in doubt about reporting

C.2 Reporting Requirements

Within ten (10) days of release, submit a written report for the reportable releases to the following:

- MDEQ Water Resources Division Field Operations Chief, PO Box 30273, Lansing, Michigan 48909-7773
- Oakland County Health Division, 1200 N. Telegraph Road, Building 34 East, Pontiac, Michigan 48341

Note: the optional report form EPQ 3465 can be found at:
http://www.michigan.gov/deq/0,4561,7-135-3307_29894_5959-20341--,00.html
The MDEQ may request other follow-up reports depending on the situation.

SECTION D – SPILL KIT INVENTORY

The following is a list of spill response equipment that will be maintained by the designated spill response coordinators at all locations where fuel products are stored and dispensed.

D.1 Minimum Spill Response Equipment

- 20 pounds of floor dry
- 1 shovel
- 1 broom
- Caution tape
- 2 Absorbent booms
- 20 Absorbant Pads
- Container for clean-up (30 gallons)
- Sample bottles

SECTION E – PROCESS FOR REVISION

This procedure shall be reviewed once per permit cycle by the City Engineering Department for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE
POLLUTION PREVENTION AND GOOD HOUSEKEEPING

GENERAL PROCEDURES

THE CITY OF TROY
500 W. BIG BEAVER ROAD, TROY, MICHIGAN 48084

MARCH 2016

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of current and proposed BMPs to meet the minimum control measure requirements for the Pollution Prevention and Good Housekeeping Program to the maximum extent practicable to prevent or reduce the discharge of pollutants from municipal facilities and operations.

SECTION B –FACILITY ASSESSMENT AND PRIORITIZATION

City owned and operated facilities have been assessed for their potential to discharge pollutants to the waters of the state. Each facility was evaluated based on the following criteria:

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

Based on these criteria, the potential for each facility to discharge pollutants to the waters of the state were rated high, medium, or low. For “low” priority facilities where no assessment factors are present, catch basin cleaning and street sweeping will be performed as indicated in the applicable procedures for these activities. For “medium” priority facilities, appropriate BMPs are considered based on the assessment factors present to prevent or minimize the potential for pollutants from entering surface waters of the state. “High” priority facilities have specific procedures that are included in Appendices M and N of the Storm Water Management Plan (SWMP).

SECTION C– UPDATES AND PRIORITY REVISION

This inventory shall be updated within 120 days as facilities and structural stormwater controls are added, removed, or no longer owned or operated by the applicant. Priority level assessments shall be revised within 120 days prior to discharging stormwater at a new facility, or when new the storage of materials, equipment, or vehicles changes at a facility.

SECTION D – MUNICIPAL INVENTORY AND ASSESSMENT

The following table identifies the City’s owned or operated facilities with a discharge of stormwater to surface waters of the state. **Table 1** includes a list of properties owned or operated by the City that has stormwater controls on site and provides the estimated number of stormwater structural controls (i.e. catch basins, detention basins, etc.) at each site, along with the priority level of potential discharge of pollutants to waters of the state. **Table 2** provides a listing of other properties that are owned and operated by the City but do not have

any stormwater controls. In general, sites listed on Table 2 are parks or properties that are green space and do not contain any structures or parking lots.

Table 1

Facility Name	Location	Structural Controls	Priority Level	Assessment Factors	BMP's Implemented
City Hall	500 W. Big Beaver Rd.	Catch Basins (5)	Low	0	Catch Basin Cleaning Street Sweeping
Public Works Facility	4693 Rochester Rd.	Catch Basins (24) Detention Basin (1)	High	1, 3	See Section E See SWPPP/PIPP
Aquatic Center	3425 Civic Center Dr.	Catch Basins (24)	Low	0	Catch Basin Cleaning Street Sweeping
Community Center	3179 Livernois Rd.	Catch Basins (31) Detention Basin (1)	Low	0	Catch Basin Cleaning Street Sweeping
Library	510 W. Big Beaver Rd.	Catch Basins (24)	Low	0	Catch Basin Cleaning Street Sweeping
Police Administration and Maint. Garage	500 W. Big Beaver Rd.	Catch Basins (7)	High	1, 3	See Section E See SWPPP/PIPP
Fire/Police Training Center	4850 John R. Rd.	Catch Basins (3) Detention Basin (1)	Low	0	Catch Basin Cleaning Street Sweeping
Fire Station No. 1	1019 E. Big Beaver Rd.	Catch Basins (4) Detention Basin (1)	Low		Catch Basin Cleaning Street Sweeping
Fire Station No. 2	5600 Livernois Rd.	Catch Basins (5) Detention Basin (1)	Low		Catch Basin Cleaning Street Sweeping
Fire Station No. 3	2400 W. Big Beaver Rd.	Catch Basins (14) Detention Basin (1)	Low		Catch Basin Cleaning Street Sweeping
Fire Station No. 4	2103 E. Maple Rd.	Catch Basins (6) Detention Basin (1)	Low		Catch Basin Cleaning Street Sweeping
Fire Station No. 5	6399 John R Rd.	Catch Basins (6)	Low		Catch Basin Cleaning Street Sweeping
Fire Station No. 6	5901 Coolidge Hwy.	None	Low	0	Street Sweeping
Troy Historic Village	60 W. Wattles Rd.	Catch Basins (30) Vegetated Swale (1)	Low		Catch Basin Cleaning Street Sweeping
Sylvan Glen Golf Course	5725 Rochester Rd.	Catch Basins (5)	Med	0	Catch Basin Cleaning Street Sweeping
Sanctuary Lake Golf Course	1450 South Blvd.	Catch Basins (4) Detention Basin (1)	Med	0	Catch Basin Cleaning Street Sweeping
Sylvan Glen Lake Park	5501 Rochester Rd.	None	Low	0	None
Fire Fighters Park	1300 W. Square Lake Rd.	Catch Basins (20) Detention Basins (2)	Low	0	Catch Basin Cleaning Street Sweeping
Boulan Park	3671 Crooks Road	Catch Basins (21)	Low	0	Catch Basin Cleaning Street Sweeping
Beach Road Park	Beach Rd/Long Lake Rd.	None	Low	0	Street Sweeping
Phillip J. Huber Park	3500 Civic Center Dr.	None	Low	0	Street Sweeping

Robinwood Park	640 Robinwood	Catch Basins (10)	Low	0	Catch Basin Cleaning
Milverton Park	2384 E. Maple Rd.	None	Low	0	Street Sweeping
Brinston Park	2262 Brinston	Catch Basins (5)	Low	0	Catch Basin Cleaning Street Sweeping
Raintree Park	3775 John R Rd.	Catch Basins (13)	Low	0	Catch Basin Cleaning Street Sweeping
Jaycee Park	1755 E. Long Lake Rd.	Catch Basins (4)	Low	0	Catch Basin Cleaning Street Sweeping
Beaver Trail Park	3458 Pasadena	Detention Basin (1)	Low	0	None
Donald J. Flynn Park	1710 E. South Blvd.	Vegetated Swale	Low	0	Street Sweeping
Gateway Park	1019 E. Big Beaver Rd.	Catch Basins (4)	Low	0	Catch Basin Cleaning
Troy Skate Park	3179 Livernois Rd.	Catch Basins (3)	Low	0	Catch Basin Cleaning Street Sweeping
Lloyd Stage Nature Center	6685 Coolidge Hwy.	None	Low	0	Street Sweeping
Troy Farm	Beach Rd./W. South Blvd	None	Low	0	Street Sweeping
Beach Road Cemetery	5360 Beach Rd.	None	Low	0	None
Crooks Road Cemetery	3701 Crooks Rd.	None	Low	0	None
Perrin Cemetery	1050 Coolidge Hwy.	None	Low	0	None
Troy Union Corners Cemetery	1199 E. Square Lake Rd.	None	Low	0	None

Structural Storm Water Controls	Quantity
City Catch Basins	19,000
City Outfalls	374
City Detention Basins	127 City Owned, 130 City Maintained
City Stormwater Treatment Units	2
City Pump Stations	20
City Secondary Containment	2 (DPW Brine Tanks)

Table 2

Facility Name	Address/Crossroads
North Glen Park	6500 Elmoor Drive
Schroeder Park	3500 Beach Road
Redwood Park	750 Redwood Drive

SECTION E –SITE SPECIFIC SOP FOR HIGH PRIORITY SITES

The MDEQ NPDES Phase II Stormwater Discharge Permit Application requires a standard operating procedure (SOP) for identifying the structural and non-structural stormwater controls implemented and maintained to prevent or reduce pollutant runoff at each facility with the high potential for pollutant runoff.

E.1 Inventory and Description of Materials and Activities

The City of Troy's public works operations are conducted at their 4693 Rochester Road facility. The City also operates a vehicle maintenance garage at their police administration office located at 500 W. Big Beaver Road. These sites are considered high priority sites due the following operations:

DPW Facility – 4693 Rochester Road

- Salt Storage
- Brine Storage
- Stockpiled materials
- Underground Storage Tanks
- Maintenance and cleaning of vehicles and equipment

Police Vehicle Maintenance Garage – 500 West Big Beaver Road

- Maintenance and cleaning of vehicles and equipment
- Underground Storage Tanks

E.2 Vehicle Washing and Maintenance

Minor vehicle maintenance activities are conducted by DPW staff for the City's DPW and police vehicle fleet. Maintenance activities conducted by DPW staff include, but are not limited to, oil changes and other vehicle fluids, tune ups, etc. These activities are carried out indoors where floor drains are connected to the sanitary sewer system. More complicated maintenance and repairs are conducted by a private maintenance facility. A maintenance log is maintained to document all vehicle maintenance and repair activities.

Vehicle washing activities are conducted at either a commercial car wash or indoors at the DPW and Police Maintenance facilities where the floor drains discharge to the sanitary sewer system.

Site specific standard operating procedures have been developed for these facilities and are included as separate documents in Appendices M and N of the Storm Water Management Plan (SWMP). Please see the Department of Public Works Facility Storm Water Pollution Prevention and Pollution Incident Prevention Plan (SWPPP/PIPP) in Appendix M, and the Police Vehicle Maintenance Garage Storm Water Pollution Prevention Plan (SWPPP) in Appendix N.

SECTION F –CATCH BASIN MAINTENANCE PRIORITY

Catch basins that are inspected and maintained by the City have been prioritized for routine inspection, maintenance, and cleaning. The criteria for the priority levels that include low, medium, and high are defined as follows:

> ***Low Priority*** – Catch basins that are of low priority have very little sediment accumulation and do not require routine maintenance. Low priority catch basins are inspected on an as needed basis based on complaints.
>
> ***Medium Priority*** – Catch basins that are of medium priority have a higher rate of sediment accumulation and will require maintenance more frequently than low priority catch basins.
>
> ***High Priority*** – Catch basins that are of high priority have a high rate of sediment accumulation and will require regular routine maintenance and inspection. These catch basins are typically located in areas where sediment is easily mobilized and transported by runoff.

All of the City's catch basins have very little sediment accumulation rates, require little maintenance and are of low priority. There are currently no catch basins that have been assigned a medium or high priority rating due to the rare occurrence of plugging, structure damage, and resident complaints. All catch basins are cleaned in a rotation and are cleaned a minimum of once every 5 years. Catch basins that prompt resident complaints or are subject to isolated instances where structures are plugged or damaged will be maintained and inspected by the City contractor as needed. At that time, it will be determined if the catch basin will require maintenance on a more frequent interval and warrants a reclassification to a medium priority rating. In the event the priority rating of a catch basin is changed, or new catch basins are constructed, this procedure will be updated and revised to reflect the change in priority within 120 days.

SECTION G – CATCH BASIN INSPECTION, MAINTENANCE, AND CLEANING

Catch basins are visually inspected during normal work activities or if a complaint is registered by a resident. A visual inspection of the structure will identify any structural defects which may include collapse, cracking, frame damage, pipe collapse, blockage, etc. and will be documented. Catch basin structures in need of structural repairs are identified during the inspection and regular maintenance process based on the results of visual assessments conducted by the City. Structure repairs are prioritized based on public safety concerns. City owned catch basins are inspected concurrently with cleaning activities between April and November. A vactor truck is used to remove all solids and liquids from the structure to the extent possible. At no time is collected sediment and water allowed to be discharged back into the storm sewer system during the cleaning process. Catch basins that are located on private property are not inspected, cleaned, or maintained by the City.

SECTION H – DISPOSAL OF COLLECTED MATERIAL

Collected material from catch basin cleaning and street sweeping activities is transported to a local landfill for disposal.

SECTION I –STREET SWEEPING PRIORITIZATION

City owned and maintained streets have been prioritized for street sweeping. The criteria for the priority levels that include low, medium, and high are defined as follows:

> ***Low Priority*** – Residential streets within the City are of low priority due to their minimal sediment accumulation rates. They are generally swept at least one time per year.
>
> ***Medium Priority*** – Major roads throughout the City are of medium priority due to the higher rate of sediment accumulation rates in comparison to low priority residential streets. Medium priority areas are generally swept several times per year.
>
> ***High Priority*** – Areas that are of high priority have a high rate of sediment accumulation and will require regular, frequent sweeping. These areas are typically located in areas where sediment is easily mobilized and transported by runoff. Additionally, areas that prompt resident complaints or are subject to excessive road sediments are also considered a high priority area. There are currently no areas that have been assigned a high priority rating due to excessive road sediments and resident complaints. However, if DPW receives a complaint, a determination of the area will be made by DPW staff to increase sweeping on a more frequent interval as well as a reclassify the area to high priority rating.
>
> In the event a priority rating is changed, or new City owned streets are constructed, this procedure will be updated and revised to reflect the change in priority within 30 days.

Street sweeping activities are conducted by the City using both mechanical and regenerative air equipment. Collected sediment from street sweeping activities is disposed of as described in Section H. Major Roads within the City are considered Medium Priority over the rest of the city side streets which are Low Priority. Street sweeping program activities are not implemented under the following conditions:

- Street sweeping is not conducted on County or State roads
- Sweeping activities is not conducted during wet and inclement weather
- Street sweeping activities are not conducted on private streets, parking lots, or uncurbed streets.

SECTION J – OTHER STRUCTURAL STORMWATER CONTROLS

In addition to implementing the catch basin maintenance and street sweeping programs, the City also performs inspections of other storm water controls that are located throughout the City.

J.1 Detention Basin

The routine procedure for the detention basins at the DPW facility is the inspection of the inlet pipes and the outlet structure for blockages as part of the biannual comprehensive inspection of the DPW.

J.2 Vegetated Drainage Swales

The routine inspection of vegetated drainage swales located on City owned properties consists of the visual evaluation of blockages or excessive sedimentation. Inspections generally occur during the course of daily park operations, or when complaints are received by the City.

J.3 Stormwater Treatment Units

The City installed a stormwater treatment unit located at Big Beaver and Rochester Road. The units are cleaned and maintained annually or per the manufacturer's recommendations.

J.4 Pump Stations

The City installed pump stations are inspected regularly to ensure operation and maintenance is conducted on an as needed basins.

J.5 Secondary Containment

Secondary containment units are located at the City Department of Public Works facility for the two (2) brine tanks. Inspections of the secondary containment for the tanks are conducted as part of the DPW SWPPP/PIPP regular and comprehensive inspections, and repairs are completed on an as needed basis.

The City does not have any other structural controls that are owned or maintained by the City. In the event additional structural stormwater controls are constructed, this procedure will be updated and revised to include the new controls within 120 days.

SECTION K – NEW APPLICANT OWNED FACILITIES

In the event the City acquires or constructs new structural stormwater controls, the design of these structures will comply with the stormwater standards that have been established by Oakland County. Site plans will be reviewed by the City, or its consultants, to ensure the appropriate standards are met.

SECTION L – CERTIFIED PESTICIDE APPLICATOR

The City has a certified pesticide applicator on staff and applies pesticides or fertilizers seasonally. In addition, the City also retains the services of a licensed applicator.

SECTION M – EMPLOYEE TRAINING

Employee training programs will be implemented to inform appropriate personnel at all levels of responsibility of safety, environmental impacts, and good housekeeping practices. The City

participates in training opportunities that are made available by SEMCOG, Oakland County, the Alliance of Rouge Communities, and others as deemed appropriate. Employee training components for the City staff includes:

Employees Trained	Training Description and Frequency
New Troy DPW Employees	Upon hire, employees will: • View the Municipal Storm Water Pollution Prevention Storm Water training video. • Read and become familiar with the City of Troy SOPs • Participate in a job shadow program where new staff is paired with a DPW foreman or grounds crewman.
All Troy Facilities Employees	• View the Municipal Storm Water Pollution Prevention Storm Water training video. • Review proper materials storage and handling. • Review good housekeeping and pollution prevention practices. • Review samples of illicit discharges to the storm sewer system • Review City of Troy Spill Response Procedures.
Key Staff	• Attendance at key staff to relevant training workshops by the Alliance of Rouge Communities, SEMCOG, or others, when available.

SECTION N –CONTRACT REQUIREMENTS AND OVERSIGHT

The contractors hired by the City to perform municipal operations that potentially impact stormwater are required to follow appropriate pollution prevention BMPs indicated in the City's contract language. In cases where an outside contractor is hired to perform services that could impact stormwater, the contracting company will be required to follow appropriate pollution prevention BMPs. At the time of the Pre-Construction Meeting for a new project, all contractors are given the City's "A Contractor's Guide to Storm Water Pollution Prevention" brochure for guidance. In addition, all work performed by outside contractors are monitored by City staff through observation to ensure quality of work, adherence to the specified contract language, and to ensure that potential impacts to stormwater are minimized.

Measureable Goals – To demonstrate the effectiveness of this procedure, the following metrics will be tracked for reporting purposes.

- Number of stormwater pollution related incidents pertaining to activities or work performed by the contractor.
- Number of incidents where the City required corrective action by the contractor

These metrics will be tracked over the reporting cycle that is specified in the City's Certificate of Coverage.

SECTION O – COMPLAINT PROCEDURE

Complaints or concerns may be reported by the public through the City's Service Request Portal available on the City's website. The service request is then routed to the appropriate

department via automated email for follow up. Investigation into complaints routed to the DPW department is conducted within 48 hours after the complaint has been received by the City. At that time, the DPW will make a determination to correct any problems, or contact the responsible parties for appropriate action.

Measureable Goals – To demonstrate the effectiveness of this procedure, the following metrics will be tracked for reporting purposes.

- Number of complaints routed to the DPW department for follow up.
- Number of incidents that prompted additional corrective actions by the DPW or other responsible party

These metrics will be tracked over the reporting cycle that is specified in the City's Certificate of Coverage.

SECTION P – PROCESS FOR REVISION

This procedure shall be reviewed once per permit cycle by the City Engineering Department for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE
POLLUTION PREVENTION AND GOOD HOUSEKEEPING

STREET MAINTENANCE
AND WINTER OPERATIONS

THE CITY OF TROY
500 W. BIG BEAVER ROAD, TROY, MICHIGAN 48084

MARCH 2016

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of operation and maintenance activities to meet the minimum control measure requirements for the Pollution Prevention and Good Housekeeping Program to the maximum extent practicable to prevent or reduce the discharge of pollutants from municipal facilities and operations.

SECTION B –INVENTORY AND DESCRIPTION OF MATERIALS AND ACTIVITIES

The City salt dome and materials stockpiles are located at the Department of Public Works Facility located at 4693 Rochester Road. The Pollution Prevention and Good Housekeeping activities that occur at this facility are located in the City of Troy's Department of Public Works Facility Storm Water Pollution Prevention and Pollution Incident Prevention Plan (SWPPP/PIPP). Municipal street maintenance and winter operation activities that occur at the facility include the following:

- Materials Storage
- Salt Storage
- Brine Storage
- Compost and Aggregate Piles

SECTION C – WINTER OPERATIONS

The City's Public Works field staff applies rock salt and liquid brine as part of their deicing procedures during the winter months. Bulk storage of road salt and liquid brine is located at the Public Works Facility.

C.1 Salt Storage and Loading

The City of Troy has a covered salt storage dome structure. The structure is not located within 50 feet of a lake shore, stream bank, or wetland, nor is it located in a 100-year floodplain.

Loading of salt takes place at the structure entrance on a paved surface. This procedure is followed as there is not enough room to have both a loader and a truck inside the structure at the same time. Employees are trained to immediately sweep excess salt from track out or spills back into the Salt Dome for reuse.

C.2 Brine Storage and Loading

The City stores liquid brine in a 8,000-gallon double-walled tank and a 3,000-gallon single-walled tank inside a secondary containment structure. The containment structure consists of a cement floor, with cement walls, that are sealed. The containment unit is inspected regularly to look for potential leaks of the structure in accordance with the DPW SWPPP/PIPP document.

Salt and brine application training is conducted to Public Works staff. Staff has been trained to minimize any track-out from loading operations. Salt application vehicles are calibrated before the winter season.

SECTION D – ROAD, PARKING LOT AND RIGHT-OF-WAY MAINTENANCE

Road and parking lot maintenance activities includes pothole repair, curb and gutter repair, and gravel road maintenance. These services are addressed by the City's Department of Public Works on an as needed basis. Materials are purchased in quantities as needed to reduce waste. In cases where a contractor is retained to perform these activities, a City representative is on site to oversee the work and ensure that left over material, concrete washout, and other associated pollutants are disposed of property. Disposing of concrete washout and other excess repair materials into the storm sewer is strictly prohibited by the City.

D.1 Unpaved Road Maintenance

Exposed soil areas are stabilized to prevent soil from eroding during rain events. This is particularly important on steep slopes. Dust suppressants are used to minimize airborne transfer of fine aggregates into the air. Grading is conducted and quality aggregates are used to minimize transfer of fine aggregates onto paved surfaces.

D.2 Right-of-Way Maintenance

Grass areas are mowed and maintained by the City's contractor. Certified applicators for fertilizers and pesticides or other herbicides are contracted by the City for application on properties or road right-of-ways.

D.3 Bridge Maintenance

Bridge and culvert crossings are inspected Biennially by an Engineering Consultant.

SECTION E – PROCESS FOR REVISION

This procedure shall be reviewed once per permit cycle by the City Engineering Department for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE
POLLUTION PREVENTION AND GOOD HOUSEKEEPING

SPILL RESPONSE

THE CITY OF TROY
500 W. BIG BEAVER ROAD, TROY, MICHIGAN 48084

MARCH 2016

SECTION A – PERSONNEL

The following City personnel have been identified as key staff in charge of spill response planning, implementation and maintenance of the Spill Response Plan.

Name	Phone
City of Troy Fire Department	(248) 524-3419
City of Troy Police Department	(248) 524-3477
Public Works Director	(248) 524-3392
Brian Varney – Superintendent of Fleet Maintenance	(248) 524-3392

A.1 Responsibilities

- The **Facility Responsible Personnel** have primary responsibility for coordinating the response to emergencies, including chemical spills
- **Supervisors** should ensure that employees are familiar with these procedures and receive the necessary training
- **All employees** should follow these procedures in the event of a chemical spill

A.2 Emergency Contact Numbers

The following telephone numbers should be posted near telephones and in other conspicuous locations:

Name	Affiliation	Phone
City of Troy Fire Department	Fire Department	(248) 524-3419
City of Troy Police Department	Police Department	(248) 524-3477
Public Works Director	Public Works Director	(248) 524-3392
Brian Varney – Superintendent of Fleet Maintenance	Superintendent of Fleet Maintenance	(248) 524-3392
MDEQ 24-Hour Pollution Emergency Alerting System (PEAS)		1-800-292-4706
MDEQ Southeast Michigan District Office		(586) 753-3794
City of Detroit Wastewater Treatment Plant		(313) 297-9400
National Response Center		1-800-424-8802

SECTION B – CLEAN-UP PROCEDURES

Spilled chemicals should be effectively and quickly contained and cleaned up. Employees should clean up spills themselves ***only if properly trained and protected.*** Employees who are not trained in spill cleanup procedures should report the spill to the Responsible Person(s) listed above, warn other employees, and leave the area.

The following general guidelines should be followed for evacuation, spill control, notification of proper authorities, and general emergency procedures in the event of a chemical incident in which there is potential for a significant release of hazardous materials.

B.1 Evacuation

Persons in the immediate vicinity of a spill should *immediately evacuate* the premises (except for employees with training in spill response in circumstances described below). If the spill is of "medium" or "large" size, or if the spill seems hazardous, immediately notify emergency response personnel.

B.2 Spill Control Techniques

Once a spill has occurred, the employee needs to decide whether the spill is small enough to handle without outside assistance. Only employees with training in spill response should attempt to contain or clean up a spill.

NOTE: If you are cleaning up a spill yourself, make sure you are aware of the hazards associated with the materials spilled, have adequate ventilation, and proper personal protective equipment. Treat all residual chemical and cleanup materials as hazardous waste.

Spill control equipment should be located wherever significant quantities of hazardous materials are received or stored. Material Safety Data Sheets (MSDSs), absorbents, over-pack containers, container patch kits, spill dams, shovels, floor dry, acid/base neutralizers, and "caution-keep out" signs are common spill response items.

B.3 Spill Response and Clean-up

Chemical spills are divided into three categories: Small, Medium and Large. Response and cleanup procedures vary depending on the size of the spill.

Small Spills: Any spill where the major dimension is less than 18 inches in diameter. Small spills are generally handled by internal personnel and usually do not require an emergency response by police or fire department HAZMAT teams.

- Quickly control the spill by stopping or securing the spill source. This could be as simple as up-righting a container and using floor-dry or absorbent pads to soak up spilled material. Wear gloves and protective clothing, if necessary.
- Put spill material and absorbents in secure containers if any are available.

- Consult with the Facility Responsible Person and the MSDS for spill and waste disposal procedures.
- Use Dry Cleanup Methods and **never** wash spills down the drain, onto a storm drain or onto the driveway or parking lot.
- Both the spilled material and the absorbent may be considered hazardous waste and must be disposed of in compliance with state and federal environmental regulations.

Medium Spills: Spills where the major dimension exceeds 18 inches, but is less than 6 feet. Outside emergency response personnel (police and fire department HAZMAT teams) may be called for medium spills. Common sense, however, will dictate when it is necessary to call them.

- Immediately try to help contain the spill at its source by simple measures only. This means quickly up-righting a container, or putting a lid on a container, if possible. Do not use absorbents unless they are immediately available. Once you have made a quick attempt to contain the spill, or once you have quickly determined you cannot take any brief containment measures, leave the area and alert Emergency Responders at 911. Closing doors behind you while leaving helps contain fumes from spills. Give police accurate information as to the location, chemical, and estimated amount of the spill.
- Evaluate the area outside the spill. Engines and electrical equipment near the spill area must be turned off. This eliminates various sources of ignition in the area. Advise Emergency Responders on how to turn off engines or electrical sources. Do not go back into the spill area once you have left. Help emergency responders by trying to determine how to shut off heating, air conditioning equipment, or air circulating equipment, if necessary.
- If emergency responders evacuate the spill area, follow their instructions in leaving the area.
- After emergency responders have contained the spill, be prepared to assist them with any other information that may be necessary, such as MSDSs and questions about the facility. Emergency responders or trained personnel with proper personal protective equipment will then clean up the spill residue. Do not re-enter the area until the responder in charge gives the all clear. Be prepared to assist these persons from outside the spill area with MSDSs, absorbents, and containers.
- Reports must be filed with proper authorities. It is the responsibility of the spiller to inform both his/her supervisor and the emergency responders as to what caused the spill. The response for large spills is similar to the procedures for medium spills, except that the exposure danger is greater.

Large Spills: Any spill involving flammable liquid where the major dimension exceeds 6 feet in diameter; and any "running" spill, where the source of the spill has not been contained or flow has not been stopped.

- Leave the area and notify Emergency Responders (911). Give the operator the spill location, chemical spilled, and approximate amount.
- From a safe area, attempt to get MSDS information for the spilled chemical for the emergency responders to use. Also, be prepared to advise responders as to any ignition sources, engines, electrical power, or air conditioning/ventilation systems that may need to be shut off. Advise responders of any absorbents, containers, or spill control equipment that may be available. This may need to be done from a remote area, because an evacuation that would place the spiller far from the scene may be needed. Use radio or phone to assist from a distance, if necessary.
- Only emergency response personnel, in accordance with their own established procedures, should handle spills greater than 6 feet in any dimension or that are continuous. Remember, once the emergency responders or HAZMAT team is on the job cleaning up spills or putting out fires, the area is under their control and no one may re-enter the area until the responder in charge gives the all clear.
- Provide information for reports to supervisors and responders, just as in medium spills.

SECTION C – REPORTING SPILLS

All chemical spills, regardless of size, should be reported as soon as possible to the Facility Responsible Person. The Responsible Person will determine whether the spill has the potential to affect the environment outside of the facility and must be reported to local, state, or federal agencies. Examples of spills that could affect the outside environment include spills that are accompanied by fire or explosion and spills that could reach nearby water bodies.

C.1 Reporting Thresholds

The spill coordinator will report spills to MDEQ PEAS for spilled that involve the following:

- Salt spills over 50 pounds or 50 gallons of brine onto the ground or into water (required by Part 5 rules)
- Gasoline release of 32 gallons or more onto the ground (required by Part 201)
- Oil release of 50 pounds (approximately 7½ gallons) onto the ground (required by Part 5 rules)
- Any amount of oil or fuel that reaches surface water or shorelines, call MDEQ PEAS and the National Response Center (as required by the Clean Water Act and Part 31)
- Any spill that is in doubt about reporting

C.2 Reporting Requirements

Within ten (10) days of release, submit a written report for the reportable releases to the following:

- MDEQ Water Resources Division Field Operations Chief, PO Box 30273, Lansing, Michigan 48909-7773
- Oakland County Health Division, 1200 N. Telegraph Road, Building 34 East, Pontiac, Michigan 48341

Note: the optional report form EPQ 3465 can be found at:
http://www.michigan.gov/deq/0,4561,7-135-3307_29894_5959-20341--,00.html
The MDEQ may request other follow-up reports depending on the situation.

SECTION D – SPILL KIT INVENTORY

The following is a list of spill response equipment that will be maintained by the designated spill response coordinators at all locations where fuel products are stored and dispensed.

D.1 Minimum Spill Response Equipment

- 20 pounds of floor dry
- 1 shovel
- 1 broom
- Caution tape
- 2 Absorbent booms
- 20 Absorbant Pads
- Container for clean-up (30 gallons)
- Sample bottles

SECTION E – PROCESS FOR REVISION

This procedure shall be reviewed once per permit cycle by the City Engineering Department for any updates to streamline the requirements.

STANDARD OPERATING PROCEDURE
POLLUTION PREVENTION AND GOOD HOUSEKEEPING

GENERAL PROCEDURES

THE CITY OF TROY
500 W. BIG BEAVER ROAD, TROY, MICHIGAN 48084

REVISED JULY 2018

SECTION A – PURPOSE

The Michigan Department of Environmental Quality (MDEQ) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase II Stormwater Discharge Permit Application requires a description of current and proposed BMPs to meet the minimum control measure requirements for the Pollution Prevention and Good Housekeeping Program to the maximum extent practicable to prevent or reduce the discharge of pollutants from municipal facilities and operations.

SECTION B –FACILITY ASSESSMENT AND PRIORITIZATION

City owned and operated facilities have been assessed for their potential to discharge pollutants to the waters of the state. Each facility was evaluated based on the following criteria:

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

Based on these criteria, the potential for each facility to discharge pollutants to the waters of the state were rated high, medium, or low. For “low” priority facilities where no assessment factors are present, catch basin cleaning and street sweeping will be performed as indicated in the applicable procedures for these activities. For “medium” priority facilities, appropriate BMPs are considered based on the assessment factors present to prevent or minimize the potential for pollutants from entering surface waters of the state. “High” priority facilities have specific procedures that are included in Appendices M and N of the Storm Water Management Plan (SWMP).

SECTION C– UPDATES AND PRIORITY REVISION

This inventory shall be updated within 120 days as facilities and structural stormwater controls are added, removed, or no longer owned or operated by the applicant. Priority level assessments shall be revised within 120 days prior to discharging stormwater at a new facility, or when new the storage of materials, equipment, or vehicles changes at a facility.

SECTION D – MUNICIPAL INVENTORY AND ASSESSMENT

The following table identifies the City’s owned or operated facilities with a discharge of stormwater to surface waters of the state. **Table 1** includes a list of properties owned or operated by the City that has stormwater controls on site and provides the estimated number of stormwater structural controls (i.e. catch basins, detention basins, etc.) at each site, along with the priority level of potential discharge of pollutants to waters of the state. **Table 2** provides a listing of other properties that are owned and operated by the City but do not have any

stormwater controls. In general, sites listed on Table 2 are parks or properties that are green space and do not contain any structures or parking lots.

Table 1

Facility Name	Location	Structural Controls	Priority Level	Assessment Factors	BMP's Implemented
City Hall	500 W. Big Beaver Rd.	Catch Basins (5)	Low	0	Catch Basin Cleaning Street Sweeping
Public Works Facility	4693 Rochester Rd.	Catch Basins (24) Detention Basin (1)	High	1, 3	See Section E See SWPPP/PIPP
Aquatic Center	3425 Civic Center Dr.	Catch Basins (24)	Low	0	Catch Basin Cleaning Street Sweeping
Community Center	3179 Livernois Rd.	Catch Basins (31) Detention Basin (1)	Low	0	Catch Basin Cleaning Street Sweeping
Library	510 W. Big Beaver Rd.	Catch Basins (24)	Low	0	Catch Basin Cleaning Street Sweeping
Police Administration and Maint. Garage	500 W. Big Beaver Rd.	Catch Basins (7)	High	1, 3	See Section E See SWPPP/PIPP
Fire/Police Training Center	4850 John R. Rd.	Catch Basins (3) Detention Basin (1)	Low	0	Catch Basin Cleaning Street Sweeping
Fire Station No. 1	1019 E. Big Beaver Rd.	Catch Basins (4) Detention Basin (1)	Low		Catch Basin Cleaning Street Sweeping
Fire Station No. 2	5600 Livernois Rd.	Catch Basins (5) Detention Basin (1)	Low		Catch Basin Cleaning Street Sweeping
Fire Station No. 3	2400 W. Big Beaver Rd.	Catch Basins (14) Detention Basin (1)	Low		Catch Basin Cleaning Street Sweeping
Fire Station No. 4	2103 E. Maple Rd.	Catch Basins (6) Detention Basin (1)	Low		Catch Basin Cleaning Street Sweeping
Fire Station No. 5	6399 John R Rd.	Catch Basins (6)	Low		Catch Basin Cleaning Street Sweeping
Fire Station No. 6	5901 Coolidge Hwy.	None	Low	0	Street Sweeping
Troy Historic Village	60 W. Wattles Rd.	Catch Basins (30) Vegetated Swale (1)	Low		Catch Basin Cleaning Street Sweeping
Sylvan Glen Golf Course	5725 Rochester Rd.	Catch Basins (5)	Med	0	Catch Basin Cleaning Street Sweeping
Sanctuary Lake Golf Course	1450 South Blvd.	Catch Basins (4) Detention Basin (1)	Med	0	Catch Basin Cleaning Street Sweeping
Sylvan Glen Lake Park	5501 Rochester Rd.	None	Low	0	None
Fire Fighters Park	1300 W. Square Lake Rd.	Catch Basins (20) Detention Basins (2)	Low	0	Catch Basin Cleaning Street Sweeping
Boulan Park	3671 Crooks Road	Catch Basins (21)	Low	0	Catch Basin Cleaning Street Sweeping
Beach Road Park	Beach Rd/Long Lake Rd.	None	Low	0	Street Sweeping
Phillip J. Huber Park	3500 Civic Center Dr.	None	Low	0	Street Sweeping

Robinwood Park	640 Robinwood	Catch Basins (10)	Low	0	Catch Basin Cleaning
Milverton Park	2384 E. Maple Rd.	None	Low	0	Street Sweeping
Brinston Park	2262 Brinston	Catch Basins (5)	Low	0	Catch Basin Cleaning Street Sweeping
Raintree Park	3775 John R Rd.	Catch Basins (13)	Low	0	Catch Basin Cleaning Street Sweeping
Jaycee Park	1755 E. Long Lake Rd.	Catch Basins (4)	Low	0	Catch Basin Cleaning Street Sweeping
Beaver Trail Park	3458 Pasadena	Detention Basin (1)	Low	0	None
Donald J. Flynn Park	1710 E. South Blvd.	Vegetated Swale (1)	Low	0	Street Sweeping
Gateway Park	1019 E. Big Beaver Rd.	Catch Basins (4)	Low	0	Catch Basin Cleaning
Troy Skate Park	3179 Livernois Rd.	Catch Basins (3)	Low	0	Catch Basin Cleaning Street Sweeping
Lloyd Stage Nature Center	6685 Coolidge Hwy.	None	Low	0	Street Sweeping
Troy Farm	Beach Rd./W. South Blvd	None	Low	0	Street Sweeping
Beach Road Cemetery	5360 Beach Rd.	None	Low	0	None
Crooks Road Cemetery	3701 Crooks Rd.	None	Low	0	None
Perrin Cemetery	1050 Coolidge Hwy.	None	Low	0	None
Troy Union Corners Cemetery	1199 E. Square Lake Rd.	None	Low	0	None

Structural Storm Water Controls	Quantity
City Catch Basins	19,000
City Outfalls	374
City Detention Basins	127 City Owned, 130 City Maintained
City Stormwater Treatment Units	2
City Pump Stations	20
City Secondary Containment	2 (DPW Brine Tanks)
City Vegetated Swales	2

Table 2

Facility Name	Address/Crossroads
North Glen Park	6500 Elmoor Drive
Schroeder Park	3500 Beach Road
Redwood Park	750 Redwood Drive

SECTION E –SITE SPECIFIC SOP FOR HIGH PRIORITY SITES

The MDEQ NPDES Phase II Stormwater Discharge Permit Application requires a standard operating procedure (SOP) for identifying the structural and non-structural stormwater controls implemented and maintained to prevent or reduce pollutant runoff at each facility with the high potential for pollutant runoff.

E.1 Inventory and Description of Materials and Activities

The City of Troy's public works operations are conducted at their 4693 Rochester Road facility. The City also operates a vehicle maintenance garage at their police administration office located at 500 W. Big Beaver Road. These sites are considered high priority sites due the following operations:

DPW Facility – 4693 Rochester Road

- Salt Storage
- Brine Storage
- Stockpiled materials
- Underground Storage Tanks
- Maintenance and cleaning of vehicles and equipment

Police Vehicle Maintenance Garage – 500 West Big Beaver Road

- Maintenance and cleaning of vehicles and equipment
- Underground Storage Tanks

E.2 Vehicle Washing and Maintenance

Minor vehicle maintenance activities are conducted by DPW staff for the City's DPW and police vehicle fleet. Maintenance activities conducted by DPW staff include, but are not limited to, oil changes and other vehicle fluids, tune ups, etc. These activities are carried out indoors where floor drains are connected to the sanitary sewer system. More complicated maintenance and repairs are conducted by a private maintenance facility. A maintenance log is maintained to document all vehicle maintenance and repair activities.

Vehicle washing activities are conducted at either a commercial car wash or indoors at the DPW and Police Maintenance facilities where the floor drains discharge to the sanitary sewer system.

Site specific standard operating procedures have been developed for these facilities and are included as separate documents in Appendices M and N of the Storm Water Management Plan (SWMP). Please see the Department of Public Works Facility Storm Water Pollution Prevention and Pollution Incident Prevention Plan (SWPPP/PIPP) in Appendix M, and the Police Vehicle Maintenance Garage Storm Water Pollution Prevention Plan (SWPPP) in Appendix N.

SECTION F –CATCH BASIN MAINTENANCE PRIORITY

Catch basins that are inspected and maintained by the City have been prioritized for routine inspection, maintenance, and cleaning. The criteria for the priority levels that include low, medium, and high are defined as follows:

> ***Low Priority*** – Catch basins that are of low priority have very little sediment accumulation and do not require routine maintenance. Low priority catch basins are inspected on an as needed basis based on complaints.
>
> ***Medium Priority*** – Catch basins that are of medium priority have a higher rate of sediment accumulation and will require maintenance more frequently than low priority catch basins.
>
> ***High Priority*** – Catch basins that are of high priority have a high rate of sediment accumulation and will require regular routine maintenance and inspection. These catch basins are typically located in areas where sediment is easily mobilized and transported by runoff.

Catch basins at the DPW property and Emerald Lakes Subdivision are considered high priority with the remaining of the City's catch basins having very little sediment accumulation rates, require little maintenance and are of low priority. Sylvan Glen Golf Course and Sanctuary Lake Golf Course are currently assigned a medium priority rating. The City Village will inspect high priority areas twice a year and medium priority areas once a year. The City Village will proceed to clean them if the sediment in the sump is no more than 50% full. The City Village will inspect 20% of catch basins in low priority areas once a year and will proceed to clean them if the sediment in the sump is no more than 50% full. Catch basins that prompt resident complaints or are subject to isolated instances where structures are plugged or damaged will be maintained and inspected by the City contractor as needed. At that time, it will be determined if the catch basin will require maintenance on a more frequent interval and warrants a reclassification to a medium priority rating. In the event the priority rating of a catch basin is changed, or new catch basins are constructed, this procedure will be updated and revised to reflect the change in priority within 120 days.

SECTION G – CATCH BASIN INSPECTION, MAINTENANCE, AND CLEANING

Catch basins are visually inspected during normal work activities or if a complaint is registered by a resident. A visual inspection of the structure will identify any structural defects which may include collapse, cracking, frame damage, pipe collapse, blockage, etc. and will be documented. Catch basin structures in need of structural repairs are identified during the inspection and regular maintenance process based on the results of visual assessments conducted by the City. Structure repairs are prioritized based on public safety concerns. City owned catch basins are inspected concurrently with cleaning activities between April and November. A vactor truck is used to remove all solids and liquids from the structure to the extent possible. At no time is collected sediment and water allowed to be discharged back into the storm sewer system during the cleaning process. Catch basins that are located on private property are not inspected, cleaned, or maintained by the City.

SECTION H – DISPOSAL OF COLLECTED MATERIAL

Collected material from catch basin cleaning and street sweeping activities is transported to a local landfill for disposal.

SECTION I –STREET SWEEPING PRIORITIZATION

City owned and maintained streets have been prioritized for street sweeping. The criteria for the priority levels that include low, medium, and high are defined as follows:

> ***Low Priority*** – Residential streets within the City are of low priority due to their minimal sediment accumulation rates. They are generally swept at least one time per year.
>
> ***Medium Priority*** – Major roads throughout the City are of medium priority due to the higher rate of sediment accumulation rates in comparison to low priority residential streets. Medium priority areas are generally swept several times per year.
>
> ***High Priority*** – Areas that are of high priority have a high rate of sediment accumulation and will require regular, frequent sweeping. These areas are typically located in areas where sediment is easily mobilized and transported by runoff. Additionally, areas that prompt resident complaints or are subject to excessive road sediments are also considered a high priority area. There are currently no areas that have been assigned a high priority rating due to excessive road sediments and resident complaints. However, if DPW receives a complaint, a determination of the area will be made by DPW staff to increase sweeping on a more frequent interval as well as a reclassify the area to high priority rating.
>
> In the event a priority rating is changed, or new City owned streets are constructed, this procedure will be updated and revised to reflect the change in priority within 30 days.

Street sweeping activities are conducted by the City using both mechanical and regenerative air equipment. Collected sediment from street sweeping activities is disposed of as described in Section H. Major Roads within the City are considered Medium Priority over the rest of the city side streets which are Low Priority. Street sweeping program activities are not implemented under the following conditions:

- Street sweeping is not conducted on County or State roads
- Sweeping activities is not conducted during wet and inclement weather
- Street sweeping activities are not conducted on private streets, parking lots, or uncurbed streets.

SECTION J – OTHER STRUCTURAL STORMWATER CONTROLS

In addition to implementing the catch basin maintenance and street sweeping programs, the City also performs inspections of other storm water controls that are located throughout the City.

J.1 Detention Basin

The routine procedure for the detention basins at the DPW facility is the inspection of the inlet pipes and the outlet structure for blockages as part of the biannual comprehensive inspection of the DPW.

J.2 Vegetated Drainage Swales

The routine inspection of vegetated drainage swales located on City owned properties consists of the visual evaluation of blockages or excessive sedimentation. Inspections generally occur during daily park operations, or when complaints are received by the City.

J.3 Stormwater Treatment Units

The City installed a stormwater treatment unit located at Big Beaver and Rochester Road. The units are cleaned and maintained annually or per the manufacturer's recommendations.

J.4 Pump Stations

The City installed pump stations are inspected regularly to ensure operation and maintenance is conducted on an as needed basis.

J.5 Secondary Containment

Secondary containment units are located at the City Department of Public Works facility for the two (2) brine tanks. Inspections of the secondary containment for the tanks are conducted as part of the DPW SWPPP/PIPP regular and comprehensive inspections, and repairs are completed on an as needed basis.

The City does not have any other structural controls that are owned or maintained by the City. In the event additional structural stormwater controls are constructed, this procedure will be updated and revised to include the new controls within 120 days.

SECTION K – NEW APPLICANT OWNED FACILITIES

In the event the City acquires or constructs new structural stormwater controls, the design of these structures will comply with the stormwater standards that have been established by Oakland County. Site plans will be reviewed by the City, or its consultants, to ensure the appropriate standards are met.

SECTION L – CERTIFIED PESTICIDE APPLICATOR

The City has a certified pesticide applicator on staff and applies pesticides or fertilizers seasonally. In addition, the City also retains the services of a licensed applicator.

SECTION M – EMPLOYEE TRAINING

Employee training programs will be implemented to inform appropriate personnel at all levels of responsibility of safety, environmental impacts, and good housekeeping practices at the minimum of once every permit cycle. The City participates in training opportunities that are made

available by SEMCOG, Oakland County, the Alliance of Rouge Communities, and others as deemed appropriate. Employee training components for the City staff includes:

Employees Trained	Training Description and Frequency
New Troy DPW Employees	Upon hire, employees will: • View the Municipal Storm Water Pollution Prevention Storm Water training video. • Read and become familiar with the City of Troy SOPs • Participate in a job shadow program where new staff is paired with a DPW foreman or grounds crewman.
All Troy Facilities Employees	• View the Municipal Storm Water Pollution Prevention Storm Water training video. • Review proper materials storage and handling. • Review good housekeeping and pollution prevention practices. • Review samples of illicit discharges to the storm sewer system • Review City of Troy Spill Response Procedures.
Key Staff	• Attendance at key staff to relevant training workshops by the Alliance of Rouge Communities, SEMCOG, or others, when available.

SECTION N –CONTRACT REQUIREMENTS AND OVERSIGHT

The contractors hired by the City to perform municipal operations that potentially impact stormwater are required to follow appropriate pollution prevention BMPs indicated in the City's contract language. In cases where an outside contractor is hired to perform services that could impact stormwater, the contracting company will be required to follow appropriate pollution prevention BMPs. At the time of the Pre-Construction Meeting for a new project, all contractors are given the City's "A Contractor's Guide to Storm Water Pollution Prevention" brochure for guidance. In addition, all work performed by outside contractors are monitored by City staff through observation to ensure quality of work, adherence to the specified contract language, and to ensure that potential impacts to stormwater are minimized.

Measureable Goals – To demonstrate the effectiveness of this procedure, the following metrics will be tracked for reporting purposes.

- Number of stormwater pollution related incidents pertaining to activities or work performed by the contractor.
- Number of incidents where the City required corrective action by the contractor

These metrics will be tracked over the reporting cycle that is specified in the City's Certificate of Coverage.

SECTION O – COMPLAINT PROCEDURE

Complaints or concerns may be reported by the public through the City's Service Request Portal available on the City's website. The service request is then routed to the appropriate department via automated email for follow up. Investigation into complaints routed to the DPW department

is conducted within 48 hours after the complaint has been received by the City. At that time, the DPW will make a determination to correct any problems or contact the responsible parties for appropriate action.

Measureable Goals – To demonstrate the effectiveness of this procedure, the following metrics will be tracked for reporting purposes.

- Number of complaints routed to the DPW department for follow up.
- Number of incidents that prompted additional corrective actions by the DPW or other responsible party

These metrics will be tracked over the reporting cycle that is specified in the City's Certificate of Coverage.

SECTION P – PROCESS FOR REVISION

This procedure shall be reviewed once per permit cycle by the City Engineering Department for any updates to streamline the requirements.

APPENDIX I

ROUGE RIVER COLLABORATIVE TOTAL MAXIMUM DAILY LOAD (TMDL) IMPLEMENTATION PLAN FOR MUNICIPAL STORMWATER PERMITEES

Prepared by:

Alliance of Rouge Communities
OURS TO PROTECT
Working together, restoring the river

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March 23, 2016

Table of Contents

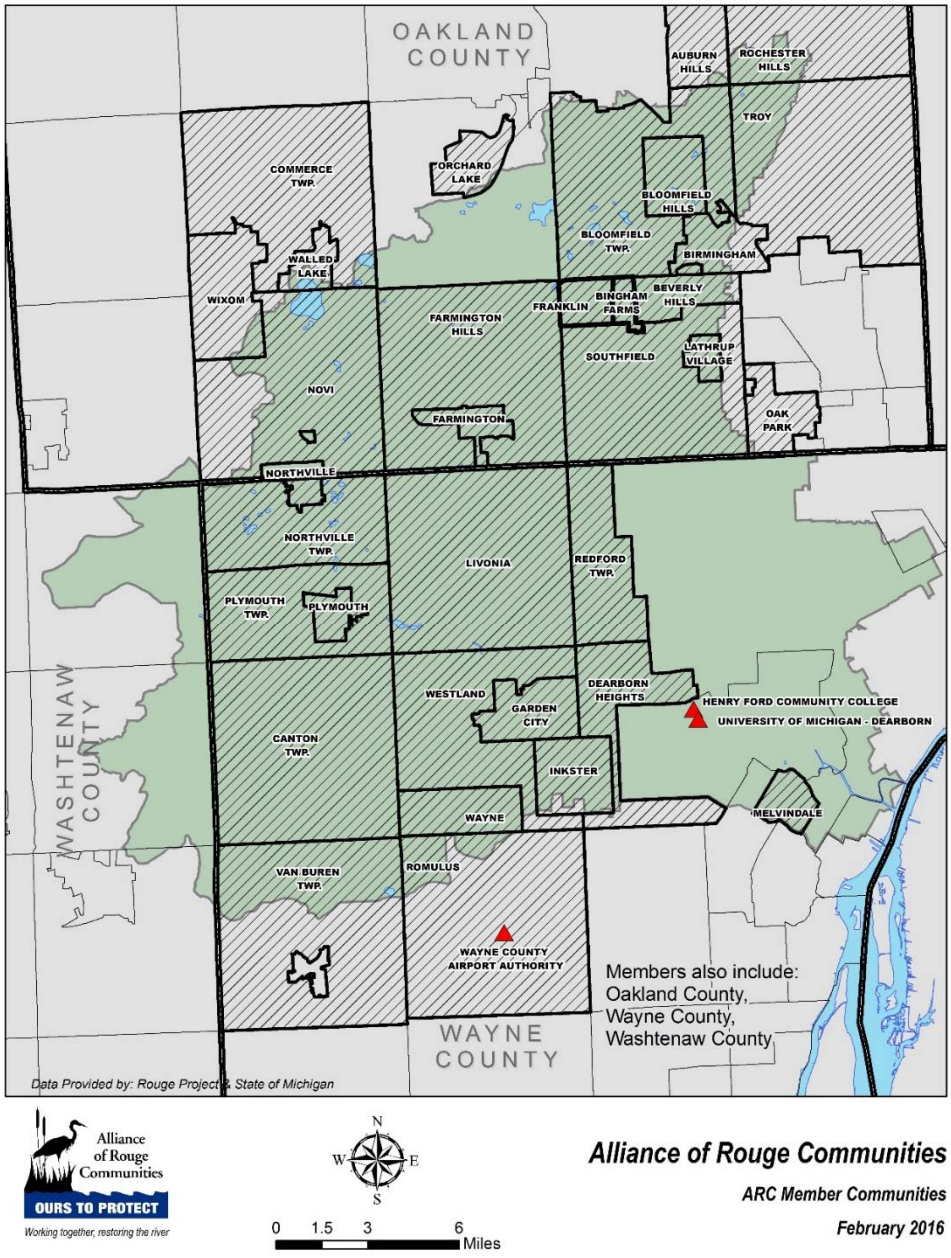
List of Figures

List of Tables

List of Appendices

A. Introduction

The Alliance of Rouge Communities (ARC), a 501(c)(3) organization, is a voluntary public watershed entity currently comprised of municipal governments, counties, schools, and cooperating partners as authorized by Part 312 (Watershed Alliances) of the Michigan Natural Resources and Environmental Protection Act (MCL 324.101 to 324.90106) as amended by Act No. 517, Public Acts of 2004. The purpose of the ARC is to provide an institutional mechanism to encourage watershed-wide cooperation and mutual support to meet water quality permit requirements and to restore beneficial uses of the Rouge River to the area residents.



This Collaborative Plan (Plan) presents the watershed-wide approach to effectively and efficiently address the pollutants contained within approved Total Maximum Daily Load (TMDL) Assessments for the Rouge River watershed. This Plan was developed by the Technical Committee of the Alliance of Rouge Communities (ARC) in response to the requirements under the State of Michigan's Permit Application for Discharges of Storm Water to Surface Waters of the State from a Municipal Separate Storm Sewer System (MS4), revised October 2015.

This Plan is intended to meet the TMDL elements of the permit application: questions 85 – 88. These requirements are as follows:

- Provide a procedure for identifying and prioritizing BMPs to reduce the TMDL pollutants,
- Provide a list of BMPs that will be implemented to reduce the TMDL pollutants, and
- Provide a monitoring plan to access the effectiveness of the BMPs.

Application Item 85

The U.S. Environmental Protection Agency has approved three TMDL Assessments within the Rouge River watershed as listed below. The *E. coli* and biota assessments apply to the entire watershed, while the dissolved oxygen (DO) assessment only applies to the City of Northville, Northville Township and the City of Novi.

- *Escherichia coli* (*E. coli*) (MDEQ, 2007a)
- Biota (MDEQ, 2007b)
- Dissolved Oxygen for Johnson Creek (up to 6 Mile Road) (MDEQ, 2007c)

This Plan will address each of these parameters within the limits of the MS4 permit. **As such, this should not be considered an implementation plan to address all sources, only those under the authority of the MS4 permit.**

This Plan will be implemented by the participating communities through September 30, 2022, which is the end of the permit cycle for the Rouge River watershed. The list of permittees participating in this Plan can be found in **Attachment A**.

B. BACKGROUND

Within the TMDL Assessments, the MDEQ established primary and secondary targets for municipal stormwater permittees as shown in **Table 1**[1]. The secondary target parameters can be thought of as surrogates that will be useful in determining the success of the selected best management practices that are needed to reduce pollutant loads. In all three assessments, the MDEQ opted to assign collective targets to the MS4 permittees rather than individual targets. This would seem to indicate that the MDEQ recognizes that the impairments need to be addressed on a watershed-basis rather than within jurisdictional boundaries. It should be noted that the *E. coli* target is equivalent to the state's full body contact standards for recreational waters which will be very difficult to achieve in urban stormwater runoff.

[1] For ease of understanding, this document refers to concentration-based, rather than load-based targets. The pollutant load targets listed in the TMDLs are based on these concentrations.

Table 1 – TMDL Targets for Municipal Stormwater Permittees

Parameter	TMDL Targets for MS4 Permittees Primary (1°) and Secondary (2°)	Notes
E. coli	1°: 300 cfu/100 ml and 130 cfu/100 ml	Daily geometric mean value 30 day geometric mean value
Biota	1°: Procedure 51 scores ≥ Acceptable 2°: Suspended solids ≤ 80 mg/l	For 2 successive years Annual average during wet weather
Dissolved Oxygen	1°: 7 mg/L 2°: Suspended solids ≤ 80 mg/l*	

*This concentration is presumed for the purposes of this document, but it was not explicitly listed in the DO TMDL.

B.1. *E. coli* Conditions

Between May and October 2005, the MDEQ evaluated *E. coli* conditions on a routine basis during a range of weather conditions at approximately 70 locations across the watershed. Issues were found during both dry and wet weather conditions at most sites as indicated in **Table 2**. MDEQ also determined that human sources of *E. coli* were likely present at a few sites based on DNA analyses. However, only a few samples with elevated *E. coli* levels were evaluated for the presence of human DNA (MDEQ, 2007a).

Table 2 – Summary of *E. coli* Data from the *E. coli* TMDL

River Branch	Range of Exceedances by Site (% of samples above the standard)		
	Above the Monthly Standard of 130 cfu/100 ml	Above the Daily Standard of 300 cfu/100 ml	Above the Partial Body Contact Standard of 1,000 cfu/100 ml
Lower	89 – 100%*	41 – 100%	9 – 83%
Main	59 – 100%	40 – 100%	0 – 71%
Middle	89 – 100%	39 – 100%	9 – 91%
Upper	100%	90 – 100%	48 – 86%

*Table interpretation note: at least one site had 89% of samples exceed the monthly standard and at least one site had all (100%) samples exceed the monthly standard. The remaining sites fell within this range.

B.2. Suspended Solids Conditions

For the Biota TMDL, the MDEQ calculated the mean suspended solids concentration of each major river branch using data collected by the Rouge Project between 1994 and 2001 (See **Table 3**). In addition, an annual sediment load of 33,800 tons/year was calculated using the Simple Method model. Based on the 80 mg/l value, a suspended solids loading target of approximately 29,000 tons/year was established. This would require a 15% reduction in sediment loads from stormwater permittees (MDEQ, 2007b).

Table 3. Suspended Solids Concentrations by River Branch

River Branch	Mean Suspended Solids Concentration (mg/l)	
	Wet Weather*	Dry Weather
Lower	191	37
Main	114	27
Middle	95	19
Upper	152	30
Watershed-wide	138	28

*The TMDL target is 80 mg/l.

B.3. Dissolved Oxygen Conditions

For dissolved oxygen, the MDEQ determined that 3% of samples collected within the TMDL reach were below the target of 7 mg/l. This result was primarily based on 43,000 hourly DO values collected at 7 Mile Road by the Rouge Project between 1994 and 1996. The instances of low DO occurred primarily during low flow (non-runoff) conditions and high flows often resulted in higher levels of DO. Based on available data of other suspect pollutants, the MDEQ determined sediment oxygen demand was the primary factor affecting the low DO levels in Johnson Creek. Although they did note that low base flow conditions were also contributing to the low DO levels. It is noted that data used in this assessment was at least 10 years old which may not reflect conditions at the time the assessment was written.

Based on modeling, the MDEQ estimated that the existing suspended sediment load from MS4s was 650 tons/year and that an 85% reduction was needed to meet the target of 96 tons/year. This should result in the creek meeting the 7 mg/l DO target during low flow conditions (MDEQ, 2007c). Note that the MDEQ did not explicitly state the concentration of suspended sediment needed to meet the target, only the load.

B.4. Pollutant Sources

The Alliance of Rouge Communities (ARC) determined the suspected sources and causes associated with each of the TMDL parameters as shown in Tables 4 and 5. Only those sources regulated under the MS4 permit are included in these tables.

Table 4 – Sources and Causes of *E. coli*

Suspected Sources*	Suspected Causes
Failing Septic Systems (OSDS)	• Historical lack of septic system maintenance, education, inspection and correction. • Undetected or uncorrected illicit discharges.
Illicit Sanitary Connections to a Storm System	• Undetected or uncorrected illicit discharges.
Pet Waste/Urban Animal Waste	• Little knowledge of the importance of pet waste /urban animal waste management. • Loss of pervious areas via urban development.
Re-suspended Sediment	• Excessive peak discharges • Unsatisfactory infrastructure maintenance.

*Additional sources not regulated under the MS4 permit but contributing to the pollutant are uncontrolled combined sewer overflows, sanitary sewer overflows, sanitary sewer maintenance, wastewater treatment plant flows, and runoff impacted by animal waste from agricultural lands.

Table 5 – Sources and Causes of Sediment

Suspected Sources*	Suspected Causes
Roads/Highways/Bridges and Related Infrastructure on Municipal Properties	• Loss of pervious areas via urban development. • Insufficient storm water infrastructure maintenance.

*Additional pollutant sources not regulated under the MS4 permit but likely contributing to the pollutant are eroding streambanks, and runoff from agricultural lands and communities not regulated to discharge stormwater.

B.5. Summary

Based on the information discussed above, addressing the indicator pollutants/parameters shown in **Table 6** will make progress toward addressing the impairments identified in the TMDLs.

Table 6. Indicators to be Addressed in this Plan

Indicators	Associated TMDLs
E. coli	*E. coli*
Suspended Solids	Biota Dissolved Oxygen *E. coli*
Stream flow	Biota Dissolved Oxygen *E. coli*

C. BMP Prioritization Procedure

Several criteria were used to prioritize the best management practices (BMPs) that should be implemented to address the impairments. These criteria are as follows:

A. Ability of the BMP to affect human health impacts caused by direct contact with the river.
   - Low, moderate, high

B. Ability of the BMP to impact the concentrations of *E. coli* and suspended solids in the river and/or reduce peak stream flows.
   - Low, moderate, high

C. Ability of the BMP to impact multiple TMDL parameters
   - Low, moderate, high

D. Anticipated level of impact of the BMP as compared to added cost to implement it.
   - Low, moderate, high

E. Legal authority to implement the BMP.
   - Yes or no

F. Are there prerequisite projects that need to be completed before the BMP can be implemented?
   - Yes or no.

This process will be reviewed and updated, if necessary, by the ARC before August 30, 2022. The review will be based on the results of monitoring data and other measurables provided in Section E.

Application Item 86

D. Selected BMPs

Using the criteria listed above, several BMPs were evaluated for implementation as shown in Attachment B. Those BMPs with the highest scores are listed in **Table 7** along with the associated TMDL pollutant. These BMPs will be implemented by ARC members on an ongoing basis or according to the frequencies/schedules listed in the collaborative plans and stormwater management plans.

Application Item 87

Table 7 – Best Management Practices to be Implemented

Best Management Practice	Associated TMDL Parameter
TMDL #1: Activities listed in the Rouge River Watershed Collaborative Illicit Discharge Elimination Plan.	*E. coli*
TMDL #2: Review and approval of developer stormwater plans following the new Post-Construction Stormwater Standards.	SS and Stream Flow
TMDL #3: Construction of the stormwater management measures for permittee-owned projects on public property following the new Post-Construction Stormwater Standards.	SS and Stream Flow
TMDL #4: Activities listed in the Rouge River Watershed Collaborative Public Education Plan including education on septic system maintenance, the impacts of improperly disposed of pet waste, the impacts of feeding waterfowl, and the pollution complaint line.	*E. coli* and SS
TMDL #5: Miles of streets swept and/or number of catch basins cleaned, actual vs. planned as listed in each permittee's Stormwater Management Plan	SS and *E. coli*

Note: SS=Suspended solids

E. Evaluating Effectiveness

The effectiveness of this Plan will be measured using the tracking metrics indicated in **Table 8**. This information will be included in the permittees' bi-annual report to the MDEQ. The evaluation dates provided below presume that all permits for the Plan participants will be issued by October 1, 2017.

Table 8 – Tracking Metrics for Evaluating Effectiveness

Metric	Milestone	BMP*
A. Success of Collaborative IDEP Plan	See plan	TMDL #1
B. Status of adoption of Post-Construction Stormwater Standards by Permittee	50% of communities adopt by March 30, 2017 Remaining communities adopt by March 30, 2018	TMDL #2, #3
C. Number of stormwater plans reviewed for private sites under new standards and previous standards	75% of actual vs total during the permit period	TMDL #2
D. Percentage of permittee projects constructed under new standards and previous standards	75% of actual vs total during the permit period	TMDL #3
E. Success of Collaborative PEP Plan	See plan	TMDL #4
F. Number of catch basins cleaned (actual and planned) or Length of streets where catch basins were cleaned (actual and planned)	60% of actual vs planned	TMDL #5

*As described in Table 7.

Overall effectiveness will be determined based on the natural resource response as indicated by stream sampling conducted throughout the watershed. This monitoring will take place (every 10 years) and include assessments for dissolved oxygen, *E. coli*, stream flow, and suspended solids. The number of monitoring locations and frequency of monitoring are displayed in **Table 9**. **Figures 1 and 2** depict the monitoring locations.

A watershed-wide assessment report will be prepared that includes a summary of all monitored parameters. Dry and wet weather *E. coli* conditions will be determined based on flow duration curves and compared to previous results reported by the MDEQ. Other parameters will also be compared to previous results compiled by the Rouge Project and others.

Table 9 – Watershed-wide Monitoring Locations and Frequency

Parameter	Anticipated Monitoring Sites	Frequency	Schedule
Dissolved oxygen	Main (US5 and US7), Lower (L05D), Middle (D06) Upper (U05) and Johnson Creek (JC)	20 events	May – Oct 2017
Stream flow	Main (US5 and US7), Lower (US1), Middle (US2) Upper (US3) and Johnson Creek (JC)	Continuous	May – Oct 2017
E. coli	Similar to sites in the MDEQ *E. coli* TMDL Assessment – 85 sites	20 events	May – Oct 2017
Suspended solids	Same as DO sites	20 events	May – Oct 2017

Schedule: Metric Summary Report: Due June 30, 2022.
Watershed-wide Assessment Report: Due every 10 years by June 30 starting in 2018.

ARC Member Responsibilities:

- ARC (as contracted by the permittees)
  - Conduct instream monitoring for select indicators to determine the effectiveness of TMDL Plan.
  - Collect tracking metrics data from permittees.
  - Evaluate Metrics A and E by April 30, 2022.
- Counties (Road Agencies, WCDPS and OCWRC)
  - Keep records of Metrics B, C, D, and F as listed in **Table 8** and provide the data to ARC staff by April 30, 2022.
- Cities and Villages
  - Keep records of Metrics B, C, D, and F as listed in **Table 8** and provide the data to ARC staff by April 30, 2022.
- Townships and Schools
  - Keep records of Metrics C, D, and F as listed in **Table 8** and provide the data to ARC staff by April 30, 2022.

Figure 1 – Non-Bacterial Monitoring Locations

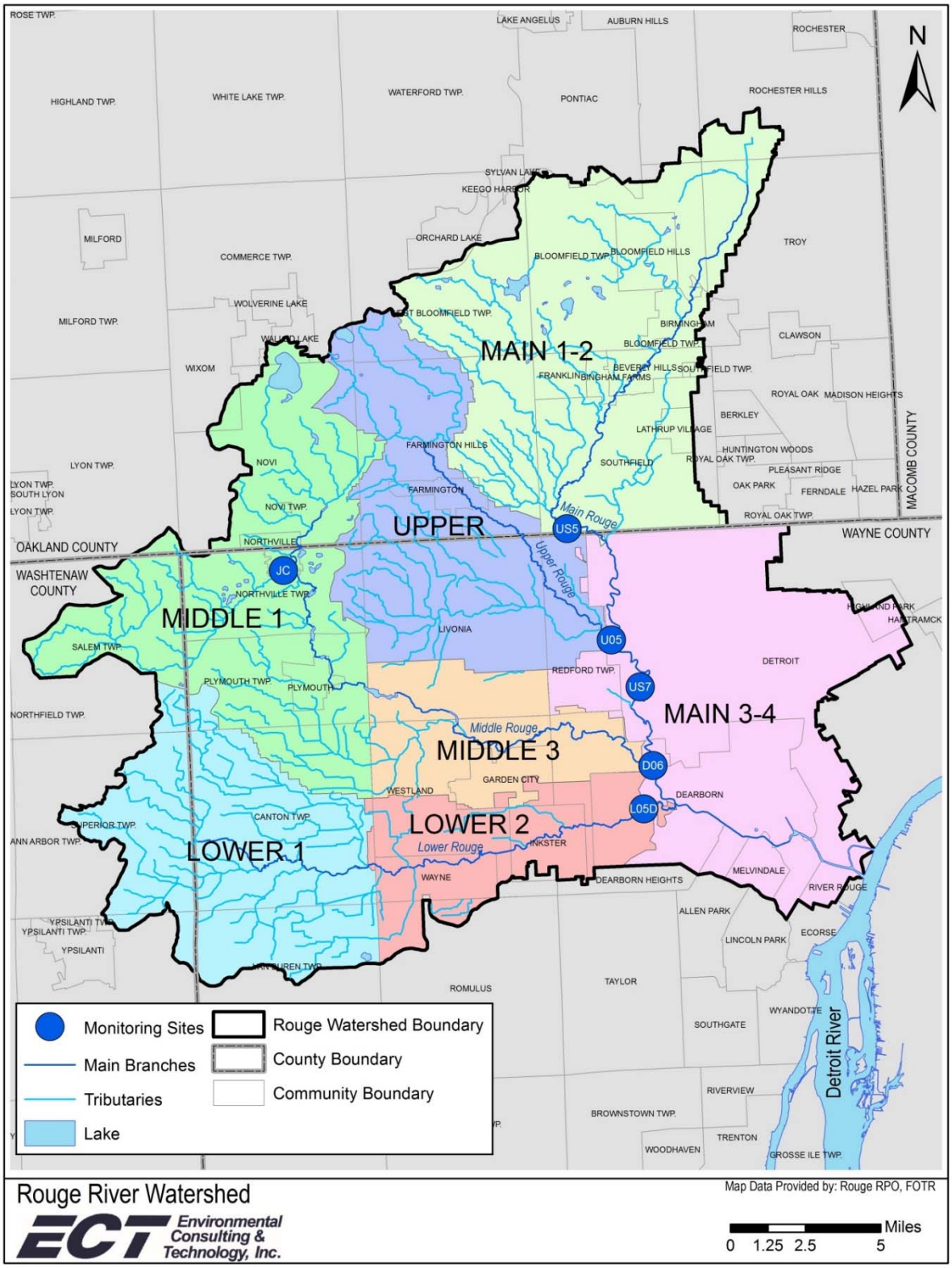
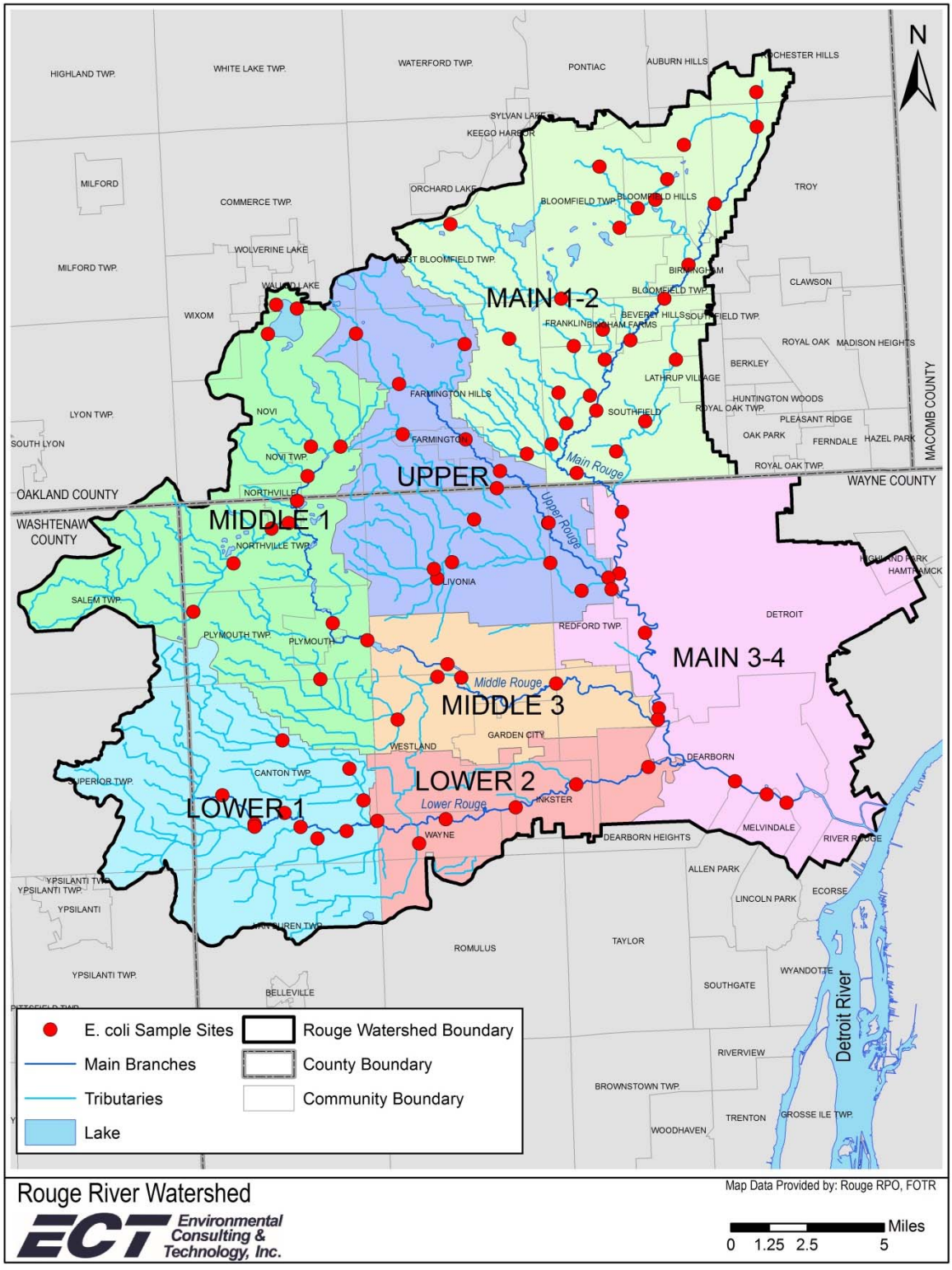


Figure 2 – Bacteria Monitoring Locations



F. REFERENCES

Alliance of Rouge Communities (ARC). *Rouge River Watershed Management Plan* June 21, 2012.

Michigan Department of Environmental Quality. *Total Maximum Daily Load for E. coli in the Rouge River, Wayne and Oakland Counties, Michigan*. August 2007a.

Michigan Department of Environmental Quality). *Total Maximum Daily Load for Biota in the Rouge River Watershed including Bishop and Tonquish Creeks, Washtenaw, Wayne and Oakland Counties, Michigan*. August 2007b.

Michigan Department of Environmental Quality. *Total Maximum Daily Load for Dissolved Oxygen in Johnson Creek, Wayne and Washtenaw Counties, Michigan*. June 2007c.

Attachment A

Participating ARC Members

Permittee (listed alphabetically)	
Communities	
Beverly Hills, Village of	Northville, City of
Bingham Farms, Village of	Northville Township
Birmingham, City of	Novi, City of
Bloomfield Hills, City of	Oak Park, City of
Bloomfield Township	Plymouth, City of
Canton Township	Plymouth Township
Dearborn Heights, City of	Redford Township
Farmington, City of	Southfield, City of
Farmington Hills, City of	Troy, City of
Franklin, Village of	Walled Lake, City of
Garden City, City of	Wayne, City of
Inkster, City of	Westland, City of
Lathrup Village, City of	
Livonia, City of	
Melvindale, City of	
Counties	
Oakland County*	
Wayne County	
Schools	
Henry Ford College	

*Participating but this plan is not part of their pending permit application.

Attachment B

BMP Selection Criteria and Ranking

	BMP Selection Criteria and Ranking for TMDL Parameters						
	Ability of the BMP to affect human health impacts caused by direct contact with the river	Ability of the BMP to impact the concentrations of *E. coli*, suspended solids and/or reduce peak stream flows	Anticipated level of impact of the BMP as compared to added cost to implement it	Ability to impact multiple TMDL pollutants	Legal authority to implement the BMP?	Are there prerequisite projects that need to be completed?	Total Score
BMP	0=low, 1=moderate, 2=high				Yes, No	Yes, No	
Illicit discharge source identification and abatement	2	2	2	2	Y	N	8
New Stormwater Ordinance Implementation	0	2	2	2	Y	Y [1]	6
Green Infrastructure Installation on Public Property	0	1	2	2	Y	Y [2]	5
PEP Activities: Education on Pollution Complaint Line	1	1	1	2	Y	N	5
PEP Activities: Don't Feed Waterfowl Signage	1	1	1	1	Y	N	4
PEP Activities: Septic System Maintenance Education	1	1	1	0	Y	N	3
PEP Activities: Education on the impacts of Pet Waste	1	1	1	0	Y	N	3
Good Housekeeping Measures - catch basin maintenance	0	1	1	1	Y	N	3
Contractor Education	0	1	1	0	Y	N	2
Adopt Buffer/Set back ordinances	0	0	1	1	Y	N	2
PEP Activities: Riparian Corridor Education	0	0	1	1	Y	N	2
Streambank Stabilization	0	0	1	0	Y (on public property)	Y [3]	1
Woody Debris Management	0	0	0	0	Y (on public property)	Y [4]	0

Notes:

BMPs that will be implemented to address TMDL parameters.

[1] Pending the adoption of new stormwater standards and a propgram to implement the standards.

[2] Pending the adoption of new stormwater standards and funding to implement the standards on permittee properties.

[3] Pending reduction in stream flows and funding to implement.

[4] Pending reduction in stream flows.

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

Table of Contents

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

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 are 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: ACTVITIES 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

Prioritization Procedure for Communities within Red Run Subwatershed

NPDES Permit Application Question 5 Public Education Plan Topic Prioritization

A watershed wide Public Education Plan (PEP) was developed to inform the public within the Clinton River Watershed and Red Run (RR) areas about their role in protecting water quality and preventing storm water pollution. 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.

The Red Run Subwatershed Advisory group prioritized the key messages that the PEP would cover for the 2015-2020 permit cycle. A representative from each community rated the 11 permit topics as low, medium or high for their individual community. The ratings were based on local knowledge of each community's characteristics and the attitudes of residents. Table 1below provides the results from the poll.

Table 1. Public Education Topic Ranking Results

Community	Stewardship	MS4/Waterbodies Education	Public Reporting of Illicit Discharges	Car, Pavement, Power Washing	Pesticides, Herbicides, Fertilizer Education	Grass Clippings, Leaf Litter, Animal Waste Disposal	HHW, RV Waste, Chemical/Yard Wastes	On Site Disposal System Education	Green Infrastructure /LID	Riparian Mgt Education	Commercial, Industrial, Institutional Education
CENTER LINE	No Response	No Response	No Response	No Response	No Response	No Response	No Response	No Response	No Response	No Response	No Response
CLINTON TWP.	High priority	High priority	High priority	Medium priority	Medium priority	High priority	Medium priority	Medium priority	Medium priority	Medium priority	Medium priority
HAZEL PARK	High priority	High priority	Medium priority	Medium priority	Medium priority	High priority	Low priority	Low priority	Medium priority	Low priority	Medium priority
MADISON HEIGHTS	High priority	Medium priority	High priority	Medium priority	High priority	High priority	High priority	Medium priority	Medium priority	Low priority	Low priority
ROCHESTER HILLS	Medium priority	High priority	High priority	Medium priority	Medium priority	Medium priority	Medium priority	Low priority	High priority	Medium priority	High priority
SHELBY TWP.	High priority	Medium priority	Medium priority	Medium priority	High priority	High priority	Medium priority	High priority	Medium priority	Medium priority	Medium priority
STERLING HEIGHTS	High priority	High priority	High priority	Medium priority	High priority	Medium priority	Medium priority	High priority	High priority	High priority	High priority
TROY	No Response	No Response	No Response	No Response	No Response	No Response	No Response	No Response	No Response	No Response	No Response
UTICA	High priority	High priority	High priority	Medium priority	High priority	Medium priority	Medium priority	High priority	High priority	High priority	High priority
WARREN	High priority	Medium priority	High priority	High priority	High priority	High priority	Medium priority	Low priority	Low priority	Low priority	Low priority
Majority	High priority	High priority	High priority	Medium priority	High priority	High priority	Medium priority	Low priority	Medium priority	Low priority	Medium priority

Once the table was assembled, feedback from the communities was sought on how best to implement the PEP key messages based on the prioritization table.

The following consensus was reached:

Low Priority Topics

On Site Disposal System Education – There are few in the areas whose major subwatershed is the RR. The topic will be covered in the areas that do contain OSDS.

- Information will still be made available on the Clinton River Watershed Council website (http://www.crwc.org/stormwater-protection/)
- Included as a topic in the Macomb County Annual Environmental Calendar.
- Workshops facilitated by the county extension will be promoted

Riparian Management - The southern end of this subwatershed contains little to no riparian area. The topic will be covered as a medium to high priority in the most northern areas of the Red Run such as Troy and Sterling Heights.

Medium and High Priority topics are covered in a variety of ways. Each medium and high priority will include a minimum of 3 presentations or workshops, 2 news articles (if applicable) over the course of the permit. All information will be made available on the Clinton River Watershed Council website (http://www.crwc.org/stormwater-protection/). Please see Table 2 for more details and additional delivery methods.

Red Run Table 2

PEP TOPIC	BMP IDENTIFIER	BMP DESCRIPTOR	PARTNER COLLABORATION	Target Audience	Key Message(s) Addressed Green =High Priority Orange= Medium Priority Yellow= Low Priority 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 Maintenenance	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
	Watershed Wide Actvities																	
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 commerical, 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 minumum 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 commerical, 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 minumum 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

Red Run 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 Maintenenance	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 communites 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	x		Program is continous however actual monitoring is in May and Oct of each year.	CRWC	Retain 4,000 students per year in the progam with 35 teachers.
	Macomb County Specific Activities																	
A-K	MCPWO Student Presentations	Macomb County Public Works Office offers *Recycle Macomb!, Pollution Solutions!* and *Water & the Urban Environment!* 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			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

Red Run 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 Maintenenance	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
	Oakland County Specific Activities																	
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	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	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 Wtaershed Model Program	The Enviroscape 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 Enviroscape is also made available to the public to borrow	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 newslteers 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.	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	YES	General public, Oakland County 4th and 5th grade students	x	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

Red Run 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 Maintenenance	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	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 Econominc Development Services (OCPEDS), Road Commision of Oakland County (RCOC), OCPRC and MSU-Extension Oakland County maintain environmental stewardship and/or water resource information on their Web sites at:	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	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: www.destinationoakland.com.	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) *Ours to Protect* Web site at: www.semcog.org/OursToProtect_HouseholdWaste.aspx	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	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,	YES	Residents	x						x					Annually	Oakland	Provide working link to Web site
	Community Specific Activites	**These items are to be reported by the communities in the SWMP not all items will be implented by each community.**																
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		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.
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		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.

Red Run 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 Maintenenance	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,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		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: www.semcog.org/OursToProtect_HouseholdWaste.aspx		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		General Public, Riparian Landowners	x	x	x	x	x	x	x	x	x	x		Continuous	MS4 Permittees	Provide working link to Web site

ILLICIT DISCHARGE ELIMINATION PLAN

FOR

City of Troy

Clinton River Watershed / Red Run Drain

PREPARED IN COMPLIANCE WITH
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

PHASE II STORM WATER REGULATIONS

CERTIFICATE OF COVERAGE MIG610053

Revised July 2019

Table of Contents

City of Troy Contact Information

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Section I - Plan Objectives

Illicit Discharge Elimination Plan (IDEP) Objectives

This document describes the City of Troy's plan for identifying and eliminating illicit connections and discharges to the Waters of the State within the portion of the City within the Red Run Drain subwatershed of the Clinton River Watershed. This plan has been developed to fulfill the requirements for Part I. Section A.3.a. of the State of Michigan's National Pollutant Discharge Elimination System (NPDES) General Permit (MIG619000) for Storm Water Discharges from Separate Storm Water Drainage Systems (MS4s) with Watershed Plans and the Certificate of Coverage, MIG610053 that was issued to the City of Troy on December 17, 2003 under the General Permit.

The City of Troy participates in the Clinton River Red Run Subwatershed Group, which is facilitated by the Macomb County Public Works Office (MCPWO). The City of Troy also fully participates in the Rouge River Main 1-2 Subwatershed Group, which is facilitated by the Oakland County Water Resources Commissioner's Office. This IDEP plan was developed in collaboration with the MCPWO and the other Red Run Subwatershed partners as listed in the Appendix. This IDEP plan was also developed in collaboration with the Oakland County Water Resources Commissioner's (OCWRC) Office and the Rouge River Main 1-2 Subwatershed partners.

The purpose of the IDEP is to develop a program to prohibit and effectively eliminate illicit discharges and illicit connections to storm water conveyances within the City of Troy, and the objectives of this IDEP are to:

1) Train appropriate city staff on the investigation of illicit connections and discharges, including those from on-site disposal systems (OSDS) with emphasis on outfall observations/screenings, safety issues and naturally occurring phenomenon.

2) Implement a system for identifying and eliminating illicit discharges and connections to the MS4s including outfall observations and follow-up sampling.

3) Improve the legal authority to eliminate illicit discharges and connections to MS4s and provide for inspections of any MS4s that may be constructed in the City of Troy in the future.

4) Locate and accurately map the storm water conveyances and outfalls owned and operated by the City of Troy.

5) Work with the Oakland County Water Resources Commissioner's (OCWRC) Office OCDC and other agencies such as the Oakland County Health Division (OCHD) to utilize the existing County-wide complaint response and referral system for storm water/water quality related complaints.

6) Develop and implement an OSDS inspection program.

7) Coordinate the City of Troy IDEP efforts with other local communities and impacted County agencies.

Section II - Community Information

A. General Information

The City of Troy covers approximately 32.6 square miles in southeast Oakland County, was originally established as an agricultural and residential center, and was incorporated in January 1955.

The City of Troy has a total population of 80,980 as determined in the 2010 census. The City of Troy falls entirely within the "urbanized area" and the storm water regulations apply to all the public separate storm sewer systems within the City of Troy limits.

The Storm Water Program Manager is appointed by the City of Troy and is responsible for implementation of this plan and compliance with the General Permit and Certificate of Coverage. The Storm Water Program Manager contact information is listed in the beginning of this document.

B. Nested Jurisdictions

The Oakland County Water Resources Commissioner's Office, the Road Commission for Oakland County, the Michigan Department of Transportation, and the Troy School District. The City of Troy will not be seeking coverage for these jurisdictions under its permit.

C. Storm Water Drainage

The City of Troy has both a separated sanitary and storm drainage system and a combined sanitary and storm drainage system under its jurisdiction. Exhibit A is a list of the known storm sewer outfalls in the City of Troy, the type of outfall, and their receiving waters. Exhibit B, also located at the end of this document, is a map of the general location of the known storm sewer outfalls under the City of Troy jurisdiction.

About 223 properties are being served by on-site sewage disposal systems (OSDS).

Section III - Planned and Existing Efforts

The following subsections summarize the four required elements of an IDEP as specified in Part I, Section A.3.a of the MDEQ Watershed Option General Storm Water Permit (MIG619000) and the City of Troy's plans for addressing each element. The City of Troy is committed to continuing the IDEP upon MDEQ approval or within 90 days of final submittal, and to completing activities to meet each of the required elements within five years of COC issuance. The actions completed will comply with the regulations and meet IDEP objectives. The planned actions are summarized and tabulated in Section IV of this plan. The City of Troy IDEP will be reviewed during preparation of the annual report to the MDEQ to determine if modifications are needed, and will notify the MDEQ of any changes in the plan.

Public education and resident involvement is essential for protection and enhancement of our natural resources. For this IDEP to be effective, the City of Troy will coordinate this plan with the Public Education Plan regarding educational activities and materials.

1. Develop and implement a program to find and eliminate illicit discharges and illicit connections found during dry weather screening.

Task 1.a: **Perform visual inspections and dry weather screenings of City of Troy owned and/or operated storm water conveyance outfalls.**

Description: Dry weather visual inspections will be conducted at each of the City of Troy's known outfalls shown in Exhibit D every 5 years. This Dry Weather visual screening will also assist the City of Troy with locating previously unknown outfalls within the City. The last round of dry weather visual inspections were completed in 2015.

Dry weather inspections are defined as those conducted when no rain/precipitation event has occurred for a minimum of 48 hours. If flow is observed in the sewer at that time, it will be determined if the flow is natural base flow or a possible illicit discharge. Dry weather screening of outfalls will include inspecting presence/absence of flow, water clarity, deposits/stains, color, vegetation condition, odor, structural condition, floatable materials, and biology (sheens, algae, and slimes). Dry weather flow may be tested for indicator parameters like temperature, pH, conductivity, and nutrients including phosphates, and nitrates, and sampling for E. coli as deemed appropriate. Sampling will be conducted within 48 hours.

Responsibility: Department of Public Works and Engineering Department

Measure: Documentation of findings and observations. Number of possible illicit connections discovered.

Schedule: Dry weather visual inspections were completed in 2015, with repeat of 20% of outfalls to be sampled every year. Visual inspections to be completed every 5 years.

Task 1.b: **Trace Illicit Connections, Owner Notification, and Follow-Up Enforcement**

Description: Initial sampling for suspected illicit connections will be completed within 1-2 business days of discovery. Trace suspected illicit connections or dumping found in Task 1.a to their source using the techniques like smoke testing, dye testing, or internal videoing of the sewer, and notify the owner or responsible jurisdiction of the problem in writing within 30

days of discovery. The City will direct the owner of the source to eliminate the illicit connection/discharge within 90 days and require a notification of correction as appropriate. The City will require the owner of the system to provide updates on their investigation and inform the City when the connection has been eliminated. This will be field verified by City Staff including the plumbing inspectors and staff from the Water & Sewer Division. The timeframe for eliminating the connection/discharge will depend on the type and significance of the illicit connection/discharge, and the expense and difficulty of repair. For non-complex illicit connections/discharges may take no longer than 14 days to be eliminated. More complex illicit connections/discharges may take longer than 90 days to eliminate. If the illicit discharge has not been eliminated, the City will use its legal authority to obtain compliance. If the illicit discharge is an indirect source, the City will coordinate follow-up and enforcement with the jurisdiction in which the discharge originates. As needed, sampling, dye and/or smoke testing, as-built plan review, or other investigative techniques will be used to determine the nature and source of the flow. The City of Troy will be required to receive written approval from the MDEQ before using any tracer dyes to confirm any potential illicit discharges or connections.

Responsibility: Department of Public Works and Engineering Department
Measure: Number of illicit connections/discharges traced and documentation of notification and elimination.
Schedule: Initial assessment has been completed, this program is to be continued as illicit connections/discharges are discovered.

Task 1.c: **Coordination with the MDEQ**
Description: The City of Troy will report any identified significant illicit discharges including those of untreated or partially treated sewage to the MDEQ within 24 hours after the discharge begins or is discovered and of corrective actions being taken to eliminate the connection/discharge. The reports will cover the information required by the General Permit and Certificate of Coverage.

The City of Troy will submit an annual report to MDEQ summarizing the activities completed including illicit connections/discharges identified and corrected. For significant illicit discharges, the City will list the pollutants of concern, the estimated load and volume discharged, and the locations of the discharge into the system and to the waters of the state.

Responsibility: Department of Public Works and Engineering Department
Measure: Copy of the referral and/or annual report
Schedule: Ongoing

Task 1.d: **Provide training to appropriate City of Troy staff on illicit connections/ discharges, including failed OSDS, safety issues and naturally occurring phenomenon.**
Description: The City of Troy will provide training on illicit connections and discharges, including failed OSDS to appropriate City staff.
Responsibility: Department of Public Works and Engineering Department
Measure: Meeting minutes, conclusions and recommendations. Training records.
Schedule: Completed with the Voluntary Storm Water Permit activities and will be continued as part of the NPDES Permit.

Task 1.e: **Review and update existing legal authority to implement the IDEP.**

Description: The City of Troy currently has adequate legal authority and enforcement capability to allow it to find, track and eliminate illicit connections. The City will conduct a thorough review of its existing legal authority to ensure it will continue to be adequate. The City of Troy will conduct a thorough review of its existing ordinances, and amend it as necessary, to ensure that:

- the ordinance adequately defines and prohibits illicit connections and discharges;
- the City has adequate legal authority to investigate suspected illicit connections/discharges;
- the City has adequate legal authority to require elimination of illicit connections/discharges and enforcement capability;

Responsibility: Department of Public Works, Engineering Department and Legal Department

Measure: Documentation of review and written recommendations

Schedule: Ongoing

Task 1.f: **Utilize the existing complaint receipt and response systems available.**

Description: There is currently a County-wide system to receive and track complaints about storm water issues in Oakland County. The City of Troy also utilizes a computer tracking system for complaints about storm water and water quality issues. The City of Troy advertises the County complaint system telephone number and e-mail address through various means such as newspapers, posters, mailings, web sites, etc.

Responsibility: Department of Public Works, Engineering Department, and Community Affairs

Measure: Documentation of advertisement of the system

Schedule: Ongoing

Task 1.g: **Notify outside agencies and proper jurisdictions of illicit discharges or connections found by City of Troy staff and coordinate efforts to find and eliminate illicit discharges/connections.**

Description: During the course of normal business, Troy staff may observe illicit connections or discharges that are not under the City's jurisdiction. The City of Troy will notify the owner or agency with jurisdiction of the problem in writing. The City will report any identified significant illicit discharges including those of untreated or partially treated sewage to the MDEQ within 24 hours after the discharge begins or is discovered and of corrective actions being taken to eliminate the connection/discharge. The reports will cover the information required by the General Permit and Certificate of Coverage. The City of Troy will submit an annual report to MDEQ summarizing the activities completed including illicit connections/discharges the City of Troy identified and corrected. For significant illicit discharges, the City of Troy will list the pollutants of concern, the estimated load and volume discharged, and the locations of the discharge into the system and to the waters of the state.

The City of Troy will attempt to coordinate drain and outfall inspections with other local communities, RCOC, OCWRC and other appropriate agencies in an effort to eliminate duplication, reduce costs and provide consistency.

Responsibility: Department of Public Works and Engineering Department
Measure: Documentation of the notification
Schedule: Ongoing

Task 1.h: **Develop a priority schedule for the inspection of all City of Troy drains and outfalls.**

Description: The City of Troy will use existing outfall inspection data, knowledge of problem areas, existing work/inspection schedule, location of urbanized area and other criteria to prioritize the next round of outfall inspections of the City of Troy drains and outfalls. The schedule will allow the re-inspection of all of the outfalls within the permit cycle.

Responsibility: Department of Public Works and Engineering Department
Measure: A written inspection schedule
Schedule: Ongoing

Task 1.i: **Review any existing water quality data for drains and water bodies in the City of Troy.**

Description: The City of Troy will obtain and review any available water quality data for the water bodies in the City of Troy. Possible sources are OCWRC records, Michigan Department of Environmental Quality (MDEQ), the Friends of the Rouge (FOTR), Alliance of Rouge Communities (ARC), Clinton River Watershed Council (CRWC), local universities and local communities. The review will be used to assist the City of Troy in prioritizing actions and tracking progress for the IDEP.

Responsibility: Department of Public Works and Engineering Department
Measure: Documentation of review and recommendations
Schedule: Once the NPDES Permit has been approved by MDEQ.

Task 1.j: **Investigate the feasibility of conducting base-line and follow-up water quality monitoring in select drains and water bodies in the City of Troy.**

Description: The City of Troy will investigate the feasibility and benefit of conducting base-line and periodic follow-up water quality monitoring in select drains and water bodies within the City. The monitoring may provide a measure of the effectiveness of the IDEP. The City will look at costs versus value of information obtained and decide if monitoring will be added as an additional IDEP task.

Responsibility: Department of Public Works and Engineering Department
Measure: Documentation of evaluation, conclusions and recommendations.
Schedule: Review existing water quality data to determine of additional monitoring is necessary. To be completed prior to next round of dry weather inspections.

2. ***Develop and implement a program to minimize seepage from sanitary sewers and on-site sewage disposal systems (OSDS) into the applicant's separate storm water drainage system.***

Task 2.a: **Provide training to City of Troy staff on illicit connections and discharges.**

Description: Same as Task 1.d.

Responsibility: Department of Public Works, Engineering Department, and Building Department
Measure: Meeting minutes, conclusions and recommendations. Training records.
Schedule: New staff will be trained as necessary

Task 2.b: **The City of Troy will take action to identify and report failed OSDS within the City of Troy.**
Description: The City of Troy will take the following actions to locate failing OSDS and report those failures to the OCHD.

- Citizen complaints will be an additional resource for locating failing OSDS.
- IDEP trained City employees will help to identify failed OSDS during the course of their daily work schedule.
- Visual inspections of the shore of lakes, streams and open drains near riparian homes and businesses, which is part of the dry weather outfall screening listed in Task 1.a.

Responsibility: Building Department, Engineering Department, Department of Public Works
Measure: Complaint and referral records.
Schedule: Ongoing

Task 2.c: **Evaluate the integrity of the City of Troy sanitary and storm sewer systems.**
Description: The City of Troy has an ongoing evaluation program in place for the city owned sanitary sewer systems. This involves visual inspections, flow record review, sewer televising and other means as appropriate. On an as-needed basis, the City of Troy will televise those separate storm sewers under its jurisdiction to determine if illicit connections that were not detected during outfall inspections/sampling exist.
Responsibility: Public Works Department
Measure: Report of findings, corrections and/or recommendations
Schedule: Ongoing.

Task 2.d: **The City of Troy has developed and adopted an ordinance which requires owners of failing OSDS to connect to the City sewer system if it is available.**
Description: The City of Troy has adopted an OSDS inspection ordinance as part of the existing Sanitary Sewer Ordinance. All new construction and repairs for OSDS are permitted through the OCHD. This ordinance also requires owners of failing OSDS to connect to the City sewer system if it is available.
Responsibility: Building Inspection Department and Legal Department
Measure: Documentation of enforcement actions.
Schedule: On going with all OSDS properties.

Task 2.e: **Provide information to owners of OSDS on the proper use and maintenance of their disposal system.**
Description: The City of Troy will provide information to owners of OSDS on the proper use and maintenance of their disposal system. The information may be in the form of workshops, pamphlets, newsletters, cable TV programs, or some other means that the City of Troy finds to be effective. Effort will be made to utilize existing information such as that

produced by Oakland County Health Department, the MDEQ, watershed councils, etc. The City of Troy will continue to encourage its residents to attend workshops that may be held on OSDS maintenance.

Responsibility: Engineering Department and Department of Public Works

Measure: Type and volume of information provided. Number of attendees at workshops.

Schedule: Ongoing

3. Develop a method for determining the effectiveness of the illicit discharge elimination activities that shall, at a minimum, result in the inspection of each storm water point source every five years unless an alternative schedule is approved by the MDEQ.

Task 3.a: Visual dry-weather inspection of the City owned storm water outfalls and follow-up investigation and correction of any problems. (See Task 1.a)

Description: Same as Task 1.a. Follow up investigations including field inspections by the Plumbing Inspectors with the Building Department or the staff members from the Engineering or Department of Public Works will be completed to determine if the necessary corrections to illicit discharges/connections have been made.

Responsibility: Department of Public Works and Engineering Department

Measure: Records of inspections and corrections

Schedule: Ongoing, same as Task 1.a

Task 3.b: The City of Troy has a tracking system to monitor progress in implementing the IDEP.

Description: Annually, as established in the COC, the City of Troy has prepared and submitted a report summarizing its illicit discharge elimination efforts to MDEQ. The report summarizes the following:

- Illicit connections/discharges identified through citizen complaints, OCWRC referral, inspections, sampling and/or sewer television and the corrective actions taken, including follow up inspections and sampling;
- Results of inspections and sampling (including pollutant, estimated volume and load and location for significant illicit discharges);
- Dry/wet weather storm water outfall inspections conducted;
- OSDS found to be improperly functioning and the actions taken to correct the problems;
- Schedules for the elimination of unresolved problems/discharges;
- Storm sewers and sanitary sewers televised in the past year as well as the findings;
- Corrective actions taken as a result of storm and sanitary sewer televising;

Responsibility: Department of Public Works and Engineering Department

Measure: Annual report

Schedule: Progress reports dates are set as part of the NPDES Permit

Task 3.c: Investigate the feasibility/benefit of conducting base-line and then follow-up water quality monitoring in select drains and water bodies in the City of Troy. (See Task 1.k)

Description: Same as Task 1.m.
Responsibility: Department of Public Works and Engineering Department
Measure: Documentation of evaluation, conclusions and recommendations.
Schedule: Same as Task 1.k.

Task 3.d: **The City of Troy has a procedure to identify and record, map and inspect outfalls from new construction.**
Description The City of Troy has a procedure to add any new outfalls from new construction to the City's Storm Drain map. An updated map will be included with the Annual Report. The procedure involves identifying new outfalls and their receiving waters through the construction approval process, adding the outfalls to the existing drainage system map. Dry-weather visual screening of the new outfalls will be completed with the next round of screening.
Responsibility: Engineering Department and Department of Public Works
Measure: Procedure documented and implemented. New outfalls mapped and inspected. An updated map will be included with the Annual Report.
Schedule: Ongoing

4. Prepare an updated map of the location of each known storm water point source and the respective receiving water or drainage system.

Task 4.a: **Update drainage system map based on field observations, as-built Engineering plans, and identify and record, map and inspect outfalls from new construction (See Task 3.d).**
Description: Same as Task 3.d. The drainage system map and outfall table will be updated based on the field observations and as-built Engineering plans. An updated map will be included with the Annual Report.
Responsibility: Department of Public Works and Engineering Department
Measure: Outfall map and table updated.
Schedule: Ongoing

Section IV - Summary of Planned Efforts

The City of Troy's IDEP is summarized in the tables that follow. The first table lists the IDEP tasks by the associated General Permit (MIG619000) requirement (Part I, Section A.3.a) and it provides the implementation schedule and measure for each task.

Summary of IDEP tasks, implementation schedules and measures:

PERMIT REQUIREMENT	TASK #	TASK DESCRIPTION	SCHEDULE	MEASURE
1. Develop and implement a program to find and eliminate illicit discharges and illicit connections found during dry weather screening.	1.a	Perform dry weather visual inspections of outfalls	Ongoing every 5 years	Records of findings
	1.b	Trace illicit connections/discharges, Owner notification, Follow-up Enforcement	Completed. Continue as required upon finding	Records of findings
	1.c	Coordination with MDEQ	Complete in 1st	Written report and recommendations
	1.d	Provide IDEP training to staff	Ongoing	Training records
	1.e	Review existing legal authority	Begin in 1st year, completed by 3rd year	Written recommendations
	1.f	Utilize existing complaint system	Ongoing	Records of complaints
	1.g	Coordinate IDEP activities with outside agency	Ongoing	Documentation of notification and coordination
	1.h	Develop schedule for inspection of all drains	See Task 1.a	Copy of schedule
	1.i	Review existing water quality data	Begin in 2nd. Ongoing	Documentation of reviews
	1.j	Investigate feasibility of base-line water quality monitoring	Begin and complete in 2nd	Written recommendations
2. Develop and implement a program to minimize seepage from sanitary sewers and on-site sewage disposal systems (OSDS) into the applicant's separate storm water drainage system.	2.a	Provide training for City staff on finding failed OSDS	Ongoing	Documentation of training events
	2.b	Identify and report failed OSDS in Troy	Ongoing	Complaint and referral records
	2.c	Evaluate sanitary and storm systems	Ongoing	Report of findings, corrections and/or recommendations
	2.d	Enforce City ordinance for OSDS inspections	Ongoing	Report of findings and corrections
	2.e	Provide maintenance information to OSDS owners	Ongoing	Number of workshops and attendees, brochures and cable programs shown

Summary of IDEP tasks, implementation schedules and measures (cont.):

PERMIT REQUIREMENT	TASK #	TASK DESCRIPTION	SCHEDULE	MEASURE
3. Develop a method for determining the effectiveness of the illicit discharge elimination activities which shall, at a minimum, result in the inspection of each storm water point source every five years unless an alternative schedule is approved by the MDEQ.	3.a	Inspect outfalls at City of Troy offices	Begin and complete in 2nd	Records of inspection and correction
	3.b	Tracking system to monitor progress in IDEP	Annually with the annual report	Annual report
	3.c	Investigate feasibility of conducting baseline water quality monitoring	Evaluation to be completed in 2nd year	Documentation of evaluation, conclusions and recommendations
	3.d	Identify, record, map and inspect outfalls from new construction	Ongoing	Revised outfall and storm sewer maps. Include updated storm sewer map with Annual Report.
4. Prepare an updated map of the location of each known storm water point source and the respective receiving water or drainage system.	4.a	Update drainage map based on field observations, as-built plans, and identify and record, map and inspect outfalls from new construction	Ongoing	Documentation of decision

2.1 Necessity. Regulations governing the storage, collection, transportation, and disposal of refuse, recyclables, yard recyclables, and other rejected, unwanted or discarded waste materials within the limits of the City of Troy are necessary to protect the public health and safety.

(Rev. 10/15/2001)

2.2 Definitions. The following definitions shall apply:

(1) Refuse - "Refuse" shall be understood to refer to municipal solid waste excluding recyclables and yard recyclables.

(Rev. 10/15/2001)

(2) Construction Refuse - "Construction refuse" shall mean all unwanted, rejected, discarded or abandoned material(s) resulting from the alteration, repair, construction, and/or demolition of buildings.

(Rev. 10/15/2001)

(3) Commercial/Industrial Refuse - "Commercial/Industrial refuse" shall mean the rejected, unwanted, discarded or abandoned materials resulting from operations that are generally identified with manufacturing, assembling, processing and distributing plants, large office buildings, hospitals, and clinics, and other producers of quantities of refuse in excess amounts.

(Rev. 10/15/2001)

(4) Hazardous Waste - "Hazardous Waste" shall mean a waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may cause or significantly contribute to an increase in serious irreversible, or incapacitating reversible illness or pose a substantial present or potential hazard to human health, safety, welfare or to the environment when improperly treated, stored, transported, used or disposed of, or otherwise managed, however, not to include solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act of 1967 as amended, or source, special nuclear, or by product material as defined by the Atomic Energy Act of 1954.

(Rev. 10/15/2001)

(5) Nuisance - Whatever annoys, injures, or endangers the safety, health, comfort or repose of the public; interferes with or destroys or renders dangerous any street, highway, allows accumulation of junk or obnoxious matters on private property; or in any way renders the public insecure in life or property is hereby declared to be a public nuisance. Public nuisances shall include, but not be limited to, whatever is forbidden by any provision of Chapter 88 and the common and

statute law of this state.

(Rev. 10/15/2001)

(6) Yard Recyclables - "Yard Recyclables" shall mean grass clippings, leaves, wood chips, chipped Christmas trees, small pencil-thin twigs, garden vegetables and fruit, old potting soil, Halloween pumpkins, shredded bark, sod, weeds, old flowers, prunings, straw, straw bales, play sand, top soil, old mulch, corn husks, and any other similar items.

(Rev. 10/15/2001)

(7) Recyclables - "Recyclables" shall be defined on an annual basis by the Southeastern Oakland County Resource Recovery Authority, but is expected to at least include newspapers, inserts, catalogs, magazines, brown paper grocery bags, paperboard, corrugated cardboard, telephone books, clear and brown glass, #1 and #2 plastics, metal cans, metal lids, pie tins, small metal objects, empty metal paint cans and metal aerosol cans, and household batteries.

(Rev. 10/15/2001)

2.3 Duties of Owners, Occupants.

(1) Every owner, tenant or occupant of any building, or any person responsible for organizing a gathering place for people for any purpose, shall provide adequate and sufficient size clean containers to hold the accumulated refuse between weekly scheduled refuse collections.

(Rev. 10/15/2001)

(2) It shall be unlawful for any person to burn refuse within the corporate limits of the City.

(Rev. 10/15/2001)

(3) It shall be unlawful for any person to bury refuse within the corporate limits of the City.

(Rev. 10/15/2001)

2.4 Containers - General.

(1) Every owner, tenant or occupant of any building, and the owner of any property or use which generates refuse shall provide sufficient size containers to hold the accumulated refuse between weekly scheduled refuse collections.

(Rev. 10/15/2001)

(2) Cardboard boxes, buckets, bushel baskets, paper bags, paint pails, and other similar containers are considered unapproved containers and the City may not collect refuse when placed in these unapproved containers.

(Rev. 10/15/2001)

(3) The City may also refuse to collect refuse placed in containers that exceed the size and weight limitation or otherwise do not conform to the provisions of this article.

(Rev. 10/15/2001)

2.5 Approved Container Size and Weight.

(1) Containers for refuse must be portable, watertight, vermin-proof, of substantial construction, and have handles and a tight-fitting cover. The container must have a capacity of at least ten (10) gallons, but not more than thirty-five (35) gallons. Mechanically lifted carts which exceed 35-gallons may be used with prior permission of the City Public Works Department.

(Rev. 10/15/2001)

(2) Strong securely closed plastic bags holding up to 32 gallons of refuse are also acceptable.

(Rev. 10/15/2001)

(3) For regular, scheduled pick-up, item(s) of refuse, including containers filled with refuse, shall weigh less than sixty (60) pounds. In addition, items of refuse shall not exceed three (3) feet in length or three (3) feet in girth.

(Rev. 10/15/2001)

2.6 Rejection of refuse, tagging of containers.

(1) If any refuse is rejected by the city waste collector because it does not conform to the requirements of this chapter, the city waste collector shall give notice to the owner or occupant of the premises by placing a tag on the rejected refuse. The tag shall advise the owner or occupant of the non-conformity and shall include a telephone number to call for additional information and possible alternatives.

(Rev. 10/15/2001)

(2) If the City of Troy Department of Public Works determines the owner or occupant has failed to correct the tagged violation, the Department of Public Works may make a special collection of the rejected refuse. The property owner shall be liable for any expense(s) the city incurs to make the special collection.

(Rev. 10/15/2001)

2.7 Disturbing Containers. No person other than the owner of refuse containers or his agents, or employees of licensees of the City shall disturb, remove, or attempt to remove refuse containers or their covers or disturb or remove or attempt to remove the contents of such containers or

disturb, remove or attempt to remove any refuse not in containers whether same is on public or private property.

(Rev. 10/15/2001)

2.8 Container Maintenance. The refuse containers and contents shall be stored in suitable places between collection periods. The containers shall be inaccessible to vermin, domestic animals, and insects, so as to prevent a nuisance.

(Rev. 10/15/2001)

2.9 Quantity of Refuse Collected.

(1) In every case where the owner, occupant, or user of any residential premises accumulates more than two (2) cubic yards of refuse within any one-week period, it shall be the responsibility of such owner, occupant, or user to arrange for private collection and disposal.

(Rev. 10/15/2001)

(2) Commercial/industrial buildings may place at the curb up to 4 bags or cans per week for collection. These cans shall not exceed a thirty-five (35) gallon limit nor weigh more than 60 pounds. If the owner or occupant accumulates more than 4 bags or cans per week, it shall be the responsibility of the owner or occupant to arrange for private collection and disposal.

(Rev. 10/15/2001)

2.10 Preparation of Refuse.

(1) Hazardous waste shall be the responsibility of the producer, or owner thereof and shall not be disposed of within the City. In addition, hazardous waste shall not be stored or transported within the City without the written approval of the City Manager or Public Works Director. Written approval will not be granted unless the City Manager designates a supervisor who has knowledge of the safety measures required to protect the public health and safety during the storage, transport, or disposal of hazardous waste.

(Rev. 10/15/2001)

(2) Large residential refuse items shall be broken down or disassembled and placed in approved containers or securely tied in bundles which do not exceed sixty (60) pounds in weight, three (3) feet in length, and three (3) feet in girth. No item shall exceed 60 pounds.

(Rev. 10/15/2001)

(3) Bulky residential refuse items, such as large appliances or furniture, which cannot be broken down or disassembled, shall be placed at the curb by 7:00 a.m. on the normally scheduled collection day. For safety reasons refrigerator doors shall be removed before placing item(s) at the curb. No item shall exceed 250 pounds.

(Rev. 10/15/2001)

(4) No person shall leave any materials that could ignite waste in a container or waste collection vehicle.

(Rev. 10/15/2001)

2.11 Preparation of Yard Recyclables.

(1) Yard recyclable collection typically runs for 35 weeks, from mid-April through the first week in December. The Public Works Director or his designated representative will announce the yard recyclable collection dates each year.

(Rev. 10/15/2001)

(2) Yard recyclables shall be placed in container(s) not exceeding thirty-five (35) gallons that have yard waste sticker(s) affixed to the can. The yard recyclable container(s) shall be placed so that the yard waste sticker faces the street. The container shall be placed at the curb on the opposite side of the driveway from the regular refuse by 7:00 a.m. on the normally scheduled collection day. Thirty (30) gallon yard waste paper bags may also be used.

(Rev. 10/15/2001)

(3) At no time will the City collect yard waste packaged in any other manner, including yard waste that is placed in plastic bags.

(Rev. 10/15/2001)

(4) Container(s) marked as yard recyclables shall not be used to collect regular refuse.

(Rev. 10/15/2001)

(5) No yard recyclables container shall exceed 60 pounds in weight. (Rev. 10/15/2001)

2.12 Preparation of recyclables.

(1) Recyclables shall be placed in a City of Troy approved recycling bin. The bin shall be placed on the opposite side of the driveway as the refuse. The bin shall be placed at the curb by 7:00 a.m. on the normally scheduled collection day.

(Rev. 10/15/2001)

(2) Recyclables may also be placed in an approved container with a recyclables sticker placed on it. The container must conform to all provisions of section 2.4 and 2.5. The container shall be placed so that the sticker faces the street and the container is clearly distinguished from regular refuse. The container shall be placed on the opposite side of the driveway as the refuse.

(Rev. 10/15/2001)

2.13.1 Disposal of Construction Refuse - It shall be the duty of the owner, contractor, occupant or other person responsible for construction work to arrange, at their own expense, the removal of such construction refuse from the premises within a reasonable time after the completion of such construction work.

(Rev. 10/15/2001)

2.14 Placing at Curb.

(1) Refuse, recyclables, and recyclable yard waste will be collected Monday through Friday, beginning at 7:00 a.m., with the exception of the following legal holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. When a holiday occurs on a weekday, refuse collection shall be made on the day following the regularly scheduled collection day. If the normally scheduled collection day is Friday, collection shall be made on Saturday.

(Rev. 10/15/2001)

(2) No refuse shall be placed at the curb or street for collection prior to 5:00 p.m. on the day preceding the day scheduled for collection.

(Rev. 10/15/2001)

(3) After the collection of container contents has been made, the empty containers shall be removed from the curb or street as soon as possible, but in no case later than twenty-four (24) hours after collection of refuse has been made.

(Rev. 10/15/2001)

2.15 Collection of Refuse.

(1) Nothing in this Chapter shall be interpreted to prohibit or deny the owner or producer of refuse the right to dispose of their refuse, so long as no provisions of the Code are violated.

(Rev. 10/15/2001)

2.16 Collection Vehicles. Vehicles used for collection, transportation of refuse within or through the City shall be water tight, covered, and conform to all laws regulating axle and road limitations.

(Rev. 10/15/2001)

2.17 Disposal of Refuse. The contractor for the City of Troy shall dispose of all refuse collected from within the corporate limits of the City at the facilities of the Southeastern Oakland County Resource Recovery Authority.

(Rev. 10/15/2001)

2.18 Routes to be Designated. The City shall designate the route to be taken by trucks of haulers of refuse through the City and to the facilities of the Southeastern Oakland County Resource Recovery Authority.

(Rev. 10/15/2001)

2.19 Composting.

(Rev. 10/15/2001)

The restrictions of Chapter 39, Section 39.90.03; Chapter 88, Section 9.13; Chapter 48, Section 6.101(5), and Section 6.107 shall not be deemed to prohibit composting on private property.

The construction and maintenance of yard waste composting bins/piles shall be permitted subject to the following conditions:

(1) The contents of compost bins/piles may consist of a combination of biodegradable material including those items listed as acceptable by composting authorities such as the Department of Natural Resources or Southeastern Oakland County Resource Recovery Authority.

(2) The contents of compost bins/piles shall not include meats, bones, fish, dairy products, vegetable or animal fats, cooked foods, carnivorous animal manure, plastics, synthetics, or other non-biodegradable material.

(3) Compost bins/piles are not permitted in drainage or utility easements.

(4) Compost bins/piles are permitted in rear yards, a minimum of three (3) feet from any lot line and fifteen (15) feet from any dwelling located on adjacent property.

(5) Composting bins/piles are limited in size to a maximum of 3 feet x 3 feet in area and 3 feet in height. Each parcel is limited to a maximum of three (3) bins/piles.

(Rev. 12/17/2001)

(6) Composting must be maintained in a manner to prevent the escape of offensive, unwholesome, or nauseous odor to adjacent property and not be an active attraction /refuge for rodents. In addition, there must be adequate screening to shield any compost bins/piles from the view of adjoining residential properties.

(Rev. 12/17/2001)

19.01.00 **DEFINITIONS.** In the interpretation of this chapter the following definitions shall apply unless the content clearly indicates otherwise:

19.01.01 **Available public sanitary sewer** shall mean a public sanitary sewer system located in a right of way, easement, highway, street or public way which crosses, adjoins or abuts upon the property and passing not more than 200 feet at the nearest point from a structure in which sanitary sewage originates.

(Rev. 08-15-2005)

19.01.02 **Biochemical Oxygen Demand** or **B.O.D.** shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at twenty (20) degrees centigrade, expressed in parts per million by weight.

(Rev. 01-13-2003)

19.01.03 **Building Department Inspector** shall mean the employee or employees of the City of Troy's Building Department, who is responsible for the inspection of the privately owned and maintained On-site Sewage Disposal Systems within the City of Troy.

(Rev. 01-13-2003)

19.01.04 **Building drain** shall mean that part of the lowest horizontal piping of a building drainage system which receives and conveys the discharge from soil, waste and drainage pipes other than storm drains from within the walls or footings of any building to the building sewer.

(Rev. 01-13-2003)

19.01.05 **Building sewer** shall mean the extension from the building drain to the public sewer or other place of disposal.

(Rev. 01-13-2003)

19.01.06 **Combination sewer** or **combined sewer** shall mean a sewer receiving both surface run-off and sewage.

(Rev. 01-13-2003)

19.01.07 **DWSD** shall mean the Detroit Water and Sewerage Department.

(Rev. 01-13-2003)

19.01.08 **Failure** shall be defined as follows: 1) the backup of sewage into a structure; 2) the discharge of effluent onto the ground surface; 3) the connection of an OSDS to a storm drain; 4) the liquid level in the septic tank is above the outlet invert; 5) the structural failure of a septic tank; 6) the discharge of sewage into any watercourse; 7) the liquid level in the disposal field is above the pipe of such field; or 8) the OSDS which failed to

meet operational, effluent or discharge guidelines as set forth by the MDEQ, Oakland County Health Division Services, or the City of Troy.

(Rev. 01-13-2003)

19.01.09 **Fixed interval inspection** shall mean the process of inspecting and evaluating the condition and state of the septic tank and septic system to cover a period of four years of operation for the On-site Sewage Disposal System. This process includes observations, information gathering, evaluations, and the report of findings.

(Rev. 01-13-2003)

19.01.10 **Garbage** shall mean solid wastes from the preparation, cooking and dispensing of food, and from the handling, storage, processing and sale of produce.

(Rev. 01-13-2003)

19.01.11 **Industrial wastes** shall mean the liquid wastes, solids, or semi-solids from industrial processes as distinct from sanitary sewage.

(Rev. 01-13-2003)

19.01.12 **MDEQ** shall mean the Michigan Department of Environmental Quality.

(Rev. 01-13-2003)

19.01.13 **Natural outlet** shall mean any outlet into a watercourse, pond, ditch, lake, or other body of water, either surface or ground water.

(Rev. 01-13-2003)

19.01.14 **On-site Sewage Disposal System or OSDS** shall include all components or devices including, but not limited to all septic tanks, pipes, pumps, vents and absorption systems used to treat and/or dispose of all wastewater from a structure that is not serviced by the City of Troy sewage disposal system.

(Rev. 01-13-2003)

19.01.15 **Person** shall mean any individual, firm, company, association, society, corporation or group.

(Rev. 01-13-2003)

19.01.16 **pH** shall mean the logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution.

(Rev. 01-13-2003)

19.01.17 **Properly shredded garbage** shall mean the wastes from the cooking, preparation and dispensing of food that has been cut or shredded to such a degree that all particles will be carried freely under flow conditions normally prevailing in public sewers, with no particle greater than one-half (1/2) inch in any dimension.

(Rev. 01-13-2003)

19.01.18 **Available public sanitary sewer system** shall mean a sanitary sewer or a combined sanitary and storm sewer used or intended for use by the public for collection and transportation of sanitary sewage for treatment or disposal.

(Rev. 08-15-2005)

19.01.19 **Public sewer** shall mean a sewer in which all owners of abutting property have equal rights, and is controlled by public authority.

(Rev. 01-13-2003)

19.01.20 **Sanitary sewer** shall mean a sewer which carries sewage, and to which storm and surface waters are not intentionally admitted.

(Rev. 01-13-2003)

19.01.21 **Satisfactory Operation** shall mean that there is minimal likelihood of degradation of groundwater and surface water, or risk to public health caused by improper construction, location or functioning of an OSDS.

(Rev. 01-13-2003)

19.01.22 **Sewage** shall mean any combination of water-carried wastes from residences, business and commercial buildings, institutions, and industrial establishments, together with such ground, surface and storm waters as may be present.

(Rev. 01-13-2003)

19.01.23 **Sewage disposal system** shall mean the City of Troy sewage disposal system.

(Rev. 08-15-2005)

19.01.24 **Sewage Treatment Plant** shall mean any arrangement of devices and structures used for treating sewage.

(Rev. 01-13-2003)

19.01.25 **Sewage works** shall mean all facilities for collecting, pumping, treating and disposing of sewage.

(Rev. 01-13-2003)

19.01.26 **Sewer** shall mean any pipe, tile, tubes, or conduit for carrying sewage.

(Rev. 01-13-2003)

19.01.27 **Shall** is mandatory. **May** is permissive.

(Rev. 01-13-2003)

19.01.28 **Storm sewer** or **storm drain** shall mean a sewer which carries storm and surface waters and drainage but which excludes sewage and polluted industrial wastes.

(Rev. 01-13-2003)

19.01.29 **Structure in which sanitary sewage originates** or **structure** shall mean a building in which toilet, kitchen, laundry, bathing or other facilities which generate water-carried sanitary sewage, are used or are available for use for household, commercial, industrial or other purposes.

(Rev. 08-15-2005)

19.01.30 **Suspended solids** shall mean the solids that either float on the surface of, or are suspended in water, sewage, or other liquids and which are removable by laboratory filtering.

(Rev. 01-13-2003)

19.01.31 **System** shall be deemed to refer to the said sewage disposal system.

(Rev. 01-13-2003)

19.01.32 **Watercourse** shall mean a channel in which a flow of water occurs, either continuously or intermittently.

(Rev. 01-13-2003)

19.02 **RESERVED.**

(Rev. 08-15-2005)

ON-SITE SEWAGE DISPOSAL SYSTEMS

19.03.01 On-site Sewage Disposal Systems. Unless a structure in which sanitary sewage originates is connected to a public sanitary sewer or combined sewer under the provisions of this Chapter, the building sewer shall be connected with a private on-site sewage disposal system complying with the regulations and orders of the MDEQ and the Oakland County Health Department, and the provisions of Chapter 79 of this code (Building Regulations).

(Rev. 08-15-2005)

19.03.02 Discontinuance of System. At such time as a public sewer becomes available to a property served by a private sewage disposal system, and a direct connection is made to the public sewer in compliance with the provisions of this Chapter, any septic tank, privy, privy vault, cesspool or similar private sewage disposal facilities shall be abandoned and filled with suitable material.

(Rev. 08-15-2005)

19.03.03 Maintenance of System. The owner shall operate and maintain the OSDS facilities in a sanitary manner at all times at no expense to the City. Maintenance of the OSDS shall include:

1. Having a fixed interval inspection and evaluation performed by City staff every four (4) years, this shall consist of:

    (A) Pumping of the septic tank at the time of inspection by a state licensed septage hauler.
    (B) Information gathering on the maintenance, including frequency of pumping of the septic tank.
    (C) Visual and olfactory observations and inspections of the condition of the septic tank, absorption system, pumps, filters, and other important features of the OSDS
    (D) Preparation of a report.

2. Having the septic tank pumped on an as needed basis to ensure a satisfactory operation of the system.

3. Repairs. The cost of all repairs, maintenance and replacements of existing On-site Sewage Disposal Systems shall be borne by the property owner. The owner shall make an application to perform such work to the Building Department Inspector and the Oakland County Health Department.

    (Rev. 01-13-2003)

19.03.04 Inspections. The City of Troy will notify the property owner when the building sewer and OSDS are required to have an inspection. The Building Department Inspector shall then inspect said OSDS and associated appurtenances to determine if the system is operating satisfactorily or is failing.

(Rev. 01-13-2003)

19.03.05 Satisfactory operation will be designated to systems with no evidence of an OSDS failure. Fixed interval inspections will be required every four (4) years thereafter until the structure is connected to the City of Troy's public sanitary sewer system.

(Rev. 01-13-2003)

19.03.06 If the OSDS and associated appurtenances do not meet the requirements for a functioning septic system, then the system will be considered a failing system. The owner of the property will be required to have the system repaired. The property owner will be responsible for obtaining all necessary repair permits from the Oakland County Health Department. Once the repairs have been completed, the property owner will be required to have the OSDS inspected again by the Building Department Inspector to ensure that the system is working properly.

(Rev. 01-13-2003)

19.03.07 Inspection Fee. All OSDS inspections performed by the City of Troy's Building Department Inspector shall be made only with written authorization and inspection reports issued by the City and with payments of fees as shall be established from time to time by the City Council. The fees and charges shall be related to actual costs incurred directly or indirectly to implement the On-site Sewage Disposal System Inspection Program.

(Rev. 01-13-2003)

19.03.08 Additional Requirements. No statement contained in this chapter shall be construed to interfere with the provisions of the State of Michigan Plumbing Code or with any additional requirements that may be imposed by the MDEQ or the Oakland County Health Department with respect to on-site sewage disposal systems.

(Rev. 01-13-2003)

BUILDING SEWERS AND CONNECTIONS

19.04.01 Permit Required. No unauthorized person shall uncover, make any connections with or open into, use, alter or disturb any public sewer or any appurtenance thereof without first obtaining a written permit from the Building Inspector of the City.

(Rev. 04-01-1964)

19.04.02 Permit Fee. All connections with the sanitary or combined sewers of the City shall be made only on written authorization and permits issued by the City on such forms and on payments of such fees as shall be established from time to time by the City Council.

(Rev. 09-25-1978)

19.04.03 Connection Permit. Before either a direct or indirect connection is made into any interceptor sewer system of Oakland County, a connection permit shall be obtained by the owner or contractor from the Oakland County Department of Public Works. This permit shall be obtained prior to any work being done on the connection to the sewer. Such permit shall be obtained in accordance with the

rules and regulations of the Oakland County Department of Public Works.

(Rev. 09-08-1968)

19.04.04 Installation Costs. All costs and expenses incident to the installation and connection of the building sewer shall be borne by the owner of said property. The owner shall indemnify the City from all loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.

(Rev. 04-01-1964)

19.04.05 Plans and Inspection of Plumbing Construction. All applicants for sewer connection permits shall first allow the City Plumbing Inspection to inspect the premises to be connected. The inspector shall determine whether present plumbing facilities are free from all safety hazards. The property owner prior to connection shall make all changes and improvements in the system required by the Plumbing Inspector to the City sewer.

(Rev. 08-30-65)

19.04.05 Inspection. The applicant for a building sewer permit shall notify the Building Inspector when the building sewer is ready for inspection and connection to the public sewer. The Building Inspector shall then inspect the said building and plumbing construction therein and if such construction meets the previous requirements as approved in the construction permit, a sewer connection permit shall be issued, subject to the applicable provisions of other sections of this chapter.

(Rev. 04-01-1964)

19.04.06 Repairs. The cost of all repairs, maintenance and replacements of existing building sewers and their connection to public sewers shall be borne by the property owner. Such owner shall make application to perform such work to the Building Inspector. (Rev. 04-01-1964)

19.04.07 House Connections. House connections from the lateral sewer in street or easement to within five feet from the house shall be in accordance with specifications established by the City of Troy Engineering Department. All joints shall be tight and when tested for infiltration shall not exceed the infiltration requirements of this Chapter.

(Rev. 09-25-1978)

19.04.08 Temporary Covering During New Construction. In an open excavated basement, it shall be the duty and responsibility of all owners, tenants, applicants for building permits and/or other agents and employees to cause the sanitary sewer pipe inside the building to be plugged. Also, it shall be the duty of such persons to prevent any removal, breaking, cracking, loosening, hole drilling, or other

damage to said plug, when removal, breaking, cracking, loosening, hole drilling, or other damage to such plug results in or causes any storm water, surface water, ground water, sub-surface drainage, dirt or debris to discharge or run into the sanitary sewer system. At such time as the plumbing system of such building or improvement is carried to the first floor, the basement backfilled and the roof placed on the building, and approved by the Building Department for the City, the plug may be removed and the building plumbing system connected thereto.

(Rev. 01-13-2003)

PROHIBITED USES

19.05.01 Unpolluted Water. No person shall discharge or cause to be discharged any storm water, surface water, ground water, roof runoff, subsurface drainage, cooling water or unpolluted industrial process waters into any sanitary sewer. Yard drains, patio drains, catch basins, downspouts, weep tiles, perimeter drains or any other structures used for the collection and conveyance of storm water shall not be permitted to discharge either directly or indirectly, into any sanitary sewer except as provided in this Chapter. Storm water and all other unpolluted drainage shall be discharged into such sewers as are specifically designated as combined sewers or storm sewers or to a natural outlet approved by the City Engineer and/or the MDEQ. Industrial cooling water or unpolluted process waters may be discharged, upon approval of the Chief Building Inspector into a storm sewer, combined sewer or natural outlet.

(Rev. 01-13-2003)

19.05.02 Except as hereinafter provided, no person shall discharge any industrial or commercial type wastes into the Troy sewer system, which is deleterious to the public health and safety of the people of the City of Troy. Any waste will be considered deleterious that may cause damaging effects as stated under General Conditions and/or does not conform to the limitations stated under Specific Conditions.

(Rev. 04-01-1964)

(1) General Conditions:

(A) Chemical reaction, either directly or indirectly, with the materials of construction to impair the strength or durability of sewer structures.

(B) Mechanical action that will destroy or damage the sewer structures.

(C) Restriction of the hydraulic capacity of sewer structures.

(D) Restriction of the normal inspection or maintenance of the sewer structures.

(E) Placing of unusual demands on the sewage treatment equipment or process.

(F) Limitation of the effectiveness of the sewage treatment process.

(G) Danger to public health and safety.

(H) Obnoxious conditions inimical to the public interest.

(I) Any conditions not listed above that are prohibited by the DWSD or are prohibited by the MDEQ and/or Federal Clean Water Act.

(Rev. 01-13-2003)

(2) Specific Conditions:

(A) Acidity or alkalinity must be neutralized to a pH of 7.0 as a daily average on a volumetric basis, with a maximum temporary variation of pH 5.0 to 10.0.

(B) Must not contain more than 10 P.P.M. of the following gases: Hydrogen sulfur dioxide, oxides of nitrogen, or any of the halogens.

(C) Must not contain any explosive substance.

(D) Must not contain any flammable substance with a flash point lower than 187 degrees F.

(E) Must have a temperature within the rage of 32 degrees to 150 degrees F.

(F) Must not contain grease or oil or other substance that will solidify or become viscous at temperatures between 32 degrees and 150 degrees F.

(G) Must not contain insoluble substance in excess of 10,000 P.P.M. or exceeding a daily average of 500 P.P.M.

(H) Must not contain total solids (soluble and insoluble substance) in excess of 20,000 P.P.M., or exceeding a daily average of 2,000 P.P.M.

(I) Must not contain soluble substance in concentrations that would increase the viscosity to greater than 1.1 specific viscosity.

(J) Must not contain insoluble substance having a specific gravity greater than 2.65.

(K) Must not contain insoluble substance that will fail to pass a No. 8 standard sieve, or having any dimension greater than 1/2 inch.

(L) Must not contain gases or vapors, either free or occluded, in concentrations toxic or dangerous to humans or animals.

(M) Must not have a chlorine demand greater than 15 P.P.M.

(N) Must not contain more than 100 P.P.M. of an antiseptic substance.

(O) Must not contain phenols in excess of .005 P.P.M.

(P) Must not contain any toxic or irritating substance, which will create conditions hazardous to public health and safety.

(Q) Must not contain in excess of 100 P.P.M. or exceed a daily average of 25 P.P.M. of any grease or oil or any oily substance.

(R) Must meet all requirements for discharging into the DWSD public sanitary sewer system.

All of the preceding standards and regulations are to apply at the point where industrial or commercial type wastes are discharged into a public sewer and all chemical and/or mechanical corrective treatment must be accomplished to practical completion before this point is reached.

19.05.03 Waste Deposits. It shall be unlawful for any person to place or deposit or permit to be deposited in an unsanitary manner upon any public or private property within the City of Troy, or in any area under the jurisdiction of the said City of Troy, any human or animal excrement, garbage, or other objectionable waste.

(Renumbered 08-15-2005)

19.05.04 Water Pollution. It shall be unlawful to discharge into any natural watercourse or any storm sewer, within the City of Troy or in any area under the jurisdiction of the said City, any sanitary sewage, industrial waste, or other polluted waters, except where suitable treatment has been provided in accordance with the standards established by the MDEQ and the provisions of the Federal Clean Water Act.

(Renumbered 08-15-2005)

19.05.05 Privies and Septic Tanks. Except as hereinafter provided it shall be unlawful to construct or maintain any privy, privy vault, septic tank, cesspool or other facility intended or based for the disposal of sewage.

(Renumbered 08-15-2005)

INTERCEPTORS

19.06.01 Grease, oil and sand interceptors shall be provided when in the opinion of the Building Inspector and/or the MDEQ they are necessary for the proper handling of liquid wastes

containing grease in excessive amounts or any inflammable wastes, sand, or other harmful ingredients, except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the Building Inspector and/or the MDEQ and shall be located so as to be readily accessible for cleaning and inspection. Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They shall be substantially constructed, water-tight, and equipped with easily removable covers which when bolted in place shall be gas-tight and water-tight.

(Rev. 04-01-1964)

19.06.02 Interceptor Maintenance. Where installed, all grease, oil and sand interceptors shall be maintained by the owner, at his expense, in continuously efficient operation at all times.

(Rev. 04-01-1964)

PRELIMINARY TREATMENT FACILITIES

19.07.01 Preliminary Treatment Facilities. The admission into the public sewers of any waters or wastes having (1) a five (5) day BOD greater than 300 parts per million by weight, or (2) containing more than 350 parts per million by weight of suspended solids, or (3) containing any quantity or substance having the characteristics described in Section 19.05.02 or (4) having a daily average flow greater than two (2%) percent of the average daily sewage flow of the City of Troy, shall be subject to the review and approval of the City Council and/or the MDEQ or the DWSD. Where necessary in the opinion of the City Council and/or the MDEQ or the DWSD, the owner shall provide, at his expense, such preliminary treatment as may be necessary to (1) reduce the BOD to 300 parts per million and the suspended solids to 350 parts per million by weight, or (2) reduce objectionable characteristics or constituents to within the maximum limits provided for in Section 19.05.02, or (3) control the quantities and rates of discharge of such waters or wastes. Plans, specifications and any other pertinent information relating to the proposed preliminary treatment facilities shall be submitted for approval of the City Council and/or of the MDEQ or the DWSD and no construction of such facilities shall be commenced until said approvals are obtained in writing.

(Rev. 01-13-2003)

19.07.02 Maintenance of Preliminary Facilities. Where preliminary treatment facilities are provided for any waters or wastes, they shall be maintained in satisfactory and effective operation, by the owner at his expense.

(Rev. 04-01-1964)

19.07.03 Control Manholes. When required by the City Council and/or the MDEQ or the DWSD, the owner of any property served by a building sewer carrying industrial wastes shall install a suitable control manhole in the building sewer to facilitate observation, sampling and measurement of wastes. Such manhole, when required, shall be accessibly and safely located, and shall be constructed in accordance with plans

approved by the City Council. The manhole shall be installed by the owner at his expense and shall be maintained by him so as to be safe and accessible at all times.

(Rev. 01-13-2003)

19.07.04 Measurements and Tests. All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made shall be determined in accordance with "Standard Methods for the Examination of Water and Sewage" and shall be determined at the control manhole or upon suitable samples being taken at said control manhole. In the event that no special manhole has been required, the control manhole shall be considered to be the nearest down-stream manhole in the public sewer to the point at which the building sewer is connected.

(Rev. 09-25-1978)

19.07.08 Agreements. No statement contained in this chapter shall be construed as preventing any special agreement or arrangement between the City and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the said City for treatment, subject to the payment by the industrial concern of the estimated cost of such treatment.

(Rev. 04-01-1964)

PROTECTION FROM DAMAGE

19.08 No unauthorized person shall break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment, which is a part of the municipal sewerage system. No person, firm or corporation shall place earth, debris, landscaping or other materials in a manner that will obstruct, obscure or prevent normal access to or operation of any manhole, siphon chamber, pumping station, meter chamber or other sewerage system appurtenance. The Superintendent may order the removal of said materials. The expenses incurred in the removal shall be a debt to the City from the responsible person, firm or corporation, and shall be collected as any other debt to the City.

(Rev. 09-25-1978)

SURFACE AND GROUND WATER DISPOSAL

19.09.01 Yard drains, patio drains, catch basins, downspouts, sump pumps or any structures used for the collection and conveyance of storm water shall not be permitted to discharge into any sanitary sewer. Any such structure which conveys storm water either directly or indirectly to any sanitary sewer shall be disconnected or altered so as to remove the possibility of such conveyance.

19.09.02 No weep tile connection to the sanitary sewer system or below grade patio drain made after the original adoption of this Section, February 19, 1968, shall be considered legal and such connections made after that date shall be promptly disconnected.

19.09.03 In the case of buildings with weep tiles or below grade patio drains which were permitted to be connected to the sanitary sewer prior to said date, the surface around the building shall be sloped so as to provide positive drainage of all roof and surface areas away from the building. Where weep tiles are connected to the sanitary sewer, downspouts shall be so constructed or altered that they do not discharge into any flower or shrub bed adjacent to a building wall, nor upon the ground within five (5) feet of the building wall. When the building is located less than five (5) feet from the property line or when there are other practical difficulties, the downspouts shall be discharged in a manner approved by the Chief Building Inspector.

19.09.04 Downspout piping shall in all cases be permanently affixed to the building wall and shall be anchored at the discharge end.

(Rev. 06-21-1999)

19.09.05 Requirements for Bulkhead. On all new lateral lines, a watertight bulkhead shall be installed to prohibit water, sand or other material from entering the existing sewer system. Such bulkhead shall be left in place until removal is authorized by the City Engineer. Rev. 09-09-68)

19.09.06 Ground Water Infiltration. A test for water infiltration into any newly constructed sewer system shall be performed by the owner or contractor in accordance with the procedures established by the City of Troy Engineering Department. When the owner or contractor has determined that the system meets the following requirements for maximum infiltration, he shall arrange for the results of such test to be verified by the Engineering Department.

19.09.07 Ground water infiltration at any time shall not exceed 250 U.S. gallons per inch of pipe diameter per mile of sewer per 24 hours for the overall system, nor shall infiltration exceed 500 U.S. gallons per inch of diameter per mile of pipe per 24 hours for any individual run between manholes. It shall be the responsibility of the owner or contractor to whom the permit was issued to make whatever corrections as may be necessary to the system to meet the infiltration requirement prior to using the sanitary sewer.

(Rev. 09-09-1968)

ENFORCEMENT - PENALTIES

19.10.01 Inspectors. The Building Department Inspector of the City of Troy and other duly authorized officials or employees of the City and agents of the MDEQ, Oakland County Health Department, or the DWSD bearing proper credentials and identification shall be permitted to enter upon all properties for the purpose of inspection, observation, measurement, sampling, and testing, in accordance with the provisions of this chapter at any time during reasonable or usual business hours. Any person guilty of refusing or obstructing such entry shall be guilty of a violation of this code.

19.10.02 Notice to Cease Violation. Any person found to be violating any provisions of this chapter except Section 19.04.08, 19.05.02, 19.05.01,19.08, and 19.10.03 shall be

served by the City of Troy with written notice stating the nature of such violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of the time stated in such notice, take such corrective action as may be necessary.

(Rev. 06-19-1972)

19.10.03 Continued Violation. Any person who shall continue any violation beyond the time limit provided shall upon conviction thereof, be fined not less than Twenty-Five ($25.00) nor more than Five Hundred ($500.00) Dollars, or by imprisonment for not more than ninety (90) days, or by both fine and imprisonment in the discretion of the court. Each day or fraction of a day in which such violation shall continue shall be deemed a separate offense. Any officer, agent, or employee guilty of aiding or abetting such violation, or, being responsible therefore, refuses or neglects to take corrective action, shall be guilty as a principal.

(Rev. 09-25-1978)

19.10.04 Civil Liability. Any person violating any of the provisions of this chapter shall be liable to the City of Troy for any expense, loss or damage occasioned to the City of Troy by reason of such violation, and recovery therefore may be had in an appropriate action in any court of competent jurisdiction.

(Rev. 04-01-1964)

19.10.05 Abatement in Equity. Any continued violation, after due notice as provided in Section 2.91, shall be deemed a public nuisance, per se, and may be abated by suit in equity by the City of Troy in any court of competent jurisdiction. This remedy shall be in addition to those heretofore provided.

(Rev. 09-09-1969)

19.10.06 Severability. If any portion of this Chapter is for any reason held invalid or unenforceable, such portion shall be deemed to be a separate and independent provision from the remainder of this Chapter, and shall have no effect on the validity or enforceability of the remainder of this Chapter.

(Rev. 01-13-2003)

Chapter 48 - Litter

6.101 Definitions.

In the interpretation of this Chapter, the following definitions shall apply, except where the context clearly indicates that another meaning is intended:

(1) "Private premises" shall mean any lot or parcel of land owned or occupied by any person whether or not improved with any dwelling, house, building, or other structure, whether inhabited or temporarily or continuously uninhabited or vacant, and shall include any yard, grounds, walk, driveway, porch, steps, vestibule or mailbox belonging or appurtenant to any dwelling, house, building, or other structure erected thereon.

(2) "Public place" shall mean any and all streets, sidewalks, boulevards, alleys, or other public ways and any and all public parks, squares, spaces, grounds, and buildings.

(3) "Garbage" shall mean putrescible animal and vegetable wastes resulting from the handling, preparation, cooking and consumption of food.

(4) "Refuse" shall mean all putrescible and nonputrescible solid wastes including garbage, rubbish, ashes, street cleanings, dead animals, abandoned automobiles, junk and solid market and industrial wastes.

(5) "Rubbish" shall mean nonputrescible solid wastes consisting of both combustible and non-combustible wastes, such as paper, wrappings, cigarettes, cardboard, tin cans, yard clippings, leaves, wood, glass, bedding, crockery and similar materials.

(6) "Litter" shall mean garbage, refuse, and rubbish as defined herein and all other waste material which, if thrown or deposited as herein prohibited, tends to create a danger to public health, safety and welfare.

6.102 Litter in Public Places.

No person shall throw or deposit litter in or upon any street, sidewalk or other public place within the City except in public receptacles, or in authorized private receptacles for collection.

6.103 Use of Waste Receptacles.

Persons placing litter in public receptacles or in authorized private receptacles shall do so in such a manner as to prevent it from being carried or deposited by the elements upon any street, sidewalk or other public place or upon private property.

6.104 Sweeping Litter Into Gutters.

No person shall sweep into or deposit in any gutter, street or other public place within the City the accumulation of litter from any building or lot or from any public or private sidewalk or driveway. Persons owning or occupying property shall keep the sidewalk in front of their premises free of litter.

6.105 Merchants' Duty to Keep Sidewalks Clean.

No person owning or occupying a place of business shall sweep into or deposit in any gutter, street or other public place within the City the accumulation of litter from any building or lot or from any public or private sidewalk or driveway. Persons owning or occupying places of business within the City shall keep the sidewalk in front of their business premises free of litter.

6.106 Litter on Occupied Private Property.

No person shall throw or deposit litter on any private premises within the City, whether owned by such person or not, except the owner or person in control of occupied private premises may maintain authorized private receptacles for collection in such a manner that litter will be prevented from being carried or deposited by the elements upon any street, sidewalk or other public place or upon any private property.

6.107 Enforcement.

The Public Works Director is hereby charged with the enforcement of this Chapter.

(Enacted 10/05/2009; Effective: 01/01/2010)

1. Short Title. This chapter shall be known as the City of Troy Erosion and Sedimentation Control Ordinance.

2. Purpose and Authority

   A. The purpose of this ordinance is to control accelerated soil erosion and sedimentation in all construction practices and other earth change activities within the City, and protect the Waters of the State.

   B. This ordinance is enacted pursuant to MCL 324.9106. Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Act, Act 451 of the Public Acts of 1994, being Sections 324.9101 to 324.9123a of the Michigan Compiled Laws Annotated, and any amendment thereto, and Rules promulgated under Part 91, and any amendments thereto, are hereby incorporated into this ordinance and adopted by reference as part of this ordinance.

   C. The City of Troy Engineering Design Standards and Details for Soil Erosion and Sedimentation Control as developed by the City Engineer and contained in the City of Troy Development Standards and Standard Detail Sheets are incorporated into this ordinance as the control measures and practices which must be complied with under this ordinance. In addition, the specifications and recommendations regarding soil erosion and sedimentation control measures and practices as provided by the "Guidebook of Best Management Practices for Michigan Watersheds", published by the Water Bureau, Michigan Department of Environmental Quality ("BMP guidebook") or subsequent version may be used for additional information. A complete copy of the BMP guidebook shall be kept available for public inspection at the Engineering Department at City Hall.

   D. The City of Troy Engineering Department is hereby designated as the municipal enforcing agency responsible for the administration and enforcement of Part 91, the Rules and this ordinance. The Troy City Engineer is authorized to administer and enforce Part 91, the Rules and this ordinance.

   E. The Troy City Engineer and/or his designees shall be the enforcement agents for this ordinance and are authorized to issue civil infraction tickets, stop work orders or to take any other actions allowed under Part 91, the Rules and this ordinance. The City Engineer and the person(s) designated shall have completed the entire Part 91 soil erosion and sedimentation control training and valid certificate issued by the Michigan Department of Environmental Quality.

3. Construction and Definitions:

   A. Construction:

      1. For the purpose of this ordinance, terms, words and phrases shall have the meanings defined in Part 91 and the Rules unless otherwise defined

in this ordinance. If there is a conflict between definitions in Part 91 and the Rules, Part 91 shall control. If there is a conflict in definitions between Part 91, the Rules and/or this ordinance, this ordinance shall control if the ordinance is more restrictive than Part 91 or the Rules.

2. Words or terms not specifically defined herein shall have the meaning commonly attributed to the word or term in the Standard English grammar.

3. The terms “shall” or “will” are mandatory; the term “may” is discretionary.

B. Definitions:

1. Accelerated Soil Erosion: The increased loss of the land surface that occurs as a result of human activities.

2. Certification: A signed written statement by the City Engineer, or the designated representative charged with enforcement of this ordinance, that specific construction, inspections, and tests where required have been performed and comply with this ordinance.

3. City: City of Troy, Michigan.

4. City Engineer: City Engineer for the City of Troy or any person designated by the City Engineer to act on his/her behalf in the administration and enforcement of this ordinance.

5. County: Oakland County, Michigan.

6. Design Standards: Construction methods and detailed drawings issued by the City Engineer, which pertain to this ordinance.

7. Designated Agent: A person who has written authorization from the landowner to sign the application and secure a permit in the landowner’s name.

8. Earth Changes: A human-made change in the natural cover or topography of land, including cut and fill activities, which may result in or contribute to soil erosion or sedimentation of the Waters of the State. Earth change does not include the practice of plowing and tilling soil for the purpose of crop production.

9. Earth Disrupting Costs: The estimated total construction cost of all private or public improvements, which involve an earth change, excluding buildings.

10. Existing Grade: The ground elevation at a site prior to any earth change.

11. Finished Grade: The final ground elevation conforming to the proposed plan for an earth change.

12. Follow-up Maintenance: Maintenance necessary on all soil erosion or sedimentation control measures as a part of earth-change activities as well as after earth-change activities has been completed.

13. Lake: The Great Lakes and all natural and artificial inland lakes or impoundments that have definite banks, a bed, visible evidence of a continued occurrence of water, and surface area of water that is equal to, or greater than, 1 acre. “Lake” does not include sediment basins and basins constructed for the sole purpose of stormwater retention, cooling water, or treating polluted water.

14. Landowner: The person who owns property or holds a recorded easement on the property or who is engaged in construction in a public right of way in accordance with sections 13, 14, 15, and 16 of Act No. 368 of the Public Acts of 1925, as amended, being Sections 247.183, 247.184, 247.185 and 247.186 of the Michigan Compiled Laws, as amended.

15. Municipal Enforcement Agency: (“MEA”) An agency designated by a municipality under MCL 324.9106 to enforce and administer Part 91, the Rules and/or a local ordinance. For purposes of this ordinance the municipal enforcement agency designated by the City of Troy is the City of Troy Engineering Department.

16. Nonerosive Velocity: A speed of water movement that is not conducive to the development of accelerated soil erosion.

17. Part 91: Part 91 of Act No. 451 of the Public Acts of 1994, as amended, being Sections 324.9101 to 324.9123a of the Michigan Compiled Laws.

18. Periodic Maintenance: maintenance necessary on soil erosion or sedimentation control measures to preserve effectiveness of the measures.

19. Permanent Soil Erosion and Sedimentation Control Measures: Control measures which are installed or constructed to control soil erosion and sedimentation and which are maintained after project completion.

20. Rules: The administrative rules promulgated by the Michigan Department of Environmental Quality pursuant to the administrative procedures act of 1969, 1969 PA 306, as amended. MCL 24.201, to MCL 24.328, as amended and referenced under MCL 324.9104(1).

21. Runoff: Rainfall which does not percolate into the ground or which is not absorbed by vegetative transpiration or other natural process on the site

and which runs off the surface onto adjoining properties or into Waters of the State.

22. Sediment: "Sediment" means solid particulate matter, including both mineral and organic matter that is in suspension in water, is being transported, or has been removed from its site of origin by the actions of wind, water, or gravity and has been deposited elsewhere.

23. Sediment basin: A naturally occurring or constructed depression used for the sole purpose of capturing sediment during or after an earth change activity.

24. Soil Erosion and Sedimentation Control Permit: A permit required under Chapter 86 of the City of Troy Code of Ordinances, known as the Soil Erosion and Sedimentation Control Ordinance. Used to control erosion, not a permit to allow soil erosion.

25. Stabilization: The establishment of vegetation or the proper placement, grading, or covering of soil to ensure its resistance to soil erosion, sliding, or other earth movement.

26. Staging: Dividing a construction site into phases. Phase grading and stabilization are completed in each phase before proceeding to the next phase as required under Engineering Standards.

27. State: State of Michigan.

28. Storm Water Retention Basin: An area which is constructed to capture surface water runoff and which does not discharge directly to a lake or stream through an outlet. Water leaves the basin by infiltration and evaporation.

29. Stream: A river, creek, or other surface watercourse, which may or may not be serving as a drain as defined in Act No. 40 of the Public Acts of 1956, as amended, being §280.1 et seq. of the Michigan Compiled Laws, and which has definite banks, a bed, and visible evidence of the continued flow or continued occurrence of water, including the connecting waters of the Great Lakes.

30. Temporary Soil Erosion and Sedimentation Control Measures: Interim control measures that are installed or constructed to control soil erosion and sedimentation and which are not maintained after project completion.

31. Waters of the State: Means the Great Lakes and their connecting waters, inland lakes and streams as defined in rules promulgated under this part, and wetlands regulated under Part 303 of the Natural Resource and Environmental Protection Act (NREPA).

32. Wetlands: Land characterized by the presence of water at a frequency and duration sufficient to support, and that under normal circumstances does support, wetland vegetation or aquatic life, and is commonly referred to as a bog, swamp, or marsh, as regulated under Part 303 of the Natural Resource and Environmental Protection Act (NREPA).

4. Soil Erosion and Sedimentation Control Requirements

A. It shall be a violation of this ordinance for any person to engage in and/or maintain any earth change activity in such a manner as to allow uncontrolled accelerated soil erosion and sedimentation to be transported off site onto adjacent properties and into the Waters of the State.

B. It shall be a violation of this ordinance for any person to engage in and/or maintain any earth change activity, which is not in compliance with Part 91, the Rules and/or the provisions of this ordinance.

C. Soil erosion and sedimentation control measures ("SESC") shall be included with plans and specifications for a project, and submitted to the City with site plans and the soil erosion permit application for review. A copy of the approved plans will be kept at the site where it will be available for inspection. SESC plans will contain all Rule 1703 information and comply with Part 91 Rule requirements and design standards prepared by the City Engineer.

D. No person shall engage in and/or maintain an earth change activity which will disturb more than 1 acre of land, or which lies within 500 feet of the water's edge of a lake or stream, regardless of the amount of land disturbed, without a valid SESC permit issued under this ordinance.

1. To assure compliance, all building permit applications will require any construction project to apply for a soil erosion permit. Upon submittal of application, the City Engineer or his/her designee will issue a soil erosion permit, if they meet the requirements found in this subsection.

5. Permit and Plan Requirements; Permit Applications; Soil Erosion & Sedimentation Control (SESC) Plans; Review Procedures and Requirements

A. After the effective date of this ordinance, no person shall maintain or undertake an earth change on any land within the City that requires a soil erosion permit without a soil erosion permit and approved soil erosion and sedimentation control plan as provided by Part 91, the Rules, and this ordinance.

1. An application for a soil erosion permit shall be submitted to the City engineer by the owner of the land upon which the earth change is proposed to be made or by the owner's designated agent. The applicant, if not the owner, shall have written authorization from the landowners to sign the soil erosion permit application and secure a soil erosion permit in

the landowners' name.

2. The application shall be on forms provided by the Engineering Department and accompanied by an application review and inspection fee made payable to the City of Troy in the amount provided in the Development Standards adopted by the resolution of the City Council.

3. The application shall also be accompanied by a soil erosion and sedimentation control plan that includes the following required data:

   a. A vicinity sketch of the site location and the proximity of any proposed earth change to the surface Waters of the State or to drains or storm water inlets leading directly to the surface Waters of the State.

   b. A boundary line survey or legal description of the site.

   c. The name, address, and telephone number of the landowner or designated agent, and of the developer, if different form the landowner.

   d. A plan of the site at a scale of not more than 100 feet to an inch or as otherwise determined adequate by the City Engineer, showing existing topography or slope description at five-foot intervals.

   e. A soil survey map or written description of the soil types of the exposed land area contemplated for the earth change.

   f. Details for the proposed each change including:

      1) A description of the location of the physical limits of each proposed earth change.

      2) A description of the location of all existing and proposed on-site drainage and dewatering facilities.

      3) The timing sequence of each proposed earth change, such as starting and completion dates of the development sequence and time exposure of each area prior to the completion of effective soil erosion and sediment control measures.

      4) The location and description for installing and removing all proposed temporary soil erosion and sedimentation control measures and their established cost.

      5) A description and the location of all proposed permanent soil erosion and sedimentation control measures and their

estimated cost.

6) A statement of the quantity of the excavation and fill involved.

7) A program proposal for the continued maintenance of all permanent soil erosion and sedimentation control measures which remain after the project completion, including the designation of the person or organization responsible for the maintenance. Maintenance responsibilities shall become a part of any sales or exchange agreement for the land on which the permanent soil erosion and sedimentation control measures are located.

4. The soil erosion and sedimentation plan shall be reviewed by the city Engineer and/or his designee.

5. All earth changes shall be designed, constructed, implemented and maintained in accordance with the minimum requirements for earth changes as provided by Part 91, the Rules, and this ordinance, and shall also comply with any structural, vegetative, or managerial practices to effectively prevent or reduce soil erosion and sedimentation as determined necessary by the City Engineer. In determining the adequacy and effectiveness of the design, implementation and maintenance of proposed soil erosion and sedimentation control measures for purposes of this ordinance the City Engineer shall consider:

   a. Site-specific factors and information of the type required to be included in the soil erosion and sedimentation control plan for the property; and

   b. The specifications and recommendations regarding soil erosion and sedimentation control measures and practices as provided by the “Guidebook of Best Management Practices for Michigan Watersheds”, published by the Water Bureau, Michigan Department of Environmental Quality (“BMP guidebook”) or subsequent version. A complete copy of the BMP guidebook shall be kept available for public inspection at the Engineering Department at City Hall.

6. The City Engineer shall approve, disapprove or require modification of the application for the soil erosion permit and accompanying SESC plan within 30 calendar days following receipt of a complete application. Notification of disapproval shall be made by certified mail. If the application is disapproved, the City Engineer shall advise the applicant of the reasons for disapproval and conditions required for approval. The requirement of notification by certified mail is not necessary if the

applicant is personally given written approval or disapproval of the application.

7. A soil erosion permit shall not be issued where:

   a. The proposed work would cause uncontrolled soil erosion and sedimentation; or

   b. The proposed work would cause hazards to the public safety and welfare; or

   c. The work, as proposed by the applicant, will damage any public or private property or interfere with any existing drainage course in such a manner as to cause damage to any adjacent property or result in the deposition of debris or sediment on any public way or into any Waters of the State or create an unreasonable hazard to persons or property; or

   d. The land area for which work is subject to geological hazard to the extent that no reasonable amount of corrective work can eliminate or sufficiently reduce settlement, slope instability or any other such hazard to persons or property; or the land area for which the work is proposed lies within the one hundred (100) year floodplain of any stream, unless a permit from the Michigan Department of Environmental Quality accompanies the application and a hydrologic report prepared by a licensed an professional engineer is submitted to certify that the proposed work will have, in the City Engineer's opinion, no detrimental influence on the public welfare or upon the total development of the watershed.

8. No soil erosion permit shall be issued until the applicant has paid applicable permit and inspection fees to the City Treasurer in accordance with the fee schedule adopted by resolution of the City Council. The City Engineer shall calculate the fee after reviewing the application and plan.

9. Upon a determination by the City Engineer that an applicant has met all applicable requirements under this ordinance and other applicable laws and regulations, and that the applicant has paid all applicable fees, the City Engineer shall issue a permit for the proposed earth change. The permit shall be kept available on the site of the proposed earth change at all times for inspection by the City.

10. If the earth change for which a permit has been issued has not been commenced within one year from the date of issuance of the permit, the permit shall lapse, provided that the City Engineer may extend the time for commencement of the earth change if the permitee requires an extension prior to the expiration of the initial period and no material change of

circumstances has occurred.

11. A soil erosion permit issued under this ordinance shall not relieve the permitee from complying with any other applicable statutes, ordinances, rules or regulations.

12. The failure to comply with any term or condition of an approved permit or to timely complete all work as set forth in an approved plan constitutes a violation of this ordinance.

13. An "authorized public agency" as defined by Part 91 is exempt from obtaining a soil erosion permit but shall notify the City Engineering Department in advance of such proposed earth change.

14. An earth change activity that does not require a permit under this ordinance is not exempt from enforcement procedures under this ordinance, Part 91 & the Rules, if the activity exempted by Part 91, the Rules and/or this ordinance causes or results in a violation of Part 91, the Rules and/or this ordinance.

6. Inspections:

A. The City Engineer or his designee shall inspect all work covered by a soil erosion permit issued pursuant to this ordinance and is hereby authorized to enter property in the City covered by a permit for the purpose of performing any duties under this ordinance. Inspection fees shall be paid as provided according to the fee schedule.

B. The City Engineer or his designee may enter at all reasonable times in or upon any private or public property for the purpose of inspection and investigating conditions or practices that may be a violation of Part 91, the Rules, or this ordinance.

7. Permit Required Prior To Issuance Of Building Permit:

A. A building permit shall not be issued for any property upon which a soil erosion permit is required until the soil erosion permit has been issued for the property as provided by this ordinance.

8. Logging, Mining, Land Plowing Or Tilling And Permit Exemption:

A. A person engaged in the logging industry, the mining industry, or the plowing or tilling of land for the purpose of crop production or the harvesting of crops is not required to obtain a permit under this ordinance. However, all earth changes associated with the activities listed in this section shall conform to the same standards as if they required a permit under this ordinance. The exemption

from obtaining a permit under this subsection does not include either of the following:

1. Access roads to and from the site where active mining or logging is taking place.

2. Ancillary activities associated with logging and mining.

B. This ordinance does not apply to metallic mineral mining activity that is regulated under a mining and reclamation plan that contains soil erosion and sedimentation control provisions and that is approved by the Michigan Department of Environmental Quality (MDEQ).

C. A person is not required to obtain a permit from the City for earth changes associated with well locations, surface facilities, flow lines, or access roads relating to oil or gas exploration and development activities regulated under Part 615 of Act 451 of 1994; MCL 324.61501, et seq., if the application to drill and operate under Part 615 contains a soil erosion and sedimentation control plan that is approved by the Michigan Department of Environmental Quality (MDEQ) under Part 615. However, those earth changes shall conform to the same standards as required for a permit under this ordinance. This subsection does not apply to a multisource commercial hazardous waste disposal well as defined in Section 62506a of Act 451.

D. As used in this section, “mining” does not include the removal of clay, gravel, sand, peat or topsoil.

E. This ordinance does not apply to exempted activities identified in section 9115a of Part 91 and Rule 323.1705.

F. The City Engineer may grant a permit waiver for an earth change after receiving a signed affidavit from the landowner stating that the earth change will disturb less than two hundred twenty-five (225) square feet and that the earth change will not contribute sediment to lakes or streams.

9. Reduction of Soil Erosion or Sedimentation by Owner:

A. A person who owns land on which an earth change has been made that may result in or contribute to soil erosion or sedimentation of the Waters of the State shall implement and maintain soil erosion and sedimentation control measures that will effectively reduce soil erosion and sedimentation from the land on which the earth change has been made.

B. This section is effective whether or not this ordinance requires a soil erosion permit.

10. Notice of Violation; Cost of Recovery

A. If the City Engineer determine that soil erosion and sedimentation of the Waters of the State or adjacent properties, has or is reasonably likely to occur from a parcel of land in violation of this ordinance, the City Engineer shall notify the person who owns the land by certified mail, with return receipt required, of that determination. The notice shall contain a description of the violation and what must be done to remedy the violation and shall specify a time to comply with this ordinance.

B. Within five days after the notice of violation is mailed, the landowner shall implement and maintain soil erosion and sedimentation control measures in conformance with the ordinance, as specified by the notice or as otherwise determined adequate by the City Engineer to prevent soil erosion and sedimentation of the Waters of the State.

C. If after five days from the date that a notice of violation is mailed, the condition of the land, in the opinion of the City Engineer, may result, in or contribute to, soil erosion and sedimentation of adjacent properties or the Waters of the State, and if soil erosion and sedimentation control measures in conformance with Part 91, the Rules and this ordinance are not in place, the City may enter upon the land and construct, implement and maintain soil erosion and sedimentation control measures in conformance with Part 91, the Rules and this ordinance. The City shall not expend more than $10,000.00 for the cost of the work, materials, or labor unless the notice of violation contained written notice that such costs might exceed $10,000.00. Further, if more than $10,000.00 is to be expended under this section, then the work shall not begin until at least 10 days of the notice of violation is mailed.

D. All expenses incurred by the City under this section to construct, implement, or maintain soil erosion and sedimentation control measures to bring the land into conformance with Part 91, the Rules and this ordinance shall be reimbursed to the City by the person who owns the land. The costs recovered by the City shall be in addition to any civil fines, damages, expenses or costs payable to the City as a result of a violation. Further, the abatement by the City of a violation of this ordinance and subsequent recovery of costs incurred by the City shall not be a defense to any action by the City against any person for the violation, including without limitation, any action by the City to collect civil fines, damages, expenses or costs as authorized by law.

E. The City shall have a lien for the expenses incurred under this section in bringing the land into conformance with Part 91, the Rules and this ordinance. With respect to single or multifamily residential property, the lien for such expenses shall have priority over all liens and encumbrances filed or recorded after the date of the expenditure. With respect to all other property, the lien for such expenses shall be collected and treated in the same manner as provided for property tax liens under the general property tax act, Act No. 206 of the Public

Acts of 1893, being Sections 211.1 to 211.157 of the Michigan Complied Laws, as amended.

11. Enforcement Authority

Upon a finding that there has been a violation of a provision, requirement or condition of this ordinance or of any permit or plan issued or approved under this ordinance, the City may take any enforcement action authorized by Part 91, the Rules, this ordinance, or by other applicable laws, regulations and ordinances. In addition to other remedies provided in this ordinance, the City Engineer's enforcement authority and/or his designees also includes, without limitation, the ability to issue cease and desist orders and to revoke soil erosion permits. Failure to comply with a cease and desist order or revocation of a soil erosion permit shall constitute a violation of this ordinance.

12. Municipal Civil Infraction

A. A person who violates any provision of this ordinance is responsible for a municipal civil infraction, subject to payment of a civil fine as provided by law, plus costs and other sanctions for each day of violation.

B. A person who knowingly violates any provision of this ordinance or knowingly makes a false statement in an application for a permit or in a soil erosion and sedimentation control plan is responsible for the payment of a civil fine as provided by law for each day of violation.

C. A person who knowingly violates any provision of this ordinance after receiving a notice of determination under section 10a of this ordinance is responsible for the payment of a civil fine as provided by law for each day of violation.

D. Civil fines collected under subsections A, b, and C above shall be deposited with the City Treasurer.

E. A default in the payment of a civil fine or costs ordered under this section or an installation of the fine or costs may be remedied by any means set out in Chapter 100 of the Troy Code of Ordinances or under the Revised Judicature Action, P.A. 261 of 1961, as amended (MCL 600.101, et seq.).

F. Notwithstanding the existence of any other remedy, the City may maintain an action in its own name in a court of competent jurisdiction for an injunction or other process against a person to restrain or prevent violations of Part 91, the Rules, or this ordinance.

G. In addition to a fine assessed under this ordinance, a person who violates this ordinance is liable to the state for damages for injury to, or destruction of, or loss of natural resources resulting from the violation. The court may order a person who violates this part to restore the area or areas affected by the violation to their conditions as existing immediately prior to the violation.

H. Each day on which a violation of Part 91, the rules and/or this ordinance continues constitutes a separate violation and shall be subject to sanctions or penalties as provided in this section as a separate violation.

I. The Code Enforcement Officers are hereby designated as the authorized City officials to issue municipal civil infraction citations directing alleged violators to appear in court.

J. Chapter 100 of the Troy Code of Ordinances shall govern municipal civil infractions. If there is a conflict between Chapter 100 and Chapter 86, Chapter 86 shall apply.

13. Severability Clause

Should any word, phrase, sentence, paragraph or section of this ordinance be held invalid or unconstitutional, the remaining provisions of this ordinance shall remain in full force and effect.

14. Effective Date

This ordinance shall become effective ten (10) days from the date hereof or upon publication, whichever shall later occur.

(06/18/2007)

9.1 Public Nuisances Defined. Whatever annoys, injures, or endangers the safety, health, comfort or repose of the public; interferes with or destroys or renders dangerous any street, highway, allows accumulation of junk or obnoxious matters on private property; or in any way renders the public insecure in life or property is hereby declared to be a public nuisance. Public nuisances shall include, but not be limited to, whatever is forbidden by any provision of this Chapter and the common and statute law of this state.

NOISE CONTROL

9.5 Noises. Among others, each of the following acts is declared unlawful and is prohibited, but this enumeration shall not be deemed to be exclusive, namely

(a) Horns and Signal Devices. The sounding of any horn or signal device on any automobile, motorcycle, bus, street car or other vehicle while not in motion except as a danger signal if another vehicle is approaching apparently out of control or to give warning of intent to get under motion, or if in motion, only as a danger signal; the creation by means of any such signal device of any unreasonably loud or harsh sound; and the sounding of such device for any unnecessary and unreasonable period of time;

(b) Radio and Musical Instruments. The playing of any radio, television, phonograph, or any musical instruments in such a manner or with such volume, particularly during the hours between 11:00 p.m. and 7:00 a.m. or at any time or place so as to annoy or disturb the quiet, comfort, or repose of persons in any office or in any dwelling, hotel, or other type of residence, or of any persons in the vicinity;

(c) Shouting and Whistling. Yelling, shouting, hooting, whistling or singing or the making of any other loud noise on the public streets, between the hours of 11:00 p.m. and 7:00 a.m., or the making of any such noise at any time so as to annoy or disturb the quiet, comfort, or repose of persons in any office, or in any dwelling, hotel, or other type of residence, or of any persons in the vicinity;

(d) Hawking. The hawking of goods, merchandise or newspapers in a loud and boisterous manner.

(e) Animal and Bird Noises. The keeping of any animals or birds which by causing frequent or long continued noise shall disturb the comfort of any person;

(f) Whistle or Siren. The blowing of any whistle or siren, except to give notice of the time to begin or stop work or as a warning of fire or danger;

(g) Engine Exhausts. The discharge into the open air of the exhaust of any steam engine, stationary internal combustion engine, or motor vehicle, except through a muffler or other device which effectively prevents loud explosive noises therefrom;

(h) Construction Noises. The erection (including excavating), demolition, alteration, or repair of any building, the excavation and/or grading of streets, highways, or

private property other than between the hours of 7:00 a.m. and 8:00 p.m. on Mondays through Saturdays, unless a permit be first obtained from the Building Department for building work or from the Engineering Department for street work.

(i) Handling Merchandise. The creating of a loud and excessive noise in connection with loading and unloading any vehicle or the opening and destruction of bales, boxes, crates and containers;

(j) Devices to Attract Attention. The use of any drum, loudspeaker, amplifier or other instrument or device for the purpose of attracting attention for any purpose.

(k) Noise, Sound Amplification, or Commotion in Vehicles. To make a commotion, amplify sound, or make unnecessarily loud noises which are audible more than 50 feet from the vehicle, or whereby the peace and good order of the neighborhood is disturbed, or persons owning or occupying property in the neighborhood are disturbed.

(Rev. 08-06-1990)

(l) Sound Trucks. To operate or cause to be operated a sound truck with radio or amplifier within the City without first having obtained a permit therefor from the City Council.

(Rev. 03-26-1979)

(m) Exceptions. None of the prohibitions herein shall apply to or be enforced against; any police or fire vehicle of the City or ambulance while engaged upon necessary public emergency business; necessary excavations or repairs of bridges, streets, or highways on behalf of the city, county or state during the night, when the public safety, welfare, and convenience renders it impossible to perform such work during the day; the reasonable use of stationary amplifiers or loud speakers in the course of public addresses which are non-commercial in character.

9.8. Abandoned Iceboxes, Refrigerators, etc. Any person who knowingly leaves, in a place accessible to children, any abandoned, unattended or discarded icebox, refrigerator or other container of a kind and size sufficient to permit the entrapment and suffocation of a child therein, without first removing the snap lock or other locking device from the lid or cover thereof, is guilty of a misdemeanor.

(Rev. 03-20-1967)

9.9 Radio and Television Interference.

(1) No person shall maintain or operate any equipment, device, appliance, or apparatus in the city which generates or causes high frequency oscillations which interfere with radio or television transmitting or reception; except, that x-ray pictures, examinations, or treatments and diathermy treatments may be made if the machine or apparatus therefor is equipped to avoid all unnecessary

interference and is not negligently operated.

(2) The City Engineer may designate a radio inspector, to investigate complaints of interference with radio and television transmitting, and reception and he is hereby given authority upon presenting his evidence of authority, to have a right of access to any premises at any reasonable hour for the purpose of inspecting any equipment, device, appliance, or apparatus coming within the terms of this Chapter to determine if such equipment, device, appliance, and apparatus complies with the terms of this Chapter, and no person shall interfere with said radio inspector in making such inspection or refuse to allow the radio inspector to enter upon the premises for such purpose.

(3) Whenever an inspection and test shall have been made by the radio inspector, and it is found that such equipment device, appliance, or apparatus is being operated in violation of this section, the person responsible for such operation shall be notified in writing to discontinue the use of such equipment, device, appliance or apparatus or to make additions, repairs, or modifications thereof, in order that the same may be operated in a manner which complies with the provisions of this Chapter. Such notice may be given personally to said person or by certified mail, addressed to said person. In the event that said person within 48 hours after receipt of such notice fails to repair the same so that it complies with the Chapter, such person shall be deemed to be operating the same in violation thereof.

(4) The operation of any machine, mechanical device, electrical device or thing that interferes with, or causes static in the operation of the police radio system is hereby declared to be a public nuisance; the operator of said machine or device shall immediately discontinue the use of said equipment upon being notified of its interference with the police radio system and shall not again place the same in operation until it has been repaired or modified so as not to interfere with the police radio system.

(5) No provision of this Chapter shall be construed as regulating any equipment, device, appliance or apparatus used in interstate commerce where the same is licensed or regulated by or under any act of Congress of the United States.

LITTERING

9.13 Deposit of Unwholesome Substances. No person shall, within the limits of the City, by himself or by another, throw, place, deposit or leave in the street, lane, alley, public place or private lands, any animal or vegetable substance, dead animals, fish, shavings, dirt, rubbish, excrement, filth, unclean or nauseous water or liquor, hay, straw, soot, offal, garbage, swill, or any other article or substance whatever which may cause any offensive, unwholesome, or nauseous smell, or endanger the health of the public.

9.15 Paper, Rubbish. No person shall throw or place, or through insecure fastening, or otherwise, cause or suffer to be placed or thrown or to fall in or upon any public street, alley, sidewalk, or other public thoroughfare or any public park or private property of the City, any loose paper or other rubbish of any nature.

(Rev. 03-26-1979)

9.16 Injurious Substances. No person shall by himself or by another, throw, place, deposit or leave in any street, highway, lane, alley, public place or square, or in any private place or premises, any glass, broken or unbroken, or any metal, stone, earthenware, tacks, cinders or other substances of a nature likely to cause injury to travelers or pedestrians, automobiles, bicycles, or vehicles, or to injure any horse or other animal or which might injure, cut or puncture any pneumatic tire.

ABATEMENT

9.19. Abating Nuisances. In the event any officer of the City shall determine that there exists a nuisance within the meaning of this Chapter and Code, such officer shall cause a notice to be served on the owner or occupant of the premises on which said nuisance exists, requiring such person to abate said nuisance within the time specified in the notice. Service of the notice shall be made in accordance with Chapter 1 of this Code. In the event such person fails to abate said nuisance in accordance with the notice, the City shall do so and the cost thereof shall be charged against the owner or occupant of premises any payment thereof shall be enforced as a special assessment as provided in the Charter.

(Rev. 03-26-1979)

22. Aircraft. The term "aircraft" shall include any and all contrivances now or hereafter used for navigation or flight in the air or space, including but not limited to airplanes, airships, balloons, hovercraft, dirigibles, helicopters, gliders, amphibians and seaplanes. This definition shall include any type of tethered contrivance.

It shall be unlawful for any individual to use or attempt to use any property, building, land or water for landing or taking-off of aircraft other than property duly licensed and approved as an airport or heliport.

Exceptions:

1. Emergency transportation of medical patients and personnel or supplies.

2. Building construction sites when use is for lifts in construction, providing further that a valid applicable permit has been issued for the work and prior notice to and approval obtained from the City of Troy, Building Department.

3. Aircraft being operated by or under the direction of a Police, Fire or Military officer for public safety related purposes. It shall be unlawful for any individual to hover or attempt to hover an aircraft over property, building, land or water except in the approach surface of an airport or heliport, as defined in Chapter 39, Section 41.12.01 of the Troy City Code. To "hover" shall mean the suspension of an aircraft closer to any property, building, land or water than one hundred (100) feet.

(Rev. 10-07-96)

23. Mini-bikes

A. Statement of Purpose. By the adoption of this section the City Council finds and determines that the uncontrolled operation of motorcycles, as defined herein, has become a public nuisance with the City of Troy due to loud and raucous noises, noxious odors, excessive dust, dangerous to the health and safety of person within the City of Troy and to property located therein and the use of such vehicles on private property without the consent of the owners thereof, and on public property without the consent of the public bodies having jurisdiction. The City Council further finds that this section controlling the use of such vehicles is necessary to prevent nuisance conditions detrimental to the safety, health, and general welfare of the public.

(Rev. 07-30-1973)

B. Definitions.

1. The word "motorcycle" as used in this Chapter means every motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three (3) wheels in contact with the ground. In addition, this term shall mean every vehicle not entitled to be licensed for travel upon the public highways of the State of Michigan which is designed primarily for recreational purposes, including but not limited to all-terrain vehicles, go-karts, trail bikes, mini-bikes, or drag-bikes. The term shall not include tractors, motor powered lawn mowers, special mobile equipment as defined in the Michigan Vehicle Code, or similar vehicles.

2. All definitions which appear in the Michigan Vehicle Code shall be applicable to such terms when used in this Chapter.

(Rev. 03-26-1979)

C. Regulations Governing the Use of Motorcycles.

1. No motorcycles shall be operated upon the streets and highways of the City or other areas open to public motor vehicle travel except in accordance with the Uniform Traffic Code, Chapter 105 of the Troy City Code, and the Michigan Vehicle Code.

(Rev. 03-26-1979)

2. No motorcycles shall be operated in any area open to the public for the parking of motor vehicles except for the sole purpose of normal ingress and egress into such parking facilities.

(Rev. 07-30-1973)

3. No motorcycles shall be operated upon property owned by the City, by a public school district, by a community college or by a library, other than areas designated for the parking of motor vehicles, except in accordance with the rules and regulations established for such property by the public body having jurisdiction.

(Rev. 03-26-1979)

4. No motorcycles shall be operated upon any private property not open to the public for the operation of motor vehicles except the owner thereof, members of his immediate family, and persons lawfully residing upon said premises without the express written permission of the owner. The written permission shall identify the property for which permission is granted, and his address, the owner of said property and the duration of said permission. The written permit shall be carried upon the person of the permittee and shall be displayed to any law enforcement officer of the City of Troy upon request. No such written permission shall be required if the permittee is accompanied by the owner, a member of his immediate family, or a person lawfully residing upon said property nor shall such written permit be required where the operation of the motor vehicle upon the property is solely for normal ingress and egress to and from a residence, a commercial establishment or other occupancy of the property.

(Rev. 07-30-1973)

5. No person shall operate a motorcycle in the City of Troy in such a manner as to create excessive, unusual or unnecessary noise. Every motorcycle so operated shall be equipped with an efficient muffler which will insure noise levels comparable to that of a private passenger automobile. Racing motorcycle engines, or repeated acceleration and deceleration of motorcycle engines except in the course of maintenance of such engines is hereby deemed to be excessive, unusual and unnecessary noise. Abrupt or violent acceleration of a motorcycle, including acceleration which causes the front wheel of the motorcycle to lose contact with the ground, shall be deemed to create excessive, unusual, or unnecessary noise.

(07-30-1973)

6. No person shall operate a motorcycle on public or private property while under the influence of intoxicating liquor or narcotic drugs, barbital or any derivative of barbital or when, due to consumption of intoxicating liquor, narcotic drugs, barbital or any derivative of barbital he has visibly impaired his ability to operate the vehicle or in willful or wanton disregard for the safety of persons, including himself, or property, or in a careless or negligent manner likely to endanger any person or property, in a speed or

acceleration contest or for the purpose of making a speed record, whether from a standing start or otherwise over a measured or unmeasured distance, or in a drag race as defined in the Michigan Vehicle Code.

D. Penalties.

1. Violation of this Chapter is declared to be a nuisance and may be abated by a law enforcement officer of the City by impoundment of the motorcycle involved by removal to the motor vehicle pound of the City to be returned as hereinafter provided.

   (03-26-1979)

2. Before the owner or persons in charge of such motor vehicles shall be permitted to remove the same from the motor vehicle pound he shall furnish evidence of his identity and owner-ship, he shall sign a receipt, and he shall pay a fee of Ten ($10.00) Dollars to cover the cost of removal, if any, plus the cost of storage.

3. Violation of this Chapter is hereby declared to be a misdemeanor and any person or persons found guilty thereof shall be subject to a fine of not to exceed Five Hundred ($500.00) dollars and/or imprisonment for not more than ninety (90) days for each such offense.

   (Rev. 03-26-1979)

24. Municipal Civil Infractions

A violation of sections 9.1, 9.2, 9.3, 9.5, 9.9, 9.13, 9.14, 9.15, 9.17, 9.18, 9.20, and 15 of this Chapter is a Municipal Civil Infraction subject to the provisions of Chapter 100 of the Code of the City of Troy. Each day that a violation continues is a separate Municipal Civil Infraction violation. Sanctions for each violation of said sections shall include a fine of not more than $500, costs, damages and injunctive orders as authorized by Chapter 100.

(03-01-2006)

(Chapter 88 Amended: 10-05-2009; Effective: 01-01-2010)

City of Troy
Department of Public Works Facility

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

Stormwater Pollution Prevention Plan
And
Pollution Incident Prevention Plan

Table of Contents

Chapter 1: General Facility Information

Table 1: General Facility Information

NAME OF FACILITY:	City of Troy Department of Public Works
FACILITY ADDRESS:	4693 Rochester Road, Troy, MI 48085
FACILITY CONTACT INFORMATION	
Name and title:	Public Works Director
Mailing Address:	4693 Rochester Road, Troy, MI 48085
Telephone:	248.524.3392
24-Hour Emergency Telephone:	248.524.3390
Email:	
SPILL PREVENTION AND CONTROL COORDINATOR	
Name and title:	Brian Varney, Superintendent of Fleet Maintenance
Telephone:	248.524.3390
Email:	Brian.Varney@troymi.gov
PHASE II PERMIT INFORMATION	
Certificate of Coverage Number and Effective Date of Coverage:	MIG610053
Receiving Waters:	Clinton River Watershed

Chapter 2: Storm Water Pollution Prevention and Spill Response Team

The City of Troy is committed to maintaining the environmental integrity of city owned property by helping improve storm water quality through the stormwater permit program. Troy Department of Public Works (DPW) staff is knowledgeable in storm water protection activities in conjunction with their fleet maintenance and material storage operations.

The Troy DPW Facility houses vehicles and materials for vehicle road maintenance and storage piles of aggregate materials. The Troy DPW Facility also stores road salt, liquid brine, and oil in threshold management quantities that requires the development of a Pollution Incident Prevention Plan (PIPP). The PIPP requirements for these materials are integrated into this SWPPP document. The Troy DPW Facility staff identified to assist in stormwater pollution prevention and pollution incident prevention activities are as follows:

Table 2: Stormwater Pollution Prevention and Spill Response Team

NAME AND TITLE	RESPONSIBILITY
Public Works Director	Spill Response Program Oversight, Stormwater Program Oversight
Brian Varney, Superintendent of Fleet Maintenance	Onsite vehicle maintenance, Routine Inspections; other duties as necessary

Chapter 3: Site Map

The Troy DPW Facility consists of eight (8) buildings. The 8 buildings include the following:

1. Maintenance Garage
2. Administration/Storage
3. Cold Storage A
4. Barn
5. Streets Garage
6. Police & Fire Dept Storage
7. Cold Storage B
8. Parks Dept Maintenance

The Maintenance Garage (1) has the primary function of performing all maintenance activities for all of the City vehicles and equipment. The Maintenance Garage has an interior trench floor drain with four sumps that discharge to the sanitary sewer.

The Administration/Storage Building (2) consists of offices and city storage areas, including a sign fabrication area, with small floor drains connected to the sanitary sewer.

The Cold Storage A (3) is on a cement slab, with cement block walls and a steel roof that does not have any interior floor drains. The shed houses bulk orders of new 55-gallon drums of vehicle fluids, masonry, signs, saw blades, and duct work.

The Barn (4) is another cold storage building on a cement slab with concrete walls and a steel roof that has an interior floor drain. This structure is used to store Parks Dept equipment and bags of Ice Melt product for sidewalk application, which are stored neatly on pallets.

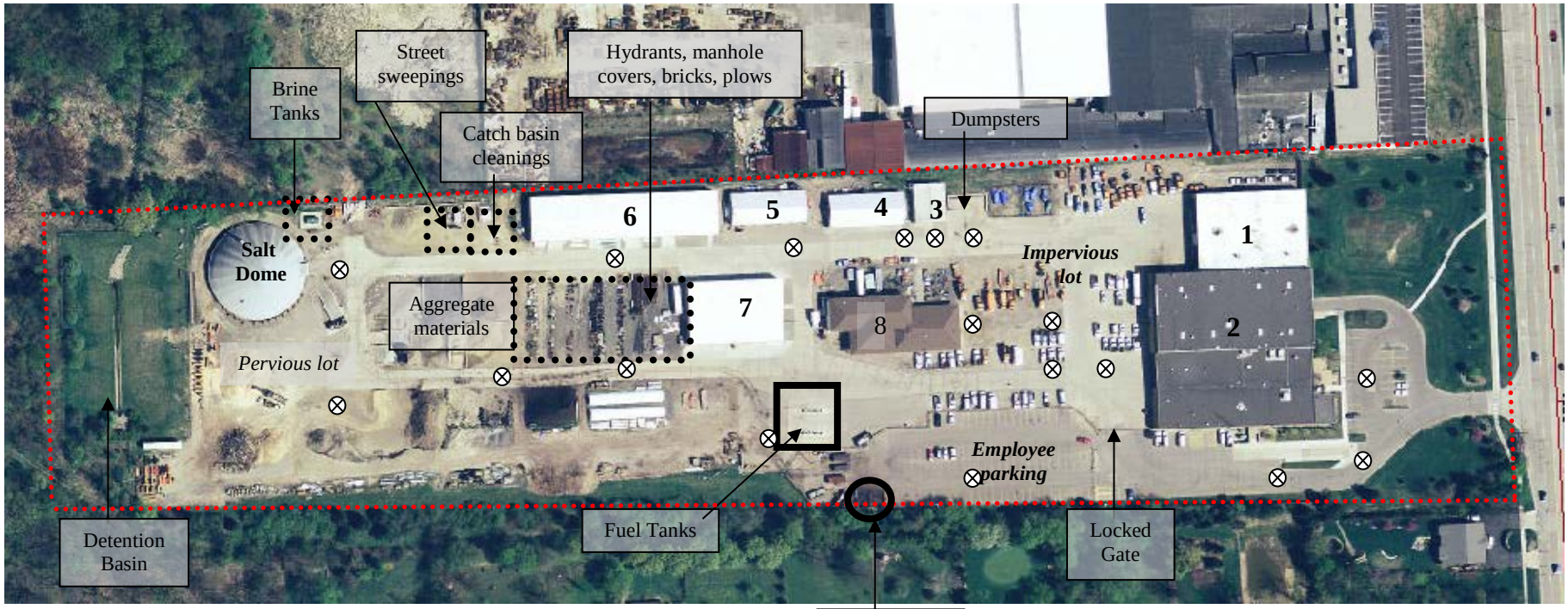
The Streets Garage (5) is another cold storage building on a cement slab with concrete walls and a steel roof that has an interior floor drain. The Streets Garage stores streets vehicles that are currently not in use. These vehicles are inspected for leaks prior to their storage. This building also stores parts and (1) 30-gallon metal tank of hydraulic oil with floor dry for spills. There is also a flammable cabinet that stores paint and fuel cans.

The Police & Fire Dept Storage Building (6) is a Cold Storage Building that is used by the Troy Fire Department and stores miscellaneous equipment and supplies, such as hoses, parade equipment, etc.

Cold Storage B (7) is another cold storage building on a cement slab with concrete walls and a steel roof that has an interior floor drain. This building houses new and old equipment, copper parts, water meters, plastic recycle bins, and other municipal items.

The Parks Dept Maintenance Building (8) is an older building with a cement floor, metal and wood walls, with a shingled roof that has interior floor drains that are connected to the sanitary sewer. There is a maintenance garage area, woodshop, storage rooms, and administrative offices for the Parks Dept housed in this building. Light maintenance of mowers and other parks equipment is performed in the maintenance garage area.

Troy DPW Facility Site Map



1 – Maintenance Garage
2 – Administration/Storage
3 – Cold Storage A
4 – Barn
5 – Streets Garage
6 – Police & Fire Dept. Storage
7 – Cold Storage B
8 – Parks Dept. Maintenance Building

⊗ Catch Basin

Property Boundary

Chapter 4: Significant Materials & Activities

Inventory and Description of Exposed Significant Materials & Municipal Activities

To identify potential sources of significant materials, Troy DPW staff, with the assistance of the Southeast Michigan Council of Governments (SEMCOG) conducted an inventory of activities and materials that may be exposed to storm water at the DPW Facility. Municipal Activity Areas consistent with the SWPPP requirements for the Troy DPW Facility include the following:

1. Loading, unloading and other material handling operations
2. Outdoor storage
    - Salt and liquid brine is stored on site in quantities that require a PIPP. The PIPP requirements have been incorporated into this document.
3. On-site waste disposal
4. Maintenance and cleaning of vehicles and equipment
    - All vehicle maintenance is conducted indoors, where interior floor drains are connected to the sanitary sewer. Oil is stored onsite in quantities that require a PIPP. The PIPP requirements have been incorporated into this document.
5. Areas of exposed and/or erodible soils

The following areas/activities as identified in the standard SWPPP template are not applicable to the Troy DPW Facility:

- Significant dust or particulate generating processes
- Discharge from rooftop vents, stacks and air emission controls
- Outdoor manufacturing or processing activities
- Sites of environmental contamination listed under the NREPA Act 451, part 201 of 1994
- Areas of significant material residues
- Areas where wild or domestic animals congregate and deposit waste

The results are displayed in Table 3:

Table 3. Municipal Activities, Significant Materials, Exposure and Material Handling

Municipal Activity Areas	Area/Process Description	Significant Material	Method of Exposure	Exposure Potential	Material Handling & Storage Procedures	Discharge Point[1]
1. Loading, unloading and other material handling operations	Fuel Island	Gasoline, Diesel (USTs)	Spills, leaks	Low	The fuel tanks are located underground with an above ground filling station that includes 6 uncovered pumps. The filling stations are located on an elevated cement pad surrounded by a cement parking lot. There are crash protection barrier posts, with breakaway hoses for spill protection. There is a labeled emergency stop button with an alarm located on the nearby Parks building. There are spill kits with oil dry located at the pumps for spill response. The closest storm drain to the pumps has a valve that can close in case of spills during loading or filling.	CB to Enclosed County Drain
2. Outdoor storage including secondary containment structures	Salt Barn	Road salt (8500 tons)	Trackout	Low	PIPP requirements are discussed below	CB to Enclosed County Drain
	Brine Tank	Liquid brine (8,000 gal and 3,000 gal)	Spills, leaks, rupture of container	Low	PIPP requirements are discussed below	CB to Enclosed County Drain
	Aggregate Storage Piles	Topsoil (350 yards) Slag (500 ton) Gravel (350 ton) Peastone (250 ton) Millings (1500 ton) Fill dirt (400 ton) Crushed concrete (200 ton) Broken asphalt (200 ton) Fill sand (300 ton) Mason sand (100 ton) Baseball diamond dust (200 ton)	Erosion of material piles, runoff	Low	The aggregate material piles are all stored on the pervious ground in labeled concrete bins. These piles are managed by staff using loaders. There is only one storm drain located within these aggregate piles, which is surrounded by silt fencing, painted for visibility, and marked with a labeled and posted sign. The baseball diamond dust is stored in a separate pile on an asphalt surface, near the back of the property. This material is only stored temporarily throughout the summer season and used immediately to maintain athletic fields.	CB to Enclosed County Drain

	Dewatering area	Sanitary sewer cleanout, Street sweepings, Catch basin cleanings	Overflow of sanitary inlet, spills or leaks during loading	Low	An outdoor cement drying bed has been constructed, with cement curbing, to contain 150 yards of materials that need to drain to the sanitary system. The drying bed is sloped, with a trench drain that connects directly to the sanitary sewer.	N/A drains to sanitary
	Cold Patch Shed	Cold patch material (150 ton)	Spills during loading, leaking container	Low	The shed that contains the cold patch material is constructed out of wood, with a wooden roof, and is located on an asphalt pad to prevent runoff from coming into contact with this material. DPW staff sweep the approach to the shed to prevent trackout material.	CB to Enclosed County Drain
	Compost	Organic compost (400 yards)	Runoff, trackout	Low	Finished compost is delivered to the DPW yard by SOCRA to provide to Troy residents at no charge. Compost is not created on site, but is created by SOCRA at their facility. The compost is delivered to the DPW rear yard, where it is stored on asphalt. Smaller piles are loaded by DPW staff and placed in the corner of the employee parking lot, outside the gated fence, for residents to pick up. The compost pile is maintained by staff to prevent trackout onto paved surfaces. There are no storm drains located in this area.	CB to Enclosed County Drain
	Vehicle and Equipment Parking	Oil, fuel, salt, grease from vehicles and equipment	Runoff	Low	Most of the City vehicles and equipment are parked inside covered buildings, however some are parked outside due to lack of space. All vehicles receive daily pre-trip inspections and also scheduled preventative maintenance through the City's software maintenance program. All vehicles and equipment parked outside are 'Road Ready.'	CB to Enclosed County Drain

3. On-site waste disposal practices	Four Dumpsters	(1) 40-yard general debris (Parks, roadsides, maintenance debris) (1) 5-yard general office debris (1) 5-yard cardboard recycling (1) 2-yard recycled metal	Leaking containers	Low	All dumpsters are metal with impermeable lids (except 40-yard) and inspected regularly for leaks. They are located on a cement pad, with cement walls, that drains to the sanitary sewer.	N/A (drains to sanitary)
4. Maintenance and cleaning of vehicles, machines, and equipment	Maintenance Garage	(6) 220-gallon tanks oil (1) 500-gallon underground storage tank of used oil (10) 55-gallon drums of special blends of oils (1) 250-gallon tank windshield washer solvent (1) 250-gallon tank used antifreeze	Spillage during transfer, leaking containers.	Low	PIPP requirements are discussed below	N/A
	Grinding Area	Metal shavings, grindings from parts, blades, signs	Trackout, leaking containers	Low	All fabrication or grinding activities occur inside the Maintenance Garage. Scrap metal pieces resulting from fabrication activities are collected and recycled. Metal shavings and grindings are collected in a trough that is connected to the brake grinder. This trough is then emptied directly into a garbage can, with a liner, that is disposed of in the dumpster. Occasionally, oil is used to lubricate the fabrication of metal, in which case used oil with	N/A

					metal shavings is created. *This material is contained, where it is separated, with the metal shavings contained in a covered coffee can before disposal in the dumpster, and the used oil recycled with the rest of the used oil generated on site.*	
	Parts washers (3)	Mineral spirits	Spillage during transfer, leaking containers	Low	Three parts washers are located inside the Maintenance Garage. They are self-contained units, where the mineral spirits are recycled within the system, and replaced and recycled as necessary by a contractor.	N/A
	Vehicle Washing	Vehicle wash water	Runoff out of inside bay, washing in non-designated areas	Low	All vehicles and equipment are washed in a dedicated indoor enclosed bay. The wash water is directed to an interior trench drain that is vactored out monthly.	N/A
5. Areas of exposed and/or erodible soils	Gravel lot	Sediment	Runoff, trackout	Low	The pervious gravel area in the back of the DPW lot holds aggregate piles and storage of pipes, manhole covers, pallets of bricks, and other equipment. There is only one storm drain located in the pervious area, which is surrounded by silt fencing, painted for recognition, and labeled with a metal sign. In addition, the impervious areas are swept every 3 weeks to prevent sediment from pervious lots and aggregate piles from entering the storm drains that are located in the impervious areas.	CB to Enclosed County Drain

[1] **Discharge point** is any location on the MS4 owned or operated by the permittee that discharges directly to a surface water of the state, or any location on the MS4 owned or operated by the permittee that discharges to any other separate storm sewer system before discharging to a surface water of the state. [Permit No. MIG610000 Definitions]

Solid Salt Storage Area Description (PIPP Requirement)

The Troy DPW Facility has a salt storage facility, the Salt Dome, with a capacity to store 8500 tons of road salt. This facility has cement walls with a domed shingled roof and a cement floor. The loading area is covered with an extension of the shingled roof. The Salt Dome does not have any interior floor drains.

Salt deliveries only occur when Troy DPW Facility staff is present onsite. The delivery is loaded onto the cement lot, in front of the Salt Dome. A solid cover is placed over the nearest catch basin during loading operations to protect storm water. This catch basin also has a filter fabric insert to place, which is cleaned out monthly. Staff then use a loader to move the delivered salt into the Salt Dome.

Loading of salt from the barn into vehicles occurs outside the Salt Dome on the cement lot using a constructed ramp. There are no catch basins located in this area. Employees are trained in the procedure to immediately sweep excess salt from track out or spills back into the Salt Dome for reuse. The area is regularly swept by staff (at least once after each snow storm).

The Troy DPW property is fenced with a locking gate that requires a code for entry. There is outdoor lighting throughout the yard for safety and security, as well as mounted cameras.

The Salt Barn **is not** located within 50 feet of a lake shore, stream bank, or wetland, nor is it located in a 100-year floodplain.

The City of Troy DPW also stores brine/calcium chloride in a double-walled 6,000-gallon tank and a 3,000 gallon single-walled tank. The tanks are located next to the Salt Dome. The 3,000 gallon single-walled tank is located in a cement secondary containment system. The containment structure consists of a cement floor, with cement walls, that are sealed with a Diamond Clear silicone that is consistent with both liquid brine and calcium chloride materials. The containment unit is inspected annually, before the winter season begins, to look for potential leaks of the structure. The sealant is applied to all joints and cracks in the cement every other year, or as often as needed. To minimize leaks and spills of the brine and/or calcium chloride, all hoses remain non-pressurized, unless the pump is specifically engaged for use.

Oil Storage Description (PIPP Requirement)

The City of Troy DPW Facility has met the Part 5 requirements of designing, constructing, maintaining, and operating indoor storage areas for oil to prevent the release of polluting materials through sewers, drains, or otherwise directly or indirectly into any public sewer system or to the surface or groundwater's of this state through the proper storage and pollution prevention methods currently in place. These include the following:

Oil Storage Area

The Maintenance Garage has a designated area inside the garage for the storage and use of vehicle fluids. This area has 55-gallon drums of materials that are connected to an oil bar, for the dispensing of fluids into hand cans for employee use, an employee log of the quantity and date materials were used, and spill clean-up materials. The used oil underground storage tank is also located in this area.

- Storage of (10) 55- gallon drums of various vehicle fluids, including special blends of synthetic oils, antifreeze, grease, axle oils, and chassis fluids. When employees use these materials, as dispensed from the oil bar, they log the quantity of material used and the date. Employees also use nitro-gloves while loading vehicle fluids to assist in keeping this area clean. This information is tracked in a vehicle fluid database for the DPW Maintenance Supervisor to assist with ordering and minimizing the amount of material that is stored onsite. All drums are clean, and well-labeled.
- Storage of (1) 250-gallon plastic single-walled tank of windshield washer fluid. This tank is stored up against the wall, behind a crash barrier post, to protect it from vehicle or equipment accidents. The

material is loaded into this tank by a contractor, who backs his vehicle up into the Maintenance Garage and loads the material directly into the tank with a hose. The material is automatically pumped out of this tank with a hose on a metered nozzle for dispensing.

- Storage of (1) 250-gallon plastic tank surrounded by a metal cage of used antifreeze. The material is loaded into this tank by DPW staff using a large funnel to minimize leaks and spills. This tank is picked up on a monthly basis by a contractor where the material is hauled away and recycled. The tank is replaced with an empty one. This tank is properly labeled 'Used Antifreeze'.
- Used oil is stored in an underground storage tank with a capacity of 500 gallons. All underground storage tank regulations are complied with for the monitoring and use of this tank. These include having overflow protection, and a high-level alarm. The used oil is loaded into the tank inside the maintenance garage, in the oil storage area, through an elevated and curbed hole in the floor that leads directly to the tank. The curbing around the hole helps to identify this area, and prevent other materials and equipment from being located in this area. The used oil is poured into the hole by staff using large funnels. When the tank is full, the used oil is hauled out and recycled by a contractor. The outlet for the used oil underground tank is located outside the maintenance garage. The contractor will connect a hose to the outlet structure and pump the material into the truck. The area the outlet is located in consists of a cement parking lot just outside the maintenance garage bay doors.
- Used oil filters are well-drained, for at least 12 hours, placed in a container, and hauled away for recycling. The used oil is then placed in the underground storage tank.
- The floor of the Maintenance Garage is swept daily and scrubbed with biodegradable soap at least three nights per week, to minimize track out of materials and small spills or debris from entering the sanitary system.

Elevated Loft Vehicle Fluid Storage

Inside the Maintenance Garage, there is an elevated loft that contains larger quantities of bulk vehicle fluids. There are six 220-gallon metal tanks that contain variations of new oil (rear axle, grease, hydraulic, 5W30, 10W40, transmission fluid). All six tanks are inspected twice per week on Friday afternoons and Monday mornings for leaks.

All tanks are labeled with clear, readable labels. Each tank is connected directly to hydraulic hoses that lead into the ceiling of the Maintenance Garage, where they are pumped by mechanics through overhead nozzles to minimize leaks and spills. These containers are loaded by a contractor, who backs his truck into the Maintenance Garage, lifts his hose up into the loft, and pumps material into the tanks. DPW employees are present and monitoring the loading operations at all times.

There are spill response materials located in the elevated loft. These materials include spill pads, absorbent booms, and oil dry absorbent material.

Spill Response Procedures and Equipment

For significant materials covered under the SWPPP, if *there is a spill or release to the waters of the state*, a Spill Response Form will be filled out (**Appendix E**), and Troy DPW Facility staff will contact the MDEQ.

During Regular Business Hours:

Southeast Michigan District Office
27700 Donald CT
Warren MI 48092-2793
(586) 753-3700

During Non-Business Hours:

Pollution Emergency Alert System (PEAS) at 1-800-292-4706

Detailed spill response procedures related to both the SWPPP and the PIPP are located in **Appendix D**.

List of Significant Spills and Leaks

There have been no significant spills and significant leaks of polluting materials that have occurred at areas that are exposed to precipitation or that otherwise discharge to a point source at the Troy DPW Facility within the last three years.

Any release that occurs after the SWPPP has been developed shall be controlled in accordance with the SWPPP (see Spill Response Plan, **Appendix D**) and is cause for the SWPPP to be updated as appropriate within 14 calendar days of obtaining knowledge of the spill or loss. The listing shall include spills that occurred over the three (3) years prior to the effective date of a certificate of coverage authorizing discharge under this permit. The listing shall include the date, volume, exact location of release, and actions taken to clean up the material and/or prevent exposure to stormwater runoff or contamination of surface waters of the state.

Summary of Sampling Data

The SWPPP requires a summary of existing stormwater discharge sampling data (if available) describing pollutants in stormwater discharges. **No stormwater sampling has been conducted at this site.**

Chapter 5: Nonstructural Controls

The Troy DPW Facility is committed to employing preventative maintenance practices through the use of several nonstructural controls to prevent stormwater pollution. These nonstructural controls are everyday types of activities undertaken by employees at the facility. The permit requires that the SWPPP shall, at a minimum, include each of the following non-structural controls:

1. Routine Inspections & Good Housekeeping Procedures
2. Comprehensive Site Inspections
3. Soil Erosion & Sedimentation Control Measures
4. Employee Training Program
5. List of Significant Materials Still Present

Routine Inspections and Good Housekeeping Procedures

Preventive maintenance at the Troy DPW Facility involves the regular inspection, testing, and cleaning of facility equipment, vehicles, and operational systems. A Routine Inspection Form has been created for the Troy DPW Facility and is located in **Appendix A**. The Routine Inspection Form will be used by facility staff during site walk-throughs that will be conducted on a **monthly** basis. The purpose of these inspections is to identify and prevent conditions that could lead to stormwater pollution. Good housekeeping procedures reduce the potential for pollutants to come into contact with stormwater.

In addition to this monthly Routine Inspection, the City of Troy DPW is committed to its current inspection practices of the following areas:

- Daily sweeping of the Maintenance Garage
- Cleaning the Maintenance Garage floor three times per week with biodegradable soap.
- Inspection of six 220-gallon metal oil storage tanks on Friday afternoons and Monday mornings

Preventative vehicle maintenance is a priority for the City of Troy. The Troy DPW Facility performs the maintenance for a majority of the 500 vehicles and pieces of equipment used within the City. Preventative maintenance is scheduled on all city vehicles automatically using a software maintenance program, that tracks both the amount of time the vehicle or piece of equipment is used and the number of miles it's been driven. The City of Troy is enrolled in the American Public Works Association voluntary preventative maintenance certification program, where they frequently score 100% in their preventative maintenance program. In fact, the City of Troy is currently recognized by the APWA as within the top 20% scoring communities in the nation for their compliance with this program.

Pre-trip inspections are performed on all heavy equipment and machinery consistent with the Michigan Commercial Driver's License requirements. All other lighter-duty vehicles are also inspected prior to being driven. This maintenance check includes a complete inspection of the vehicle for leaks, safety, functionality, and all repairs are made as needed. If fluid leaks are present, drip pans are used to catch fluids to prevent spills or releases. Completed vehicle maintenance records and Routine Inspection Forms will be kept on file with the SWPPP. A log of the routine inspections and corrective actions shall be maintained on file and shall be retained for three years.

Part 5 rules also require surveillance of polluting materials. The routine inspections include this information for the Salt Dome, brine, and the oil storage areas.

Comprehensive Site Inspection

The permit requires a schedule for comprehensive site inspections to include but not be limited to, the areas and equipment identified in the good housekeeping procedures, a review of the routine preventive maintenance reports, and any other paperwork associated with the SWPPP. The whole facility will be evaluated during the comprehensive inspection. This inspection will determine the overall adequacy of the SWPPP and will be coordinated with the annual plan review.

The comprehensive site inspection for the Troy DPW Facility will be conducted once every six months. A report of the comprehensive site inspection results shall be prepared and retained for three years. The report shall identify any incidents of non-compliance with the SWPPP or this permit. If there are no reportable incidents of non-compliance, the report shall contain a certification that the facility is in compliance with this permit. The Comprehensive Site Inspection and Report Form that will be used for each inspection is located in **Appendix B**.

Soil Erosion & Sedimentation Control Measures

The permit requires the identification of areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion. ***There are no areas present that have a high potential for significant soil erosion.***

Employee Training Program

The permit requires a description and documentation of employee training programs which will be implemented to inform appropriate personnel at all levels of responsibility the components and goals of the SWPPP. Records of employee must be kept and retained on site documenting employee training. Employee training components include:

Employees Trained	Training Description and Frequency
New DPW Maintenance Employees	Upon hire, employees will: ● View the MDEQ online employee training video "Stormwater Employee Training" during the Phase II permit cycle.
All DPW Maintenance Staff	● Review Spill Response Plan ● Attend one stormwater training during the Phase II permit cycle ● View the MDEQ online employee training video "Stormwater Employee Training" during the Phase II permit cycle.

List of Significant Materials Still Present

The permit requires the identification of significant materials expected to be present in stormwater discharges following implementation of nonstructural preventative measures and source controls. ***No significant materials are expected to be present.***

Chapter 6: Structural Controls

The permit requires that where implementation of non-structural controls does not control stormwater discharges to prevent contact with significant materials to the maximum extent practicable, the SWPPP shall provide a description of the location, function, and design criteria of structural controls for prevention and treatment.

Several structural controls have been implemented at the Troy DPW Facility to prevent stormwater from being exposed to significant materials and municipal activities. These structural controls include:

Structural Control Type	Description	Significant Materials Intended to be Managed
Filter fabric insert	A filter fabric insert is located inside the storm drain that is closest to the Salt Dome to prevent stormwater contamination. This insert is cleaned out monthly.	Salt, sediment
Detention basin	There is a detention basin located at the rear of the property that receives the stormwater from the onsite catch basins in the rear of the DPW yard.	Sediment, salt
Silt fence	Silt fence has been installed around the one catch basin located in the pervious area. This catch basin is also painted for recognition, and labeled with a staked metal sign.	Sediment, salt
Catch basin cleaning	The catch basins located in the DPW Yard are cleaned out annually.	Sediment, salt, heavy metals, oil
Street sweeping	The paved surfaces in the DPW yard are swept using the City sweeper every three weeks, and periodically as needed.	Sediment, salt, heavy metals, oil

Chapter 7: Plan Review

The permit requires that the permittee shall review the SWPPP/PIPP *annually* after it is developed and maintain written summaries of the reviews (See **Appendix C** for Review Form). The Plan will be updated if any release requiring implementation of the plan occurs. The Plan will also be updated if any facility personnel, processes, materials, or procedures that were included in the plan change. Based on the review, the Troy DPW Facility will amend the Plan as needed to ensure continued compliance with the terms and conditions of the permit and Part 5 rules. The annual review will be retained on site.

Part 5 requires that the PIPP elements be evaluated *every three years* and after any release requiring implementation of the plan. Based on the annual reviews, the City of Troy will recertify and re-notify the following agencies of any Plan updates: The MDEQ District Office, the Oakland County Health Department, and the Local Emergency Planning Committee (see Chapter 8). The Annual Review Form (**Appendix C)** includes a component to ensure the three-year notification requirements are met to satisfy Part 5 Rules.

Chapter 8: Record Keeping and Notification

Troy DPW Facility will maintain records of all SWPPP/PIPP-related inspections and maintenance activities. Records will also be kept describing spills or other discharges that can affect the quality of stormwater runoff. All such records will be retained for three years. The following records are required to be kept by the Phase II permit:

- Routine and Good Housekeeping Inspection Reports
- Comprehensive Inspection Reports
- Annual Review Forms

The PIPP requires that DPW will notify the MDEQ Water Bureau District Office within 30 days of completing the PIPP requirements at:

Southeast Michigan District Office
27700 Donald CT
Warren MI 48092-2793
(586) 753-3700

DPW will also notify the following agencies that the PIPP requirements have been completed:

- Oakland County Health Division
  North Oakland Health Center
  1200 North Telegraph, Building 34 East
  Pontiac, Michigan, 48341
  Phone: 248-858-1280

- Local Emergency Planning Committee
  1200 N. Telegraph Rd., Bldg 47W
  Pontiac MI 48341-0410
  248-858-5300

Chapter 9: SWPPP Certification

The completed SWPPP shall be signed by the facility manager and certified stormwater operator or stormwater program manager, as applicable, and retained on-site at the facility which generates the stormwater discharge.

_____

Printed Name and Title

_____

Signature and Date

_____

Printed Name and Title

_____

Signature and Date

Appendix A: Routine Inspection and Good Housekeeping Report

Date:	Facility Name: **Troy DPW Facility**
Inspector Name:	
Routine Inspection Schedule: **Monthly**	

Preventative maintenance involves the regular inspection, testing, and cleaning of facility equipment, vehicles, and operational systems. All systems and equipment in which a breakdown could result in significant materials impacting stormwater runoff should be included in a preventative maintenance and good housekeeping program.

Municipal Activity Area #1: Loading, unloading and other material handling operations

Fueling Station

Check Box	Method	Comment/Action Taken
☐	Fuel dispensing equipment is properly maintained	
☐	Hose breakaways are implemented and properly working	
☐	Spill clean-up materials are located at fueling station and are stocked	
☐	Small spills are cleaned with absorbents, rather than hosing down the area	
☐	Procedures are in place to have employees avoid topping off tanks (to prevent spills)	
☐	Employees are trained to report fuel leaks as soon as possible	
☐	Inspect catch basin nearest the fueling area for oily sheen and cloudiness.	

Municipal Activity Area #2: Outdoor storage, including secondary containment structures

Salt Dome

Check Box	Method	Comment/Action Taken
☐	Areas surrounding salt dome are swept to contain tracking, and salt is returned for reuse (*don't hose down the area*)	

☐	Check loading/unloading equipment for leaks, through a vehicle/equipment inspection	
☐	Inspect the outside of the dome to look for seepage of salt outside of the structure. Inspect joints between the floor and the walls, the roof and the walls, and all areas of the ground. (*If material is detected, clean up salt immediately and schedule facility for necessary repairs*.)	
☐	During salt deliveries, ensure staff is present to immediately load salt into dome. *Do not allow deliveries to stand outside of the dome uncovered.*	
☐	Ensure solid cover is present at the Salt Dome and is used during all deliveries.	

Brine Tanks and Secondary Containment Structure

Check Box	Method	Comment/Action Taken
☐	Inspect 8,000-gal and 3,000-gal brine tanks for leaks, cracks, loose fittings. Repair all leaks immediately.	
☐	Inspect overhead application nozzle for leaks	
☐	Inspect tank foundations, connections and piping systems for corrosion, leaks, and cracks. Repair as necessary.	
☐	Temporary storm drain cover is available on site (to be used to cover closest storm drain in case of a spill, or during loading and unloading of material)	
☐	Spill clean-up materials are complete and available onsite	
☐	Tank is properly labeled	
☐	Cement walls are inspected for open cracks and joints. Ensure all cracks and joints are sealed immediately.	

Aggregate Storage Areas

Check Box	Method	Comment/Action Taken
☐	Examine aggregate piles for erosion onto paved surfaces. Sweep aggregate back into piles as necessary.	

☐	Inspect silt fence around designated catch basin. Ensure that is properly functioning. Fix as needed.	
☐	Inspect paint on catch basin and designated sign. Make all necessary repairs as needed.	

Cold Patch Shed

Check Box	Method	Comment/Action Taken
☐	Assess areas for track-out. Sweep up regularly (*don't hose down the area*)	
☐	Ensure all cold patch material remains in the barn (and covered) to prevent exposure to storm water	

Compost Piles

Check Box	Method	Comment/Action Taken
☐	Inspect the large compost pile inside the DPW yard for trackout and erosion. Ensure pile is maintained off of paved areas and away from storm drains.	
☐	Inspect the small homeowner compost pile outside of the DPW yard for trackout and erosion. Ensure pile is maintained off of paved areas and away from storm drains and vegetated areas.	

Dewatering Area

Check Box	Method	Comment/Action Taken
☐	Inspect the drainage for the spoils piles located in the drying bed. Ensure the sanitary drain is not blocked.	
☐	Ensure all spoils piles (sanitary cleanouts, street sweepings, and vactor cleanings) are stored in this area.	

Vehicle Parking Lot

Check Box	Method	Comment/Action Taken
☐	Ensure DPW vehicles and corresponding parking spots are checked for leaks. If leaks are found, ensure drip pans are available and used to prevent leaks from entering storm drains.	

☐	Inspect DPW parking lot catch basins monthly for oily sheen, increased sediment, and to ensure proper operation. Have vactored out as needed.	
☐	Inspect catch basin with filter fabric insert near the Salt Dome. Clean as needed. Replace or repair as needed.	
☐	Inspect paved areas of rear lot for sediment and trackout. Sweep every three weeks, or as often as needed.	

Municipal Activity Area #3: On-site waste disposal practices

Dumpsters

Check Box	Method	Comment/Action Taken
☐	Dumpsters containing general debris are covered, or located in an area that drains to the sanitary sewer.	
☐	Inspect each dumpster for holes near the bottom. Call for replacement dumpsters as needed.	
☐	Dumpster lids are kept closed at all times	
☐	Interior of dumpsters are manually cleaned (*not hosed out*)	
☐	Hazardous materials are not disposed of in dumpsters	

Municipal Activity Area #4: Maintenance and cleaning of vehicles, machines, and equipment

Operation and Maintenance Practices

Check Box	Method	Comment/Action Taken
☐	Maintenance garage floor is clean of any oil or fluid residue (*any oil dry used to clean past spills is swept from floor*)	
☐	Spill clean-up materials are clearly accessible to employees in fluid storage areas (Oil Bar area)	
☐	Pre-trip inspections are performed on all vehicles and heavy equipment prior to use (use forms when possible)	

☐	Block interior floor drains when changing vehicle fluids nearby.	
☐	Drip pans and funnels are used when transferring fluids or to collect leaking or dripping fluids	
☐	Drain all used oil filters for at least 12 hours prior to being recycled.	
☐	Inspect used oil filter canister for leaks, cracks, or drips. Repair or replace immediately.	
☐	Any batteries are stored inside, on pallets.	
☐	All cracked batteries are stored in a non-leaking secondary container to retain acid leaks.	
☐	Inspect parts washers for need to reorder recyclable mineral spirits.	

Bar Oil Storage Area

Check Box	Method	Comment/Action Taken
☐	Spill clean-up materials *(oil dry, absorbent pads, brooms, shovels, etc.*) are stocked and clearly accessible	
☐	Funnels are used when transferring fluids	
☐	All tanks and drums are inspected for leaks or cracks and are repaired or replaced immediately.	
☐	All tanks and drums are properly labeled, including Used Antifreeze tank	
☐	All tanks and drums are free of fluid residue (use spill pads, rags, and absorbents to clean and prevent leaks)	
☐	Drums are kept closed at all times, except when filling	
☐	Hand cans are properly labeled and stored in secure manner (not balanced on tops of drums)	

Oil Storage Loft

Check Box	Method	Comment/Action Taken
☐	Tanks are inspected for leaks or cracks and are repaired immediately.	
☐	Tanks are properly labeled, with clear, readable labels	
☐	Tanks are free of fluid residue (use spill pads and absorbents to clean and prevent leaks)	
☐	All joints, fittings, and hoses are inspected for leaks and repaired immediately.	
☐	Spill kit is located in this area and is fully stocked	

Metal Grinding Area

Check Box	Method	Comment/Action Taken
☐	Scrap metal is collected and recycled	
☐	Metal shavings are collected and disposed of in an enclosed container (such as coffee can with lid or 5-gallon bucket with lid) before placing in dumpster	
☐	When lubricating oil is used, filter out metal shavings, properly dispose of them, and recycle used oil	

Vehicle and Equipment Washing Areas

Check Box	Method	Comment/Action Taken
☐	Wash equipment and vehicles in designated inside garage where the water goes to the sanitary sewer.	
☐	Clean lawn mowers inside, or outside using an air hose on turfgrass area (*ensure all clippings remain on grass or are properly disposed of*)	
☐	Inspect interior trench drain and clean out as often as needed, or at least annually.	

Appendix B: SWPPP Comprehensive Inspection Report

Date:	Facility Name:
Inspector Name:	
Comprehensive Inspection Schedule: Every six months	

The permit requires a schedule for comprehensive site inspection (see Table 3) to include but not be limited to, the areas and equipment identified in the preventive maintenance program and good housekeeping procedures, a review of the routine preventive maintenance reports, and any other paperwork associated with the SWPPP. The whole facility should be evaluated during the comprehensive inspection. In contrast to the routine inspections, comprehensive inspections should focus on areas that have a reasonable potential for significant materials to contaminate stormwater runoff. This inspection should determine the overall adequacy of the SWPPP and should be coordinated with your annual plan review.

Check Box	Method	Comment/Action Taken
☐	Review Routine Inspection and Good Housekeeping Forms	
☐	Review vehicle and equipment maintenance logs	
☐	Review spill reports (if applicable)	
☐	Review Spill Response Procedures and phone numbers for updates	
☐	Ensure Material Safety Data Sheets are up-to-date and available for all chemicals onsite	
☐	Review facility operations and determine if additional structural controls are needed to prevent releases of materials to the environment.	

Appendix C: Annual Review Form

Date of Review:

Reviewer Name	
Print:	Signature:

Annual Review Checklist

1) Facility general information and Storm water Team information is current and accurate	Yes	No	
2) Site map is current and accurate	Yes	No	
3) Significant material inventory is current and accurate	Yes	No	
4) New exposures, processes and related controls have been documented	Yes	No	NA
5) Spills have been recorded and reported as appropriate	Yes	No	NA
6) Records of routine preventative maintenance, housekeeping and employee training are available on file	Yes	No	
7) Comprehensive site inspections have been completed, certified and on file	Yes	No	
8) Corrective actions noted in the inspection reports have been completed	Yes	No	
9) Re-notification of updates are sent to the MDEQ District Office, the Oakland County Health Department, and the Local Emergency Planning Committee (**every three years**).			NA
10) SWPPP has been reviewed and signed by the Stormwater Program Manager and the Permittee or designated representative	Yes	No	

Additional Comments:

Appendix D: Troy DPW Facility
Spill Response Plan

EMERGENCY NUMBERS (to be posted at key telephones throughout facility)

Agency Name	Phone Number
Local Fire Department	
Emergency	911
Nonemergency	248.524.3419
Police	
Emergency	911
Nonemergency	248.524.3477
Oakland County Health Division	
Nonemergency	248-858-1280
U.S. Coast Guard	
National Response Center	800-424-8802
Michigan Department of Natural Resources and Environment (MDNRE)	
8:00 a.m. – 5:00 p.m. Southeast Michigan District Office	586- 753-3700
After Hours: PEAS Hotline	1-800-292-4706
Buck's Oil or Crystal Flash Energy	
To be called for spill response services in the event the City is unable to properly respond, if not the Fire Dept. (i.e., large or hazardous spills)	734.728.3280 (Buck's) 1.800.436.3853 (Crystal)
Waste Water Treatment Plant	
For spills into the sanitary system, contact the local WWTP	DWSD Systems Control – 313.267.6000

SPILL RESPONSE PLAN - FOR SMALL SPILLS
(Less than 5 gallons)

1. Make sure area is safe for entry and the spill does not pose an immediate threat to health or safety of responder
2. Stop source of spill (plug hole, upright the container, shut off valve)
3. Check for hazards (flammable material, noxious fumes, cause of spill). If flammable liquid is spilled, turn off engines and (nearby electrical equipment). If serious hazards are present leave the area and call 911. When in doubt consult the Material Safety Data Sheets for hazards
4. Notify Supervisor
5. Block the nearest storm drain (use absorbent or other material as necessary, close valve to drain, cover or plug drain)
6. If spilled material has entered a storm sewer, check catch basins and contact Brian Varney at: 248.524.3390
7. Clean up spilled material/absorbent (do not flush with water)
8. Dispose of cleaned material/absorbent into secure container for proper disposal
9. Complete a Spill Reporting Sheet

SPILL RESPONSE EQUIPMENT

- 5 lb floor dry
- 1 – Shovel
- 1 - Broom
- 1 – Absorbent Boom
- 5– Absorbent Pads
- Container for clean-up (dustpan, 5-gallon container, etc)

SPILL RESPONSE PLAN - MEDIUM SPILLS
(5 **< 50 gallons)**

1. Make sure area is safe for entry and the spill does not pose an immediate threat to health or safety of responder.
2. Stop source of spill (plug hole, upright the container, shut off valve).
3. Check for hazards (flammable material, noxious fumes, cause of spill). If flammable liquid is spilled, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. When in doubt consult the Material Safety Data Sheets for hazards.
4. Contact co-workers and Supervisor for assistance and to make them aware of the spill and potential dangers.
5. Block the nearest storm drain (use absorbent or other material as necessary, close valve to drain, cover or plug drain).
6. Stop spill from spreading (use absorbent or other material).
10. If spilled material has entered a storm sewer, check catch basins and contact Brian Varney at: 248.524.3390
7. Clean up spilled material/absorbent (do not flush with water) – If outside clean-up service is required contact.
8. Dispose of cleaned material/absorbent into secure container for proper disposal.
9. Complete a Spill Reporting Sheet.

SPILL RESPONSE EQUIPMENT

- 20 lb floor dry
- 1 – Shovel
- 1 - Broom
- 2 – Absorbent Booms
- 20 – Absorbent Pads
- Container for clean-up (30 gal)

SPILL RESPONSE PLAN - LARGE SPILLS
(Greater than 50 Gallons or 50 pounds, including salt)

1. Make sure area is safe for entry and the spill does not pose an immediate threat to health or safety of responder
2. Stop source of spill (plug hole, upright the container, shut off valve)
3. Check for hazards (flammable material, noxious fumes, cause of spill). If flammable liquid is spilled, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911**.**
4. Call Brian Varney at: 248.524.3390 to make them aware of the spill and potential dangers. Notify police and fire departments if necessary for possible lane closure and need for assistance.
5. **LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD AND WILL REQUIRE SPILL RESPONSE SERVICES FROM FIRE DEPT.**
6. Protect all drains from spilled material (use absorbent or other material as necessary, cover or plug drain)
    a. Spill kits are located near fuel islands, and by oil distribution center
    b. The MSDS for all materials are kept in Fleet Service Garage and at Fire Department
7. Stop spill from spreading (use absorbent or other diking material such as sand, dirt, etc.)
8. For spills of materials indoors, clean up spilled material with absorbents, oil dry, etc. (Do not flush with water). If material is spilled outside, a clean-up service may be required.
9. Spilled salt will be swept up and either transferred to the Salt Barn, or into a truck for road application use. Industry standards will be followed regarding usage concentration and application rates using normally accepted practices.
10. Dispose of cleaned material/absorbent into secure container for proper disposal.
11. A call to PEAS at 800-292-4706 will be made to report the release.
12. Written report MUST be submitted within 10 days after the release to:

    a. MDEQ Water Bureau Chief
    525 West Allegan Street
    P.O. Box 30473
    Lansing, MI 48909-7973

    b. Oakland County Health Division
    1200 N. Telegraph Road
    Building 34 East
    Pontiac, MI 48341

SPILL RESPONSE EQUIPMENT

- 20 lb floor dry
- 1 - Broom
- 1 – Shovel
- Caution Tape
- 5– Absorbent Booms
- 20 – Absorbent Pads
- Container for clean-up (30 gal)

Appendix E: SPILL REPORTING SHEET

Date of Incident	
Time of Incident	
Location & Cross Streets	
Type of Spill	
Estimated Quantity	
Reported To	
Time Reported	
Responsible Party	
Address	
Phone Number/Contact	
Describe materials used to clean up spill: **Describe response measures that have been done, and the schedule for completion of other measures to be taken, or both** **Describe measures taken to prevent recurrence of similar releases**	
Completed By:	

Additional Notes:

City of Troy

Police Vehicle Maintenance Garage

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

Stormwater Pollution Prevention Plan

Table of Contents

Chapter 1: General Facility Information

Table 1: General Facility Information

NAME OF FACILITY:	City of Troy Police Vehicle Maintenance Garage
FACILITY ADDRESS:	500 W. Big Beaver Road, Troy, MI 48085
FACILITY CONTACT INFORMATION	
Name and title:	Brian Varney, Superintendent of Fleet Maintenance
Mailing Address:	500 W. Big Beaver Road, Troy, MI 48085
Telephone:	248.524.3392
24-Hour Emergency Telephone:	248.524.3390
Email:	Brian.Varney@troymi.gov
PHASE II PERMIT INFORMATION	
Certificate of Coverage Number and Effective Date of Coverage:	MIG610053
Receiving Waters:	Clinton River Watershed

Chapter 2: Spill Response Team

The City of Troy is committed to maintaining the environmental integrity of city owned property by helping improve stormwater quality through the stormwater permit program. Troy Police Vehicle Maintenance Garage staff is knowledgeable in storm water protection activities in conjunction with their fleet maintenance operations.

The Troy Police Vehicle Maintenance Garage houses vehicles and materials for vehicle maintenance. The Troy Police Vehicle Maintenance Garage staff identified to assist in stormwater pollution prevention and pollution incident prevention activities are as follows:

Table 2: Stormwater Pollution Prevention and Spill Response Team

NAME AND TITLE	RESPONSIBILITY
Brian Varney, Superintendent of Fleet Maintenance & Joe LaGarde, Fleet Maintenance Supervisor	Spill Response Program Oversight, Stormwater Program Oversight
	Onsite vehicle maintenance, Routine Inspections; other duties as necessary

Chapter 3: Site Map

The Troy Police Vehicle Maintenance Garage consists of one building; the Maintenance Garage. The Maintenance Garage is part of the overall City of Troy Municipal Complex, which includes the Library, City Hall, Police Station, and the Court House. However, The Maintenance Garage is the only area within the complex that stores vehicle fluids or performs maintenance.

The Maintenance Garage has the primary function of performing light maintenance activities for the City of Troy police vehicles. The Maintenance Garage has an interior floor drain that discharges to the sanitary sewer. All storm and sanitary sewers have been mapped by the City and are maintained in the City's GIS database for maintenance and future upgrades as needed.

The police vehicles are all parked outside on the asphalt parking lot between the Police Department and Maintenance Garage buildings. Covered carports have been constructed in this parking lot to assure all police vehicles are covered. No vehicle washing occurs on site. All police vehicles are taken to a local car wash to be cleaned.

Figure 1. City of Troy Municipal Complex Site Map

Figure 2. City of Troy Vehicle Maintenance Garage Site Map

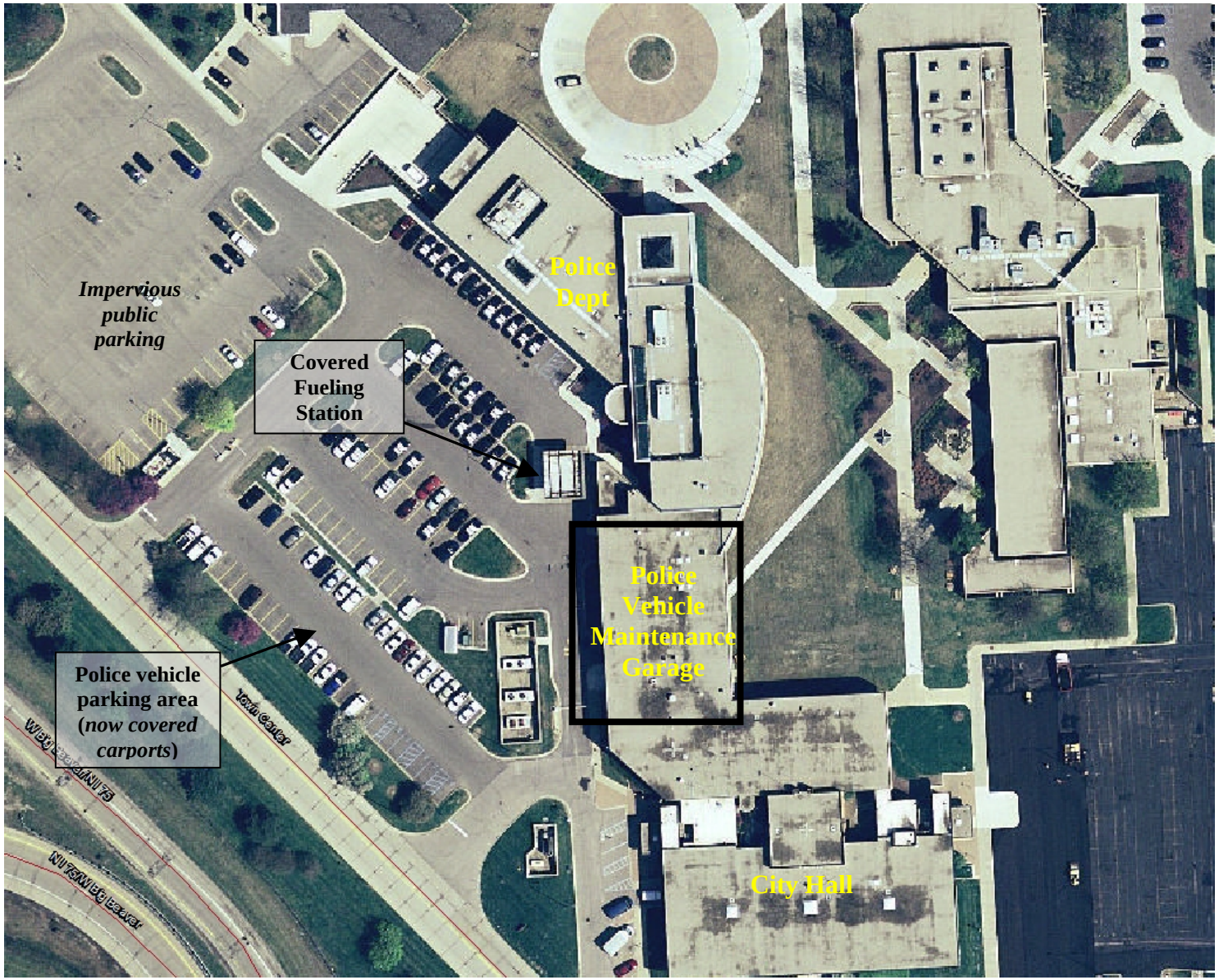
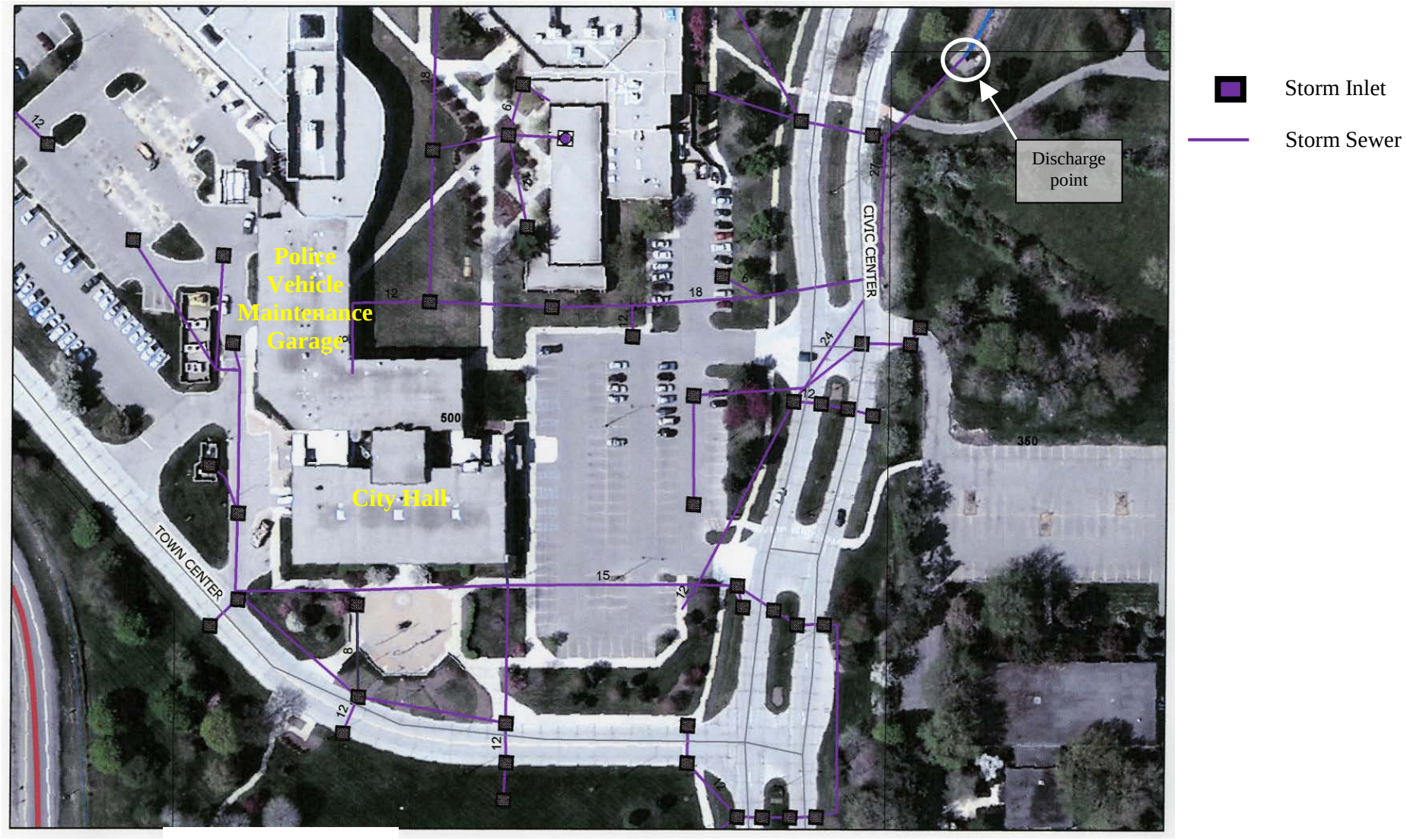


Figure 3. City of Troy Municipal Complex Storm Drain Map



Chapter 4: Significant Materials & Activities

Inventory and Description of Exposed Significant Materials & Municipal Activities

To identify potential sources of significant materials, Troy staff, with the assistance of the Southeast Michigan Council of Governments (SEMCOG) conducted an inventory of activities and materials that may be exposed to storm water at the Police Vehicle Maintenance Garage. Municipal Activity Areas consistent with the SWPPP requirements for the Troy Police Vehicle Maintenance Garage include the following:

1. Loading, unloading and other material handling operations
2. On-site waste disposal
3. Maintenance and cleaning of vehicles and equipment
    - All vehicle maintenance is conducted indoors, where interior floor drains are connected to the sanitary sewer.

The following areas/activities as identified in the standard SWPPP template are not applicable to the Troy Police Vehicle Maintenance Garage:

- Areas of exposed and/or erodible soils
- Outdoor storage
- Significant dust or particulate generating processes
- Discharge from rooftop vents, stacks and air emission controls
- Outdoor manufacturing or processing activities
- Sites of environmental contamination listed under the NREPA Act 451, part 201 of 1994
- Areas of significant material residues
- Areas where wild or domestic animals congregate and deposit waste

The results are displayed in Table 3:

Table 3. Municipal Activities, Significant Materials, Exposure and Material Handling

Municipal Activity Areas	Area/Process Description	Significant Material	Method of Exposure	Exposure Potential	Material Handling & Storage Procedures	Discharge Point[1]
1. Loading, unloading and other material handling operations	Fuel Island	Gasoline, Diesel (USTs)	Spills, leaks	Low	The fuel tanks are located underground with two above ground pump stations. The pump stations are covered and located on an elevated cement pad surrounded by an asphalt parking lot. There are crash protection barrier posts, with breakaway hoses for spill protection. There is a labeled emergency stop button with an alarm. There is a spill kit located just inside the Maintenance Garage.	Lane Drain
2. Outdoor storage including secondary containment structures	Vehicle Parking	Oil, fuel, grease from vehicles	Runoff	Low	All of the City Police Vehicles are parked outside under covered carport storage areas. All vehicles receive daily pre-trip inspections and also scheduled for routine preventative maintenance through the City's software maintenance program.	Lane Drain
3. On-site waste disposal practices	Dumpster	5-yard general debris	Leaking containers	Low	All dumpsters within the municipal complex are metal with impermeable lids. Only dry general debris material is disposed of in these dumpsters.	Lane Drain
4. Maintenance and cleaning of vehicles, machines, and equipment	Maintenance Garage	(1) 160-gal tank of Automatic Transmission Fluid (1) 160-gal tank of 10W30 (1) 55-gal tank of used oil (1) 150-gal tank of windshield washer fluid	Spillage during transfer, leaking containers.	Low	The two 160-gallon metal tanks of vehicle fluids are stored in the mechanics area. They are loaded with new material using a transfer pump that leads from a new 55-gallon drum of material into the metal tank. This is performed inside the mechanics area. The 55-gallon drum of used oil is labeled and located inside the mechanics area. When it is full, it is driven to the City DPW yard where it is transferred to their underground used oil tank (and recycled by a contractor). Used oil	N/A (drains to sanitary)

Municipal Activity Areas	Area/Process Description	Significant Material	Method of Exposure	Exposure Potential	Material Handling & Storage Procedures	Discharge Point[1]
					filters are drained for at least 12 hours before taken to the DPW yard for recycling. The 300-gallon plastic tank of windshield washer fluid is stored inside the bay of the garage on an elevated cement pad against a wall for crash protection. The tank is loaded by the supply company, which backs their vehicle into the garage and uses a hose to load the material. There are no interior floor drains in this area.	
	Parts cleaner	Mineral spirits	Spillage during transfer, leaking containers	Low	The parts cleaner is located inside the Mechanic's area of the Maintenance Garage. It is a self-contained unit, where the mineral spirits are recycled within the system, and replaced and recycled as necessary by a contractor.	N/A (drains to sanitary)

[1] **Discharge point** is any location on the MS4 owned or operated by the permittee that discharges directly to a surface water of the state, or any location on the MS4 owned or operated by the permittee that discharges to any other separate storm sewer system before discharging to a surface water of the state. [Permit No. MIG610000 Definitions]

Spill Response Procedures and Equipment
For significant materials covered under the SWPPP the MDEQ must be contacted in the following scenarios:

To The Ground:			**To Waters of the State:**			**To Sanitary Sewer (*contact WWTP only*):**	
Oil, any other significant material	50 gallons or 50 pounds		Oil, any significant material	Any quantity that causes visible sheens, oil films, unnatural turbidity, foams or deposits in water body		Oil, any significant material	Any quantity not currently authorized by receiving WWTP

During Regular Business Hours:
Southeast Michigan District Office
27700 Donald Court
Warren, MI 48092-2793
(586) 753-3700

During Non-Business Hours:
Pollution Emergency Alert System (PEAS)
at 1-800-292-4706

Detailed spill response procedures related to the SWPPP are located in **Appendix D**.

List of Significant Spills and Leaks

There have been no significant spills and significant leaks of polluting materials that have occurred at areas that are exposed to precipitation or that otherwise discharge to a point source at the Troy Police Vehicle Maintenance Garage within the last three years.

Any release that occurs after the SWPPP has been developed shall be controlled in accordance with the SWPPP (see Spill Response Plan, **Appendix D**) and is cause for the SWPPP to be updated as appropriate within 14 calendar days of obtaining knowledge of the spill or loss. The listing shall include spills that occurred over the three (3) years prior to the effective date of a certificate of coverage authorizing discharge under this permit. The listing shall include the date, volume, exact location of release, and actions taken to clean up the material and/or prevent exposure to stormwater runoff or contamination of surface waters of the state.

Summary of Sampling Data

The SWPPP requires a summary of existing stormwater discharge sampling data (if available) describing pollutants in stormwater discharges. **No stormwater sampling has been conducted at this site.**

Chapter 5: Nonstructural Controls

The Troy Police Vehicle Maintenance Garage is committed to employing preventative maintenance practices through the use of several nonstructural controls to prevent stormwater pollution. These nonstructural controls are everyday types of activities undertaken by employees at the facility. The permit requires that the SWPPP shall, at a minimum, include each of the following non-structural controls:

1. Routine Inspections & Good Housekeeping Procedures
2. Comprehensive Site Inspections
3. Soil Erosion & Sedimentation Control Measures
4. Employee Training Program
5. List of Significant Materials Still Present

Routine Inspections and Good Housekeeping Procedures

Preventive maintenance at the Troy Police Vehicle Maintenance Garage involves the regular inspection, testing, and cleaning of facility equipment, vehicles, and operational systems. A Routine Inspection Form has been created for the Troy Police Vehicle Maintenance Garage and is located in **Appendix A**. The Routine Inspection Form will be used by facility staff during site walk-throughs that will be conducted on a **monthly** basis. The purpose of these inspections is to identify and prevent conditions that could lead to stormwater pollution. Good housekeeping procedures reduce the potential for pollutants to come into contact with stormwater.

Preventative vehicle maintenance is a priority for the City of Troy. The Troy Police Vehicle Maintenance Garage performs the routine maintenance for all of the police vehicles used within the City. Preventative maintenance is scheduled on all city vehicles automatically using a software maintenance program that tracks both the amount of time the vehicle is used and the number of miles it's been driven. Heavy maintenance on police vehicles is performed at the Troy DPW garage.

Pre-trip inspections are performed on the police vehicles prior to being driven. A maintenance check includes an overall inspection of the vehicle for leaks, safety, functionality, and all repairs are made as needed. If fluid leaks are present, drip pans are used to catch fluids to prevent spills or releases. Completed vehicle maintenance records and Routine Inspection Forms will be kept on file with the SWPPP. A log of the routine inspections and corrective actions shall be maintained on file and shall be retained for three years.

Comprehensive Site Inspection

The permit requires a schedule for comprehensive site inspections to include but not be limited to, the areas and equipment identified in the good housekeeping procedures, a review of the routine preventive maintenance reports, and any other paperwork associated with the SWPPP. The whole facility will be evaluated during the comprehensive inspection. This inspection will determine the overall adequacy of the SWPPP and will be coordinated with the annual plan review.

The comprehensive site inspection for the Troy Police Vehicle Maintenance Garage will be conducted once every six months. A report of the comprehensive site inspection results shall be prepared and

retained for three years. The report shall identify any incidents of non-compliance with the SWPPP or this permit. If there are no reportable incidents of non-compliance, the report shall contain a certification that the facility is in compliance with this permit. The Comprehensive Site Inspection and Report Form that will be used for each inspection is located in **Appendix B**.

Soil Erosion & Sedimentation Control Measures

The permit requires the identification of areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion. ***There are no areas present that have a high potential for significant soil erosion.***

Employee Training Program

The permit requires a description and documentation of employee training programs which will be implemented to inform appropriate personnel at all levels of responsibility the components and goals of the SWPPP. Records of employee must be kept and retained on site documenting employee training. Employee training components include:

Employees Trained	Training Description and Frequency
New Maintenance Employees	Upon hire, employees will: • View the MDEQ online employee training video "Stormwater Employee Training" during the Phase II permits cycle.
All Maintenance Staff	• Review Spill Response Plan • View the MDEQ online employee training video "Stormwater Employee Training" during the Phase II permit cycle.

List of Significant Materials Still Present

The permit requires the identification of significant materials expected to be present in stormwater discharges following implementation of nonstructural preventative measures and source controls. ***No significant materials are expected to be present.***

Chapter 6: Structural Controls

The permit requires that where implementation of non-structural controls does not control stormwater discharges to prevent contact with significant materials to the maximum extent practicable, the SWPPP shall provide a description of the location, function, and design criteria of structural controls for prevention and treatment.

Several structural controls have been implemented at the Troy Police Vehicle Maintenance Garage to prevent stormwater from being exposed to significant materials and municipal activities. These structural controls include:

Structural Control Type	Description	Significant Materials Intended to be Managed
Catch basin cleaning	The catch basins located in the Municipal Complex are cleaned out annually by the Troy DPW.	Sediment, salt, heavy metals, oil
Street sweeping	The paved surfaces in the Municipal Complex are swept by the Troy DPW every month, and periodically as needed.	Sediment, salt, heavy metals, oil

Chapter 7: Plan Review

The permit requires that the permittee shall review the SWPPP *annually* after it is developed and maintain written summaries of the reviews (See **Appendix C** for Review Form). The Plan will be updated if any release requiring implementation of the plan occurs. The Plan will also be updated if any facility personnel, processes, materials, or procedures that were included in the plan change. Based on the review, the Troy Police Vehicle Maintenance Garage will amend the Plan as needed to ensure continued compliance with the terms and conditions of the permit and Part 5 rules. The annual review will be retained on site.

Chapter 8: Record Keeping and Notification

Troy Police Vehicle Maintenance Garage will maintain records of all SWPPP-related inspections and maintenance activities. Records will also be kept describing spills or other discharges that can affect the quality of stormwater runoff. All such records will be retained for three years. The following records are required to be kept by the Phase II permit:

- Routine and Good Housekeeping Inspection Reports
- Comprehensive Inspection Reports
- Annual Review Forms

Chapter 9: SWPPP Certification

The completed SWPPP shall be signed by the facility manager and certified stormwater operator or stormwater program manager, as applicable, and retained on-site at the facility which generates the stormwater discharge.

_____

Printed Name and Title

_____

Signature and Date

_____

Printed Name and Title

_____

Signature and Date

Appendix A: Routine Inspection and Good Housekeeping Report

Date:	Facility Name: **Troy Police Vehicle Maintenance Garage**
Inspector Name:	
Routine Inspection Schedule: **Monthly**	

Preventative maintenance involves the regular inspection, testing, and cleaning of facility equipment, vehicles, and operational systems. All systems and equipment in which a breakdown could result in significant materials impacting stormwater runoff should be included in a preventative maintenance and good housekeeping program.

Municipal Activity Area #1: Loading, unloading and other material handling operations

Fueling Station

Check Box	Method	Comment/Action Taken
☐	Fuel dispensing equipment is properly maintained	
☐	Hose breakaways are implemented and properly working	
☐	Spill clean-up materials are located just inside maintenance garage and are stocked	
☐	Small spills are cleaned with absorbents, rather than hosing down the area	
☐	Procedures are in place to have employees avoid topping off tanks (to prevent spills)	
☐	Employees are trained to report fuel leaks as soon as possible	
☐	Inspect catch basin nearest the fueling area for oily sheen and cloudiness.	

Municipal Activity Area #2: Outdoor storage, including secondary containment structures

Police Vehicle Parking Lot

Check Box	Method	Comment/Action Taken
☐	Inspect parking spots for accumulated vehicle fluids and leaking vehicles. If leaks are found, ensure drip pans are available and used to prevent leaks from entering storm drains.	

Municipal Activity Area #3: On-site waste disposal practices

Dumpster

Check Box	Method	Comment/Action Taken
☐	Inspect dumpster for holes near the bottom. Call for replacement dumpsters as needed.	
☐	Dumpster lids are kept closed at all times	
☐	Interior of dumpsters are manually cleaned (*not hosed out*)	
☐	Hazardous materials are not disposed of in dumpsters	

Municipal Activity Area #4: Maintenance and cleaning of vehicles, machines, and equipment

Operation and Maintenance Practices

Check Box	Method	Comment/Action Taken
☐	Inspect maintenance garage floor for any accumulated oil or fluid residue (*sweep up oil dry used to clean past spills)*	
☐	Spill clean-up materials are clearly accessible to employees in fluid storage areas	
☐	Block interior floor drain with solid cover when vehicles are on lift.	
☐	Drip pans and funnels are used when transferring fluids or to collect leaking or dripping fluids	
☐	Drain all used oil filters for at least 12 hours prior to being recycled.	
☐	Inspect used oil filter canister for leaks, cracks, or drips. Repair or replace immediately.	
☐	Any batteries are stored inside, on pallets.	
☐	Inspect parts washers for need to reorder recyclable mineral spirits.	

Appendix B: SWPPP Comprehensive Inspection Report

Date:	Facility Name:
Inspector Name:	
Comprehensive Inspection Schedule: Every six months	

The permit requires a schedule for comprehensive site inspection (see Table 3) to include but not be limited to, the areas and equipment identified in the preventive maintenance program and good housekeeping procedures, a review of the routine preventive maintenance reports, and any other paperwork associated with the SWPPP. The whole facility should be evaluated during the comprehensive inspection. In contrast to the routine inspections, comprehensive inspections should focus on areas that have a reasonable potential for significant materials to contaminate stormwater runoff. This inspection should determine the overall adequacy of the SWPPP and should be coordinated with your annual plan review.

Check Box	Method	Comment/Action Taken
☐	Review Routine Inspection and Good Housekeeping Forms	
☐	Review vehicle and equipment maintenance logs	
☐	Review spill reports (if applicable)	
☐	Review Spill Response Procedures and phone numbers for updates	
☐	Ensure Material Safety Data Sheets are up-to-date and available for all chemicals onsite	
☐	Review facility operations and determine if additional structural controls are needed to prevent releases of materials to the environment.	
☐	Inspect three parking lot catch basins monthly for oily sheen, increased sediment, and to ensure proper operation. Have vactored out as needed.	
☐	Inspect outfall (where storm sewer pipe empties into drainage ditch) for oily sheen, sediment, etc. If materials are present, notify Tom Rosewarne, Superintendant of Streets and Drains	

Appendix C: Annual Review Form

Date of Review:

Reviewer Name	
Print:	Signature:

Annual Review Checklist

1) Facility general information and Stormwater Team information is current and accurate	Yes	No	
2) Site map is current and accurate	Yes	No	
3) Significant material inventory is current and accurate	Yes	No	
4) New exposures, processes and related controls have been documented	Yes	No	NA
5) Spills have been recorded and reported as appropriate	Yes	No	NA
6) Records of routine preventative maintenance, housekeeping and employee training are available on file	Yes	No	
7) Comprehensive site inspections have been completed, certified and on file	Yes	No	
8) Corrective actions noted in the inspection reports have been completed	Yes	No	
9) A re-notification of updates is sent to the MDNRE District Office, the Oakland County Health Department, and the Local Emergency Planning Committee (**every three years**).			NA
10) SWPPP has been reviewed and signed by the Stormwater Program Manager and the Permittee or designated representative	Yes	No	

Additional Comments:

Appendix D: Troy Police Vehicle Maintenance Garage Spill Response Plan

EMERGENCY NUMBERS (to be posted at key telephones throughout facility)

Agency Name	Phone Number
Local Fire Department	
Emergency	911
Nonemergency	248.524.3419
Police	
Emergency	911
Nonemergency	248.524.3477
Oakland County Health Department	
Nonemergency	248-858-1352
U.S. Coast Guard	
National Response Center	800-424-8802
Michigan Department of Natural Resources and Environment (MDNRE)	
8:00 a.m. – 5:00 p.m. Southeast Michigan District Office	586- 753-3700
After Hours: PEAS Hotline	1-800-292-4706
Buck's Oil or Crystal Flash Energy	
To be called for spill response services in the event the City is unable to properly respond, if not the Fire Dept. (i.e., large or hazardous spills)	734.728.3280 (Buck's) 1.800.436.3853 (Crystal)
Waste Water Treatment Plant	
For spills into the sanitary system, contact the local WWTP	DWSD Systems Control – 313.267.6000

SPILL RESPONSE PLAN - FOR SMALL SPILLS
(Less than 5 gallons)

1. Make sure area is safe for entry and the spill does not pose an immediate threat to health or safety of responder
2. Stop source of spill (plug hole, upright the container, shut off valve)
3. Check for hazards (flammable material, noxious fumes, cause of spill). If flammable liquid is spilled, turn off engines and (nearby electrical equipment). If serious hazards are present leave the area and call 911. When in doubt consult the Material Safety Data Sheets for hazards
4. Notify Supervisor
5. Block the nearest storm drain (use absorbent or other material as necessary, close valve to drain, cover or plug drain)
6. If spilled material has entered a storm sewer, check catch basins and contact Brian Varney at: 248.524.3390
7. Clean up spilled material/absorbent (do not flush with water)
8. Dispose of cleaned material/absorbent into secure container for proper disposal
9. Complete a Spill Reporting Sheet

SPILL RESPONSE EQUIPMENT

- 5 lb floor dry
- 1 – Shovel
- 1 - Broom
- 1 – Absorbent Boom
- 5– Absorbent Pads
- Container for clean-up (dustpan, 5-gallon container, etc)

SPILL RESPONSE PLAN - MEDIUM SPILLS
(5 < 50 gallons)

1. Make sure area is safe for entry and the spill does not pose an immediate threat to health or safety of responder.
2. Stop source of spill (plug hole, upright the container, shut off valve).
3. Check for hazards (flammable material, noxious fumes, cause of spill). If flammable liquid is spilled, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. When in doubt consult the Material Safety Data Sheets for hazards.
4. Contact co-workers and Supervisor for assistance and to make them aware of the spill and potential dangers.
5. Block the nearest storm drain (use absorbent or other material as necessary, close valve to drain, cover or plug drain).
6. Stop spill from spreading (use absorbent or other material).
7. If spilled material has entered a storm sewer, check catch basins and contact Brian Varney at 248.524.3390
8. Clean up spilled material/absorbent (do not flush with water) – If outside clean-up service is required contact.
9. Dispose of cleaned material/absorbent into secure container for proper disposal.
10. Complete a Spill Reporting Sheet.

SPILL RESPONSE EQUIPMENT

- 20 lb floor dry
- 1 – Shovel
- 1 - Broom
- 2 – Absorbent Booms
- 20 – Absorbent Pads
- Container for clean-up (30 gal)

SPILL RESPONSE PLAN - LARGE SPILLS
(Greater than 50 Gallons or 50 pounds)

1. Make sure area is safe for entry and the spill does not pose an immediate threat to health or safety of responder
2. Stop source of spill (plug hole, upright the container, shut off valve)
3. Check for hazards (flammable material, noxious fumes, cause of spill). If flammable liquid is spilled, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911**.**
4. Call Brian Varney at 248.524.3390 to make them aware of the spill and potential dangers. Notify police and fire departments if necessary for possible lane closure and need for assistance.
5. **LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD AND WILL REQUIRE SPILL RESPONSE SERVICES FROM FIRE DEPT.**
6. Protect all drains from spilled material (use absorbent or other material as necessary, cover or plug drain)
    a. Spill kits are located near fuel islands, and by oil distribution center
    b. The MSDS for all materials are kept in Fleet Service Garage and at Fire Department
7. Stop spill from spreading (use absorbent or other diking material such as sand, dirt, etc.)
8. For spills of materials indoors, clean up spilled material with absorbents, oil dry, etc. (Do not flush with water). If material is spilled outside, a clean-up service may be required.
9. Spilled salt will be swept up and either transferred to the Salt Barn, or into a truck for road application use. Industry standards will be followed regarding usage concentration and application rates using normally accepted practices.
10. Dispose of cleaned material/absorbent into secure container for proper disposal.
11. A call to PEAS at 800-292-4706 will be made to report the release.
12. Written report MUST be submitted within 10 days after the release to:
    a. MDEQ Water Bureau Chief
    525 West Allegan Street
    P.O. Box 30473
    Lansing, MI 48909-7973
    b. Oakland County Health Division
    1200 N. Telegraph Road
    Building 34 East
    Pontiac, MI 48341

SPILL RESPONSE EQUIPMENT

- 20 lb floor dry
- 1 - Broom
- 1 – Shovel
- Caution Tape
- 5– Absorbent Booms
- 20 – Absorbent Pads
- Container for clean-up (30 gal)

Appendix E: SPILL REPORTING SHEET

Date of Incident	
Time of Incident	
Location & Cross Streets	
Type of Spill	
Estimated Quantity	
Reported To	
Time Reported	
Responsible Party	
Address	
Phone Number/Contact	
Describe materials used to clean up spill:	
Describe response measures that have been done, and the schedule for completion of other measures to be taken, or both	
Describe measures taken to prevent recurrence of similar releases	
Completed By:	

Additional Notes:

GIS Online

Legend:

- Drain (Ditch/Spillway)
  - Channel
  - Ditch
  - Spillway
- Drain (Pipe/Culvert)
- Drain Clean Out
- Drain Fitting
- Drain Lift Station
- Drain Structure
- Drain Outfall
- Drain Manhole
- Drain Inlet

Notes:

City of Troy DPW Yard

Map Scale: 1=277

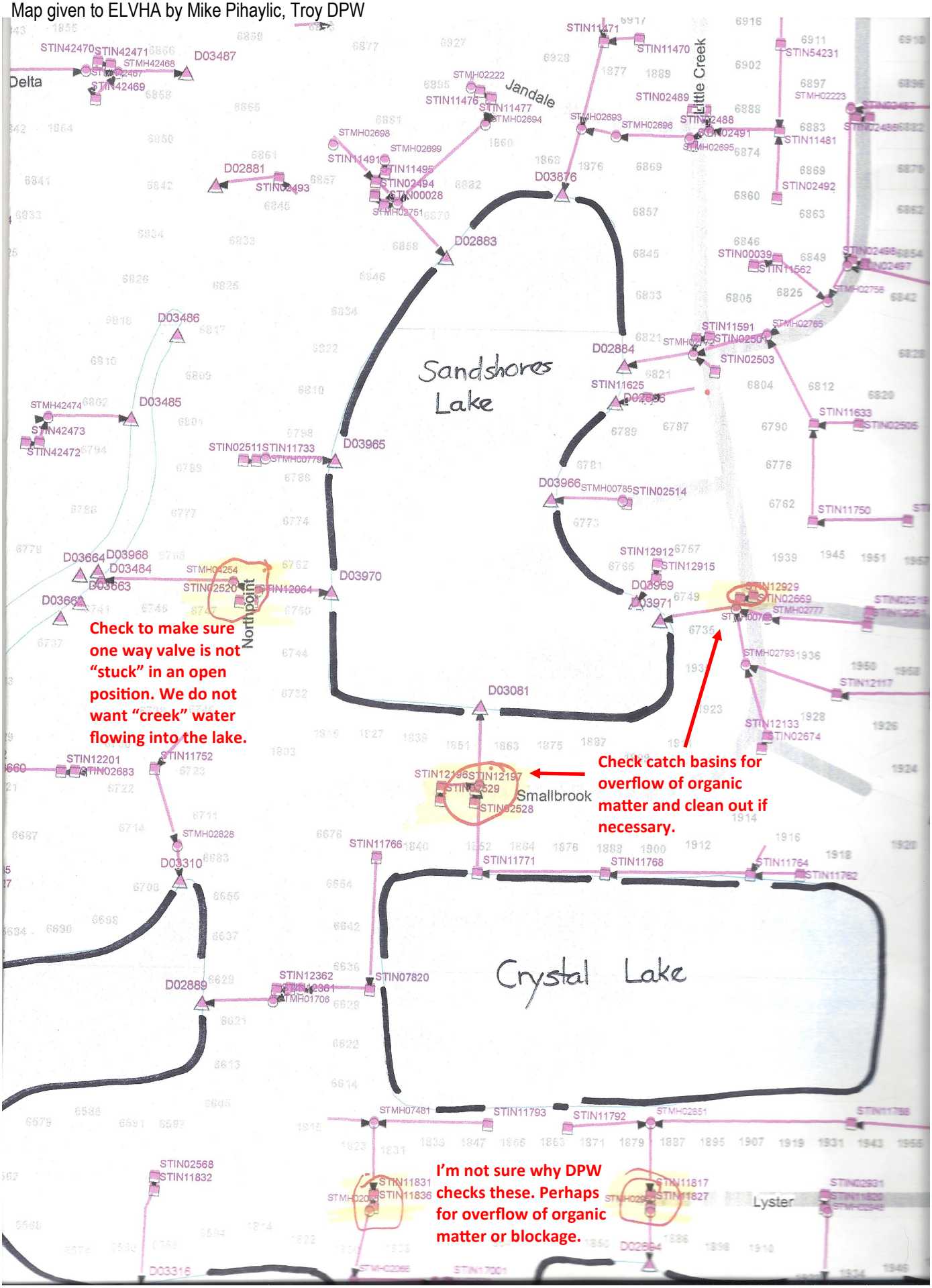
Created: July 9, 2018

Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

EMERALD LAKES VILLAGE DRAINS FOR EXTRA ATTENTION—Sandshores Lake, Crystal Lake

Map and notes provided by Kathleen Donovan, Corresponding Secretary, ELVHA, 248-879-7364, jbktroy@aol.com.

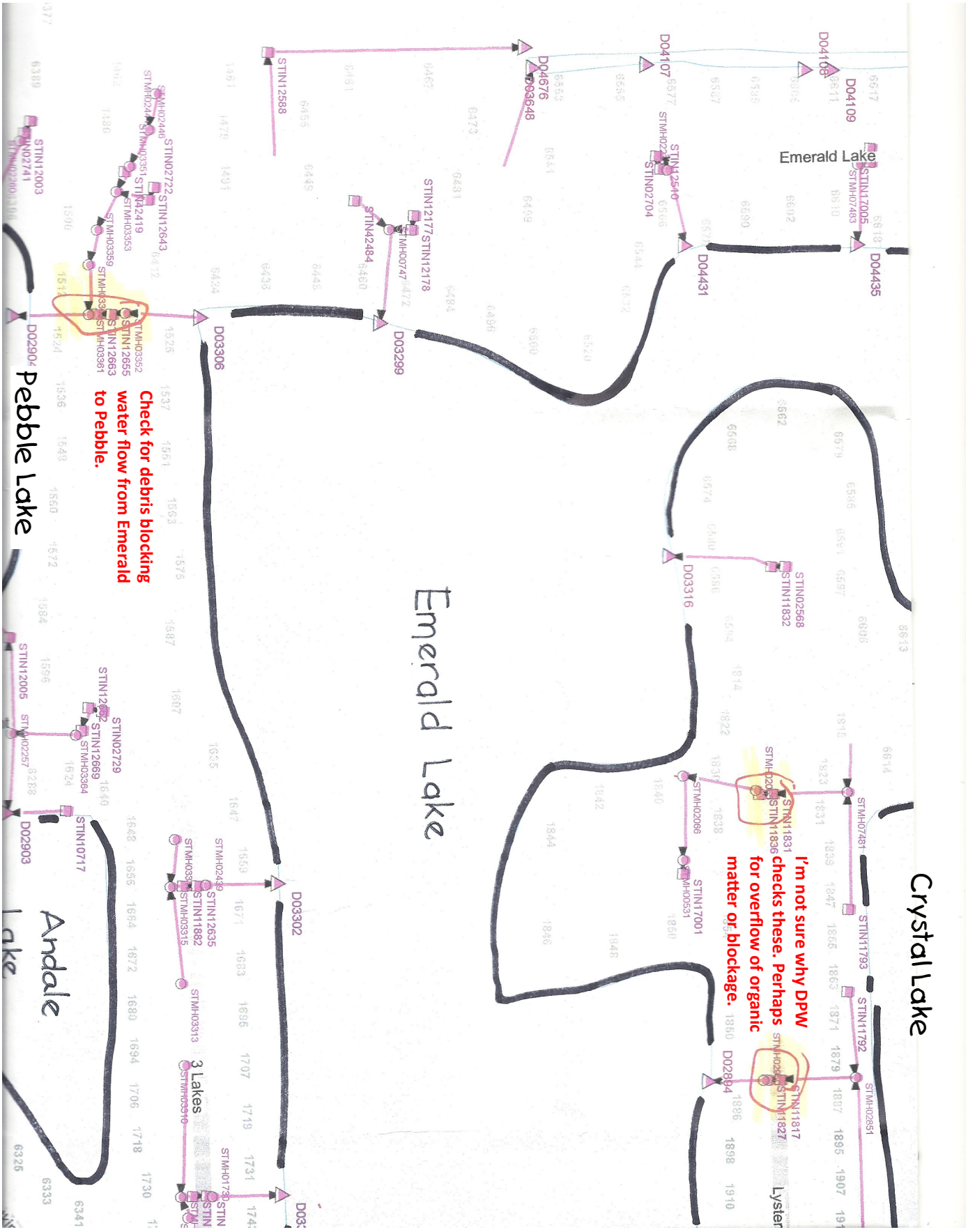
Map given to ELVHA by Mike Pihaylic, Troy DPW



EMERALD LAKES VILLAGE DRAINS FOR EXTRA ATTENTION—Crystal Lake, Emerald Lake, Pebble Lake

Map and notes provided by Kathleen Donovan, Corresponding Secretary, ELVHA, 248-879-7364, jbktroy@aol.com.

Map given to ELVHA by Mike Pihaylic, Troy DPW



Spill Notification & Complaint Reporting Form
Illicit Discharge Elimination Program
City of Troy, Oakland County

Complaint made by: _____ Phone #: _____

Date: _____ Time: _____

Location of Discharge: _____Offending Party (if known) _____

Nature of Problem (i.e. paper waste, odor, color, etc.): _____

_____

_____

Is this an Emergency?
Yes ☐ (Then Phone 911) ☐ No
Nature of Emergency: _____

_____

Initial Contact made to:
☐ 911
☐ City Dept. (248) 524-3392
☐ Wayne County (888)-223-2363
☐ Oakland County (248)-858-0931
☐ PEAS Hotline (State) 1-800-292-4706
☐ Other

Additional Comments:
_____
_____
_____
_____
_____
_____
_____
_____

Site Investigation

Date of Observation:_____
Investigating Agency: _____
Location of Discharge:
_____

☐ Initial Investigation
☐ Follow-up Investigation

Crew Members:
_____
_____

Investigation Location:
_____
_____

Observations (odor, color, volume, etc):
_____
_____

Actions Taken:
_____
_____
_____
_____
_____
_____

Were photos taken: ☐ Yes* ☐ No
Date Corrected: _____
* Please attach copies

If necessary:
Agency Referred to: _____
Agency Contact: _____
Method of Communication:
☐ E-mail ☐ Letter/memo ☐ Phone

Content of Communication:
_____
_____

Spill Notification & Complaint Reporting Form
Illicit Discharge Elimination Program
City of Troy, Oakland County

Compliance Information & Schedule:

_____

_____

_____

Date Violation Was Resolved: _____

1. Take down complaint information.

2. Fill out the Spill Notification form for the Illicit Discharge Elimination Reporting System.

3. Inform the caller that the problem will be further investigated and thank him/her for calling in.

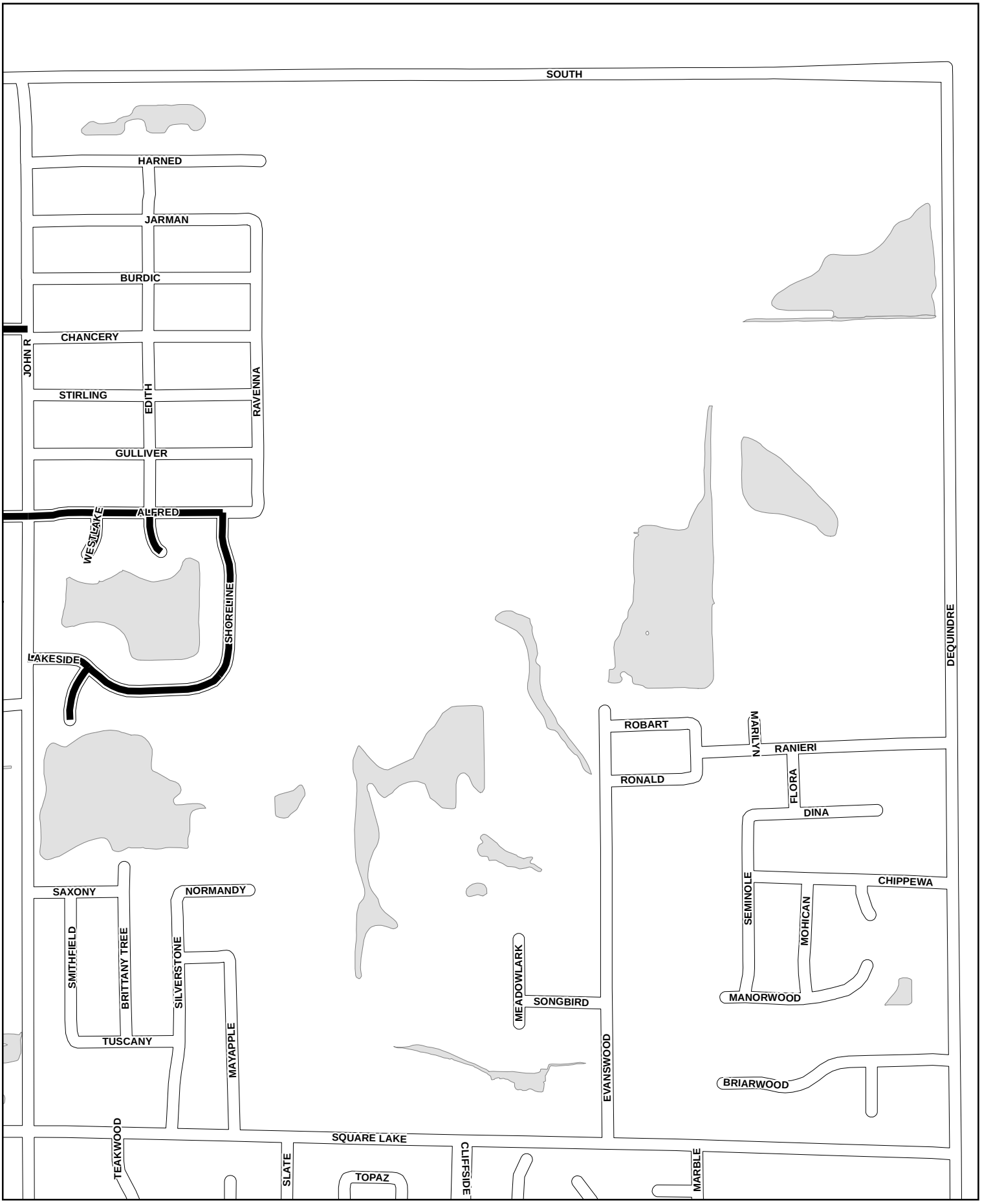
4. If the problems are related to sanitary please contact the Oakland County Water Resources Commission at (248) 858-5248.
5. If the problem is related to oil, please phone 911.

6. If the Problem is related to a construction site and there is sediment leaving that site, please contact Oakland County Water Resources Commission at (248) 858-5248

7. Please fax/email completed form to:

(i) Michigan Department of Environmental Quality (MDEQ)
Southeast Michigan District Office
Industrial and Storm Water Unit
Fax #: (586) 753-3751
Phone #: (586) 753-3700

(ii) Hubbell, Roth & Clark, Inc.
Environmental Engineering Department
Fax #: (248) 338-2592
Phone #: (248) 454-6300



City of Troy

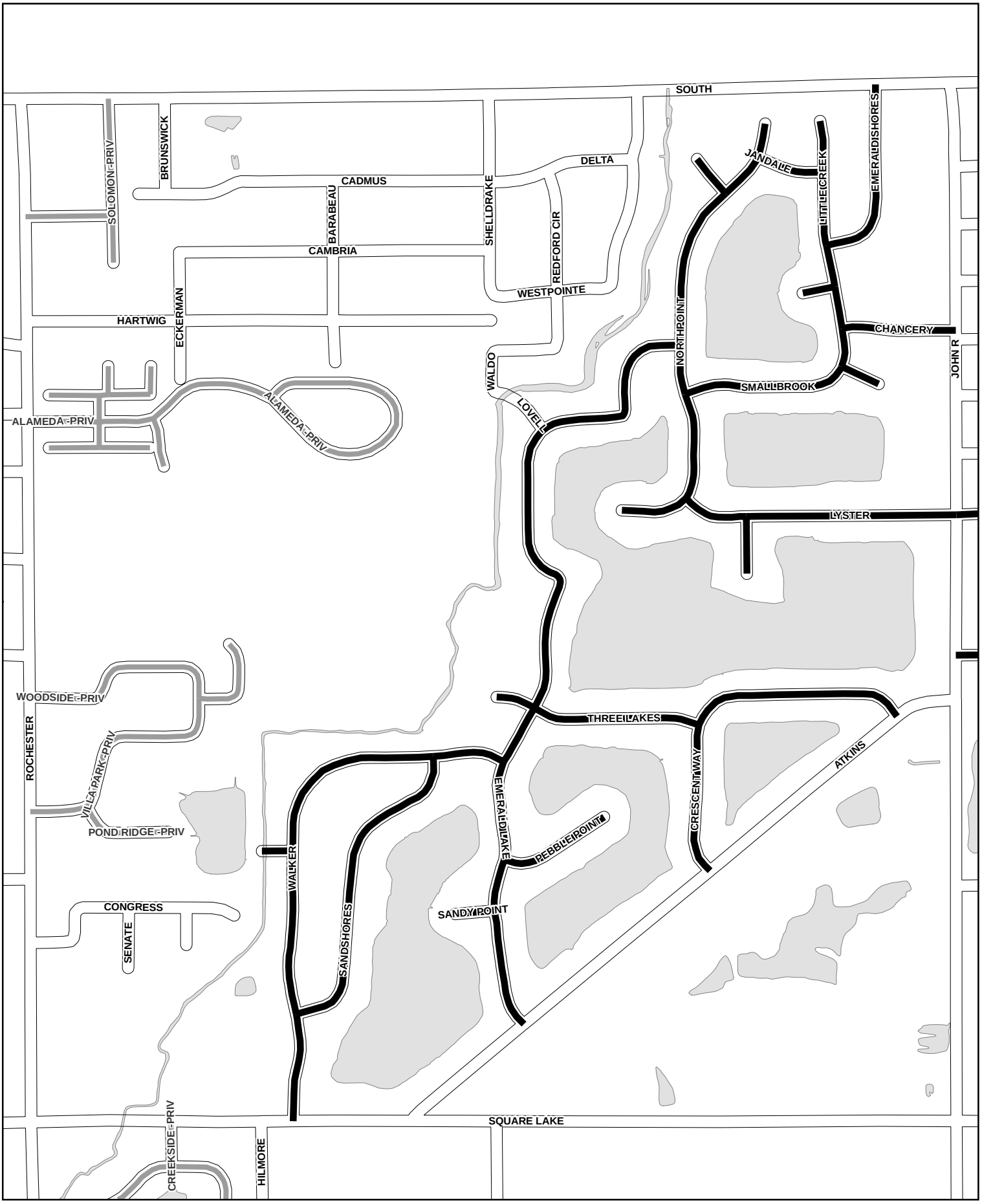
Legend

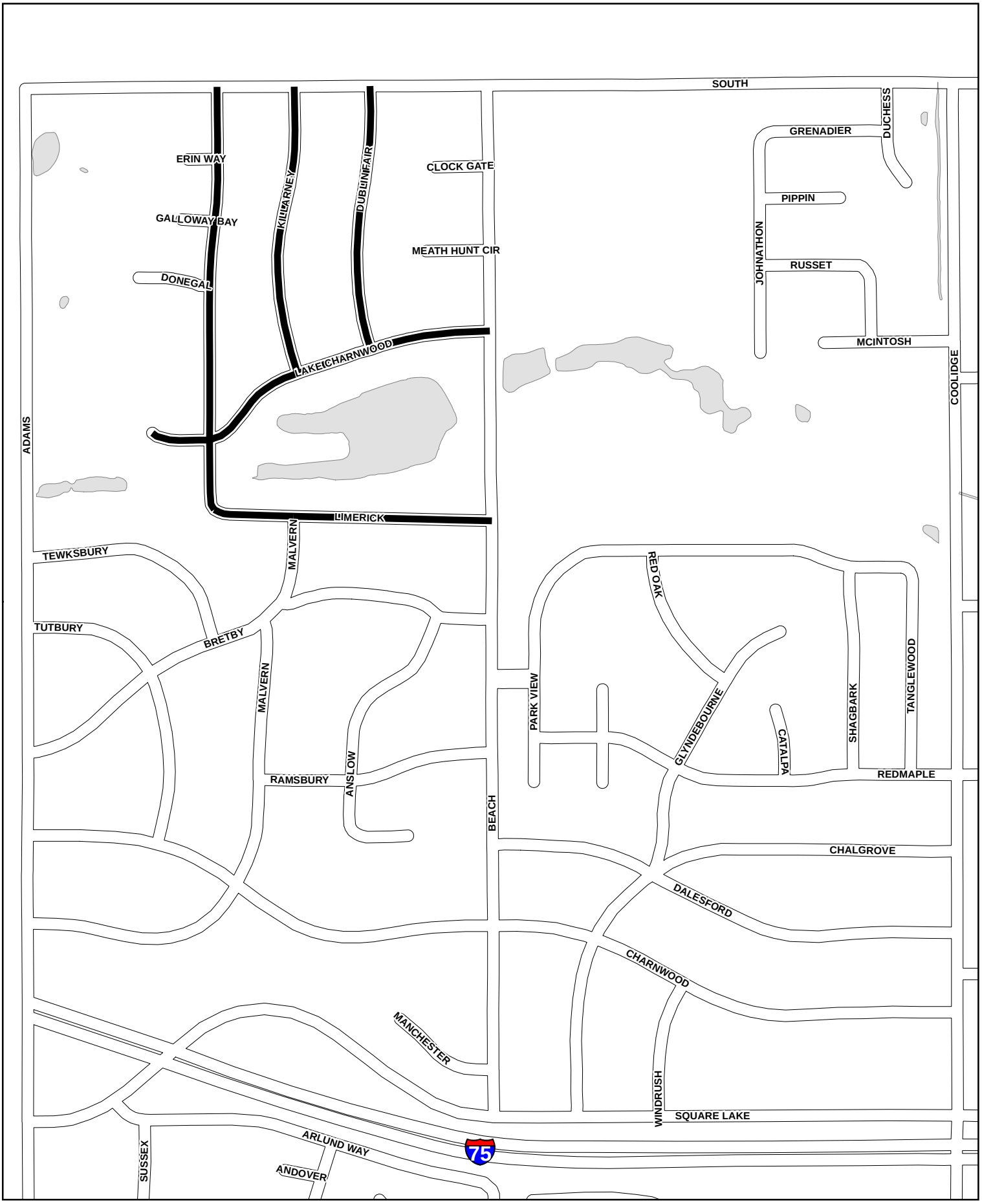
- Private
- Do Not Salt

Street Map - **Section 01**

N

Mar 04, 2010


SOUTH
SOLOMON PRIV
BRUNSWICK
CADMUS
DELTA
JANDALE
LITTLE CREEK
EMERALD SHORES
BARABEAU
SHELLDRAKE
REDFORD CIR
CAMBRIA
WESTPOINTE
HARTWIG
ECKERMAN
NORTHPOINT
CHANCERY
JOHN R
WALDO
SMALLBROOK
ALAMEDA PRIV
ALAMEDA PRIV
LOVELL
LYSTER
WOODSIDE PRIV
THREE LAKES
ROCHESTER
VILLA PARK PRIV
CRESCENT WAY
ATKINS
POND RIDGE PRIV
EMERALD LAKE
REBECA POINT
WALKER
CONGRESS
SANDY POINT
SENATE
SANDSHORES
SQUARE LAKE
CREEKSIDE PRIV
HILMORE
Legend
Private
Do Not Salt
City of Troy
Street Map - Section 02
N
Mar 04, 2010



City of Troy

Legend

Private

Do Not Salt

Street Map - **Section 06**

Mar 04, 2010

HUBBELL, ROTH & CLARK, INC
CONSULTING ENGINEERS SINCE 1915

PRINCIPALS
Daniel W. Mitchell
Nancy M.D. Faught
Jesse B. VanDeCreek
Roland N. Alix
Michael C. MacDonald
James F. Burton
Charles E. Hart
Todd J. Sneathen

CONTROLLER
Donna M. Martin

SENIOR ASSOCIATES
Gary J. Tressel
Randal L. Ford
William R. Davis
Dennis J. Benoit
Robert F. DeFrain
Thomas D. LaCross
Albert P. Mickalich
Timothy H. Sullivan
Thomas G. Maxwell

ASSOCIATES
Marshall J. Grazioli
Colleen L. Hill-Stramsak
Bradley W. Shepler
Karyn M. Stickel
Jane M. Graham
Aaron A. Uranga
Salvatore Conigliaro
Melissa A. Coatta
Michael P. Darga
Brian K. Davies
Matthew G. Slicker
James J. Surhigh
Trevor S. Wagenmaker
Adrianna M. Melchior
Jesse M. Morgan

HUBBELL, ROTH & CLARK, INC.
MAILING: PO Box 824
Bloomfield Hills, MI 48303-0824

SHIPPING: 555 Hulet Drive
Bloomfield Hills, MI 48302-0360

PHONE: 248-454-6300
WEBSITE: hrcengr.com

OTHER OFFICE LOCATIONS
Delhi Township
Detroit
Grand Rapids
Howell
Jackson
Kalamazoo
Lansing

July 12, 2019

Environmental, Great Lakes, and Energy Department (EGLE)
27700 Donald Court
Warren, MI 48092-2793

Attn: Martin Hendges, Water Resources Division

Re: NPDES MS4 Permit Application Comments
Troy MS4 – Oakland County

Dear Mr. Hendges:

In response to the comments submitted by the EGLE concerning the City of Troy's April 1, 2016 MS4 application submittal, Hubbell, Roth, & Clark (HRC) in collaboration with the ARC and the City of Troy have provided the comments below. Attachments of appendices and other supporting documentation are also provided for your reference to ensure the completeness of our response.

EGLE: My understanding is that Steve Vandette retired from the City of Troy. Therefore, please upload a new permit application with a new city contact person replacing Steve. I'm assuming that would be Bill Huotari.

HRC: Correction has been made.

<u>Enforcement Response Procedure (ERP) (Section 5)</u>
Per the application, the ERP shall include expected responses to violations to compel compliance with ordinance(s) and regulatory mechanism(s) implemented as part of the City's storm water management program, which include regulatory mechanisms associated with IDEP and PCC. However, currently, the ERP focuses on Part 91 (construction storm water and soil erosion), but does not reference appropriate IDEP and PCC ERP's –please revise as needed and provide.

HRC: Please see responses to Question 17.

EGLE: It appears that the city would like to wait until their new IDEP and PCC Ordinances are developed but to update their ERP however the city does not have to wait until the new ordinances are written to reference them in the ERP. Please submit an updated ERP referencing the ordinances. The content of these ordinances does not need to be included.

HRC 2: Correction has been made. See ERP.

<u>Public Participation/Involvement Program (PPP) (Section 5)</u>
Please update your application to include the updated and approved Rouge River Collaborative Public Participation/Involvement Program dated January 2017.

HRC: Update has been made to include the updated and approved Rouge River Collaborative Public Participation/Involvement Program dated January 2017. See

Appendix C.

Public Education Program (PEP) Section 6
Please update your application to include the updated and approved Rouge River Collaborative Public Education Program dated March 2017.

HRC: Update has been made to include the updated and approved Rouge River Collaborative Public Education Program dated March 2017. See Appendix D.

Illicit Discharge Elimination Program (IDEP) (Section 7)
Please update your application to include the updated and approved Rouge River Collaborative IDEP Program September 25, 2017.

HRC: Update has been made to include the updated and approved Rouge River Collaborative IDEP Program September 25, 2017. See Appendix E.

Question (11) (Section 7)
The Red Run IDEP states that sampling should be conducted within 48 hours. Please include a commitment to conduct sampling/field screening within 48 hours of discovery of an unidentified discharge.

HRC: Commitment and update has been made. See Appendix K.

Question (12)
The Red Run IDEP does not include a schedule for performing a source investigation. Please include.

HRC: A commitment of 20% of outfalls will be inspected every year. See Appendix K.

EGLE: Inspecting 20% of outfalls per year is not the same as performing a source investigation if an illicit discharge is not identified during sampling. A schedule for performing a source investigation is still not included. Please include.

HRC 2: Correction has been made. See Red Run IDEP, Appendix K, Task 1b, pg., 5-6.

Question (15)
The Pollution Prevention and Good Housekeeping Spill Response SOP includes an incorrect MDEQ Southeast Michigan District Office phone number. The correct phone number is (586) 753-3700.

HRC: Correction has been made to the SOP, pg.6, C.6.

Question (17)
For the illicit discharges/connections that are not considered to be complex, please include a shorter timeframe than 90 days for their correction, or for the submittal of a corrective action plan such as within 60 days of notification, to be consistent with the Rouge River Collaborative IDEP timelines. Please also include a schedule for pursuing enforcement actions.

HRC: The City will create a schedule for pursuing enforcement actions and will be addressed with IDEP ordinance which will include a submittal of a corrective action plan within 60 days of notification.

EGLE: A schedule for pursuing enforcement actions can be included in your procedures as well.

HRC 2: Correction has been made to ERP.

Illicit Discharge Elimination Program (IDEP) Ordinance/Regulatory Authority
The ordinance(s) and/or regulatory authority reference(s) provided with the City's application do not appear to fully address the permit application items (20-26). The City apparently agrees with this assessment by referencing a "Future Municipal Separate Storm Sewer System ordinance" to meet the requirements in Table 1.
Please draft and adopt an IDEP ordinance to address these gaps and to establish the full regulatory authority needed to enforce the IDEP. Please provide your draft ordinance/regulatory mechanism and schedule for adoption with your response.

A sample IDEP ordinance can be found on the Center for Watershed Protection (CWP) website in a document entitled "illicit Discharge Detection and Elimination Technical Appendices". DEQ staff reviewed the CWP model ordinance and found minor modifications needed relative to the permit application, which can be provided upon request. DEQ staff can also provide reference examples from local communities, upon request.

HRC: The City is currently reviewing existing IDEP ordinances and will begin drafting an ordinance to comply with the permit requirements.

EGLE: Any new IDEP Ordinance needs to be submitted to DEQ, approved, and adopted by the city as soon as possible. Please submit a draft ordinance by the due date below.

HRC 2: The City is currently reviewing their IDEP ordinance draft and will include remaining items to draft for EGLE review in 2019.

Post Construction Controls (PCC) Ordinance/ Regulatory Authority (Section 9)
The ordinance/regulatory mechanism currently in place does not meet the application requirements. The PCC procedure provided with the application indicates that the City intends to adopt the Oakland County standards once they are revised and approved by the DEQ. Please begin the process of drafting an ordinance that will be used to adopt the Oakland County standards. The draft ordinance /regulatory mechanism and associated procedures should be developed and reviewed by the City now, so that it is ready to go into effect in an expeditious manner once the County standards are finalized. In addition to performance standards, the ordinance/regulatory mechanism(s) and associated procedure(s) shall also address the applicability, the site plan review process, long-term operation and maintenance, associated with PCC controls. For comprehensive guidance on all aspects of the PCC, please also see the DEQ PCC Compliance Assistance Document.

HRC: It is the City's understanding that MDEQ is negotiating the development of stormwater design standards with Oakland County to meet the MS4 permit requirements. The City is in the process of reviewing the summary of the draft PCC design standards being proposed by Oakland County Water Resources Commissioner's Office. The City will begin the process of drafting an ordinance to adopt the standards. Once MDEQ has approved Oakland County's stormwater design standards, the City will review them to assess their applicability. If revisions are needed, the City will prepare separate design standards.

Pollution Prevention and Good Housekeeping Program (Section 10)

Question 60
Please include the total number of vegetated swales that the City owns in Table 1 of the General Procedures SOP.

HRC: Correction has been made to the SOP. See Appendix H.

Section J of the General Procedures SOP includes Stormwater Treatment Units and the application form under question (60) lists other structural Stormwater controls but does not provide a description of what they are. Please provide.

HRC 2: The City's structural stormwater controls are referring to detention basin maintenance. Clarification has been made to the SOP.

Question (71)
The City's DPW SWPPP/PIPP and the Police Vehicle Maintenance Garage SWPPP states that the catch basin cleaning occurs at these facilities annually, which is fine. Section G of the General Procedures SOP does not provide a catch basin inspection schedule for the rest of the City's catch basins. The SOP also states that these catch basins are cleaned a minimum of once every 5 years.

Please include a catch basin inspection schedule and cleaning frequency that assures that the sediment in the catch basin sumps is cleaned out when the sumps do not get more than 50% full. This may require an inspection frequency of annually and a cleaning frequency of more than every 5 years.

HRC: The City will inspect 20% of its catch basins each year. The City will proceed to clean the catch basins if the sediment in the sump is no more than 50% full. See Pollution Prevention Good House Keeping.

EGLE: Will inspecting catch basins once every 5 years be adequate to make sure that catch basin sumps do not fill up close to the top before they have a chance to be cleaned. Would an increased inspection frequency be needed?

HRC 2: Correction has been made, See Appendix H.

Question (72)
Section F of the General Procedures SOP states that all of the City's catch basins are stated to be 'low' priority, while the City's TMDL Implementation states that all are

given high priority. Please address this discrepancy and provide a narrative description or map with the geographic location of the catch basins in the City that are a higher priority to clean. There must be some areas that tend to accumulate sediment more often.

HRC: Most of the City's catch basins are low priority other than Emerald Lakes Subdivision and DPW which are designated as high priorities. Corrections made in City's TMDL. See Appendix O.

EGLE: The City's Appendix O (TMDL) was not updated to reflect this. Please address.

HRC 2: Correction has been made, See Appendix O (TMDL).

Question (77)
In addition to conducting salt application and track out training and having calibrated salt vehicles, please provide additional BMPs being implemented or to be implemented by the City to prevent or reduce pollutant runoff from cold weather operations (e.g. plowing, application of deicing agents and snow pile disposal).

HRC: No salt zones have been added.

Question (78)
Section I of the Pollution Prevention and Good Housekeeping Procedures SOP states that residential streets are generally swept at least one time per year and the TMDL Implementation Plan states that local roads are swept twice per year. The same documents state that major roads are swept several times per year and four times per year. Please confirm the City's actual sweeping schedules for local ad major roads. Please also include the City's parking lot entrance road sweeping schedule for both (frequency and timing) as these were not mentioned.

HRC: The City's local roads are cleaned once a year and major roads are cleaned twice a year. City's parking lot entrances are cleaned once annually. See Appendix O & Appendix H.

EGLE: Appendix O & Appendix H were not revised to reflect this. Section I of the Pollution Prevention and Good Housekeeping Procedures SOP still says Major roads throughout the City are of medium priority due to the higher rate of sediment accumulation rates in comparison to low priority residential streets. Medium priority areas are generally swept several times per year. Please address.

HRC 2: Correction has been made in Appendix O & Appendix H.

Question (79)
Provide a narrative description or map with the geographic location of the City streets/roads, parking lots and entrance roads that are a higher priority for the City to sweep. There must be areas that tend to accumulate sediment on a more regular basis.

HRC: Maps of Emerald Lakes Subdivision and DPW. See Appendix H.

Question (84)
The General Procedures SOP (Section M) does not include a training frequency for all Troy Facilities Employees. At a minimum, existing staff shall be trained once during the permit cycle. Please include.

HRC: The City will train new and existing employees a minimum of once every permit cycle. See Appendix H.

Questions (88)
Please update your application to include the updated Rouge River Collaborative Total Maximum Daily Load Implementation Plan once it is approved by DEQ. The TMDL Plan is currently in the process of being revised.

The Red Run Drain TMDL monitoring plan is not approvable. Referencing other water quality testing by other entities while only some of the testing sites being within the Red Run subwatershed is not adequate to assess the effectiveness of the BMPs implemented or to be implemented by the City to determine their effectiveness in making progress toward achieving the TMDL pollutant load reduction. Please submit a revised monitoring plan that will better assess the City's BMP effectiveness. Outfall monitoring, in-stream monitoring, or modeling may be considered.

HRC: The City will evaluate the monitoring conducted at Emerald Lakes Subdivision to assess effectiveness in making progress toward achieving the TMDL pollutant load reduction.

EGLE: Evaluating the monitoring conducted at Emerald Lakes Subdivision does not appear to be an adequate Red Run TMDL Monitoring Plan, at least without further detail on what the monitoring would be. With over 200 Red Run Drain outfalls in the City, it seems as though selecting a subset of these outfalls to monitor for E. coli twice during the permit cycle would be appropriate.

HRC 2: The City will commit to outfall sampling of 10% of their 200 outfalls every other year. Updates have been made in Red Run TMDL, pg. 2, Part II.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.

Barbara Matthews
Project Environmental Analyst

City of Troy
Red Run Drain
Total Maximum Daily Load (TMDL) Implementation Plan

The City of Troy is located in both the Main 1-2 Subwatershed of the Rouge River Watershed, and the Red Run Subwatershed of the Clinton River Watershed. The TMDL activities for the portion of the City within the Rouge River Watershed are outlined in the Collaborative TMDL prepared by the Alliance of Rouge Communities (ARC). The City shall implement the subject TMDL Implementation Plan to reduce the discharge of pollutants from the permittee's MS4 to make progress in meeting Water Quality Standards for the Red Run Subwatershed. The City shall implement the TMDL Implementation Plan as part of the SWMP.

The following TMDL(s) is applicable to the discharge from the permittee's MS4:

- Red Run Drain - E. Coli

The TMDL lists the possible sources of E. coli illicit connections to storm sewers, wildlife and/or pet waste, leaking septic or sanitary sewers, Combined Sewer Overflows (CSOs), Sanitary Sewer Overflows (SSOs), the Warren Wastewater Treatment Plant (WWTP), and nonpoint source runoff.

I. The City of Troy shall implement the prioritized Best Management Practices (BMPs) included in the TMDL Implementation Plan during the permit cycle to make progress in achieving the pollutant load reduction requirement in the TMDL. The City shall review, update, and revise the list of BMPs implemented as part of the TMDL Implementation Plan in accordance with the procedure included in the SWMP. The Michigan Department of Environmental Quality (MDEQ) may determine that a permit modification is required, after opportunity for public comment, based on modifications to the TMDL Implementation Plan. The MDEQ will notify the City if a modification is required.

   The following BMPs are prioritized in accordance with activities that are most likely to discover or eliminate sources of E.coli to Lake St. Clair.

   1. **Illicit Discharge Elimination Plan (IDEP) Outfall Inspections (High Priority):** The IDEP activities within the Rouge River portion of the City are covered under the Collaborative IDEP prepared by the ARC. The IDEP for the portion of the City within the Clinton River Watershed calls for City all of the outfalls to be inspected once every five (5) years.

      Dry weather inspections are conducted if no rain/precipitation event has occurred for a minimum of 48 hours. If flow is observed in the sewer at that time, it may be attributed to sewage, cooling water, sump pump discharge, infiltration from ground water sources, or runoff from potable water sources such as lawn sprinklers.

      The City may be able to locate the source of an illicit connection/discharge solely through visual observation of flow in the storm sewer at manholes. Odor, color, turbidity, bacteria growth, quantity of flow, etc., may lead to the source of a problem without additional sampling. All storm outfalls that are discharging during dry weather will be investigated further by upstream visual inspection or with televising, as-built pipe schematic review, dye and/or smoke testing, sampling, or other investigation as needed to determine the nature and source of the flow.

   2. **Catch Basin Cleaning (Low & High Priority):** Catch basin investigations and cleaning are performed on a rotating basis; a few sections of the City are performed per year. All catch basins are cleaned a minimum of once every 5 years. Catch basins at Emerald Lakes Subdivision and DPW are considered high priority and will be inspected twice a year. During investigations/cleaning, if some areas are

identified as being severely clogged, these areas will then be put on the priority list for cleaning in the future.

Catch basin waste is dried at the Department of Public Works facility where the runoff discharges to the sanitary sewer, and then hauled away to a landfill for disposal.

3. **Street Sweeping (High Priority):** All City-owned streets are swept regularly. Street sweeping waste is dried at the Department of Public Works facility where the runoff discharges to the sanitary sewer, and then hauled away to a landfill for disposal. Major Road are swept about twice (2) a year with local roads being swept once (1) a year. The City's parking lots and entrance roads are swept once (1) a year.

   The City considers increasing sweeping frequency based on factors such as traffic volume, land use, field observations of sediment and trash accumulation, proximity to water courses, etc. For example:
   - High pollutant loadings areas
   - Areas identified by staff with sediment accumulation
   - High litter or erosion areas

4. **Public Education (Medium Priority):** The City of Troy is to perform all Public Education activities required by the NPDES MS4 Permit. The activities specifically related to the reduction of E. Coli to the water ways are as follows:
   a. The City's Website is to contain information and links on Clean Boating, Riparian Management, and Waterfront Wisdom.
   b. The City's Newsletters will include articles that pertain to the reduction of E. coli Pollution. The articles include Clean Boating, Cleaning up after pets, what not to discharge to the separate storm sewer system, and septic system maintenance.
   c. The City will promote water quality workshops put on by the Michigan State University Extension, Oakland County, Southeast Michigan Council of Governments, and the Clinton River Watershed Council.

5. **Riparian Management (High Priority):** The City takes steps to properly maintain its riparian areas.
   a. Riparian Buffers: The City is to maintain no-mow buffers, containing natural vegetation, along all water ways. The purpose of the buffers is to absorb nutrient and pet waste runoff as well as discourage the migration of waterfowl from the water to land.

6. **Regional Collaboration (Medium Priority):** The City of Troy will participate in and collaborate with other entities/groups in the region. They include, but are not limited to, the following:
   - Red Run Subwatershed Stormwater Action Group
   - Oakland County Water Resources Commissioner
   - Oakland County Health Division
   - Clinton River Watershed Council
   - Southeast Michigan Council of Governments
   - Michigan State University Extension

Prioritization of BMPs and the implementation of additional BMPs are will be considered on a biennial basis based on the surface water monitoring results.

II. The City of Troy will commit to outfall sampling on 10% of their 200 outfalls every other year as well as referencing the routine water quality testing data collected by the Macomb County Health Department. The Macomb County Health Department conducts routine water quality tests from mid-April through September each year as part of their Bathing Beach Water Quality Monitoring Program. Some of the testing sites are within the Red Run Subwatershed just east and downstream of the City of Troy. This data, along with any

other data that may be collected by Oakland County and the Clinton River Watershed Council, shall be used to assess the effectiveness of the BMPs implemented in make progress toward achieving the TMDL pollutant load reduction. The monitoring data shall be submitted with each progress report.