



### **What is Stormwater**

Stormwater is water that originates from rain, snow, and ice melt. Stormwater can soak into the soil (infiltrate), be stored on the land surface in ponds and puddles, evaporate, or runoff. Most runoff is conveyed directly to nearby streams, rivers, or other water bodies (surface water) without treatment.

Why does stormwater need to be managed? Over the past century or so we have built homes, roads, shopping centers, commercial buildings, and so on, all of which dramatically increased the amount of impervious surface. At the same time, we have modified the landscape to facilitate rapid drainage of stormwater runoff from our developments. This has had the effect of concentrating the stormwater runoff and decreasing infiltration. This causes three problems.

1. Flowing water is quite powerful and picks up soils, debris, leaves, and oils from the impervious surfaces it flows over. Unless treated, this material reaches surface waters, where it can pollute them beyond the point where the water is able to support wildlife or recreation.
2. The increased volume of water running off and the increased speed of the drainage means large quantities of water reach surface waters quickly. This can lead to flooding and scouring (erosion) of river channels.
3. Less water infiltrates, resulting in reduced soil moisture and less water percolating to groundwater. Consequently, plants may be stressed during dry periods and aquifer (groundwater) levels may decrease. Depleted groundwater levels may, in turn, reduce water levels in streams and reduce drinking water supplies.

### **Stormwater Management Plan Available for Public Inspection and Comment**

The Stormwater Management Plan is available on the Macomb Intermediate School District website for review and comment by the public.

- All comments should go to the Macomb Intermediate School District Operations Department at 586-228-3352.

## **Community Group/Organization/Resource**

[Visit the Clinton River Watershed Council Homepage](#)

[Visit the Southeast Michigan Council of Governments \(SEMCOG\) Homepage](#)

The Lake St. Clair Water Festival provides free, hands-on opportunities for 4th and 5th grade students to learn about using and preserving the Lake St. Clair Watershed.

[Visit the Lake St. Clair Water Festival Homepage](#)

## **Household Hazardous Waste**

When household hazardous waste is not correctly disposed, it can enter our storm sewers and waterways. Improperly disposing of these items into storm sewers, sanitary sewers, on-lot sewage systems, or by dumping them onto the ground allows stormwater runoff to pick them up and carry them into our waterways. Once this waste enters our waterways, it causes water pollution that poses a threat to our health and can harm — and in some instances kill — animal and plant life.

Public Services host household hazardous waste collections for county residents. The collections are designed to accept unwanted household chemicals for proper disposal. Links for household hazardous waste collections are below.

[Visit the Oakland County Hazardous Waste Information Webpage](#)

[Visit the Macomb County Hazardous Waste Information Webpage](#)

[Visit the Wayne County Hazardous Waste Information Webpage](#)

## **Recreational Vehicle Waste Information**

Many RV owners fail to follow proper waste-disposal protocols, instead discharging their accumulated sewer wastes, including “black water,” directly into storm drains. The result is that untreated sewage is being released directly into our local waterway. Please see the link below to locate RV dump stations by state.

[Visit the RV Dumps – Michigan Information Webpage](#)

## **Riparian Landowner Information**

As a responsible waterfront property owner, practicing these Healthy Habits for Clean Water are especially important because you are directly at the water’s edge where runoff doesn’t have far to travel before reaching the water. Oakland County is home to the headwaters of five major river systems—the Clinton, Flint, Huron, Rouge and Shiawassee. With more than 1,400 lakes and five major river systems in Oakland County (encompassing a total of more than 900 miles of shoreline), riparian landowners have a significant opportunity to make a big difference in protecting our water quality!

[Visit the Waterfront Wisdom Booklet Webpage](#)

## **Illicit Discharge Elimination**

**The two greatest sources of water quality problems** in the Clinton River and Lake St. Clair are polluted storm water runoff and illicit discharges that contain bacteria and nutrients.

## **REPORT A POLLUTER - 24-Hour Toll Free Water Pollution Hotline 1-877-679-4337**

### **When to Call**

**Please contact us if you observe:**

- A strong sewage odor
- Discharges or dumping of pollutants into drains, ditches, ponds, lakes, or rivers
- Sewage on the ground surface

**Be prepared to give the following information:**

- Location of complaint
- Source of pollution, if known
- Responsible party, if known
- Any other relevant observations

*\*You may remain anonymous if you desire.*

### **Prevent Illicit Discharges**

#### **Only rain in the drain.**

Never dump motor oil, chemicals, pet waste or dirty wash water down the storm drain or into ditches. All these materials pollute our lakes and streams.

#### **Scoop it.**

Keep pet waste cleaned up from lawns, sidewalks, and streets and away from drainage ditches and storm drains. When dog waste is left behind, it washes into storm drains and ditches. From there, it heads straight to your local lakes and streams.

#### **Sweep it.**

Fertilizer left on sidewalks and driveways will easily wash into storm drains and ditches. So, save money and our lakes and streams by sweeping fertilizer back onto the lawn.

### **Post- Construction Policies**

Development and redevelopment projects include the Macomb County Procedures and Design Standards for Stormwater Management.

# **MISD and Nested Districts: Municipal Separate Storm Sewer System Post Construction Stormwater Runoff Controls for New Developments & Redevelopments Policy # S5**

Revised date: July 22, 2021

## **I. POLICY:**

This policy is to establish the Macomb Intermediate School District (MISD) and nested School Districts procedures for post construction stormwater runoff controls for new development & redevelopment.

## **II. BACKGROUND:**

The EGLE NPDES Phase II Stormwater Discharge Permit Application requires a procedure for post construction stormwater runoff controls for new development and redevelopment. The post construction stormwater runoff controls are necessary to maintain or restore stable hydrology on receiving waters by limiting surface runoff rates and volumes and reducing pollutant loading from sites that undergo development or significant redevelopment.

## **III. PROCEDURE:**

### Water Quality Treatment Performance Standard

This policy is to establish the District's goal to include water quality treatment volume standards for each new development or redevelopment of projects where the area of disturbance exceeds one acre, or including projects less than one acre that are part of a larger common plan of development or site that would disturb one acre or more, as required by the EGLE NPDES phase II Stormwater Discharge Permit.

1. Water Quality control systems must provide a minimum treatment volume equal to one inch of runoff from the project site.

Water quality Volume (WQV) is determined by Schueler's Simple Method:

$$\begin{array}{rcll} \text{WQV} & = & (R_v) (A) (P) / 12 \\ \text{Where,} & R_v & = & \text{Site Runoff Volume Coefficient} \\ & A & = & \text{Site Drainage Area (ft}^2\text{)} \\ & P & = & \text{Design Rainfall Depth (1.0 inches)} \end{array}$$

2. Water Quality control system must reduce post development total suspended solids (TSS) loadings by 80% or to not exceed solids loadings of 80 milligrams per liter.

### Channel Protection Performance Standard

1. Channel Protection is required that the post-development project site runoff volume and

peak flow rate must be maintained at or below pre-development levels for all storms up to the 2- year, 24-hour event. Pre-development level means the runoff flow volume and rate for the last land use prior to the planned new development or redevelopment. Compliance with this requirement is determined by calculating the existing ("pre-development") and post- development runoff volume and rate for the 2-year and smaller storm events. The method is described in the Department of Environment, Great Lakes, and Energy (EGLE) publication Computing Flood Discharges for Small Ungaged Watersheds, dated July 2003 (updated January 22, 2010).

2. If it is demonstrated using the Alternative Approach Flowchart (below) that the development cannot meet the required channel protection performance standard, the District shall consider incorporation of green infrastructure (i.e. Rain gardens, green (vegetated) roofs, permeable pavement, impervious cover removal, use of trees, etc.) This includes instances where site conditions (e.g., space limitations, tight soils that prevent infiltration or soil or ground water contamination) challenge or prohibit feasibility of maintaining the project site's pre-development runoff levels for all storms up to the 2-year, 24-hour event. In the case of extended detention when required for channel protection, the volume shall be held for 48 hours or released at the 1-year/24 hour discharge rate. Green Infrastructure shall be allowed under all circumstances consistent with the flowchart. Review of these proposals will be consistent with the "SEMCOG Low Impact Development Manual for Michigan, 2008" or current standards and coordinated with EGLE staff as appropriate.

#### Site Specific Criteria

Each site has its' own special circumstances and conditions. The following BMPs will be used as appropriate according to the site conditions.

1. Reduce runoff from the site to greatest extent possible
2. Prevent spills and discharges
3. Control waste such as building materials, concrete washout, chemicals, litter, and sanitary waste. Including the area with potential significant pollutant loading and/or the potential for contaminating public water supply intakes (i.e. "hot spots")
4. Phasing will be considered to limit amount of exposed soils
5. Interim soils stabilization methods are to be considered (temporary seeding, mulching etc.)
6. Buffer preservation (avoid exposing soils to property limits)
7. Inspection staff will be trained in proper maintenance and operation of Soil Erosion and Sedimentation Control (SESC) measures.

#### Site Plan Review

Site plan for review as required by the EGLE NPDES Phase II Stormwater Discharge Permit. The District will prepare and submit a written application, including a site plan for review and approval of post- construction stormwater runoff BMPs, for all new construction or redevelopment projects where the area of disturbance exceeds one (1) acre. The application will be completed in form and manner as prescribed by local municipality or governing unit in which the property is located. The site plan will be reviewed by the appropriate local municipal, County, State, or other governmental agency. Their view of the stormwater site plan will provide the District with the ability to ensure

that water quality objectives, erosion and sediment control requirements, and BMP maintenance are adequately considered. Unless provided for otherwise, hydraulic and hydrologic calculations (including rainfall volumes and distributions) shall be based on current EGLE standards (i.e. NOAA Atlas 14) and procedures in place at the time of application.

The goal of the site plan review is to:

1. Minimize clearing and grading
2. Protect waterways
3. Limit soil exposure
4. Project steep slopes and cuts

#### Operation and Maintenance of Stormwater Controls

The District will identify all stormwater controls and mechanisms for all new construction or redevelopment projects where the area of disturbance exceeds one (1) or more acres and will develop “BMP Operation and Maintenance” guidance manuals for each property, including:

1. Develop a map of each facility identifying the location and type of structural controls, if any exist
2. Develop a guidance manual that will provide a listing of structural controls including a site diagram showing the location of each control, instructions for inspection and operation, and the inspection and/or maintenance schedules for each control mechanism
3. Stormwater runoff facilities, after construction and approval, shall be maintained in good condition, in accordance with the approved stormwater plan
4. Update and revise the stormwater structural controls on facility site diagrams as identified during scheduled inspections or within 30 days following the completion a new facility or reconstruction/redevelopment site project

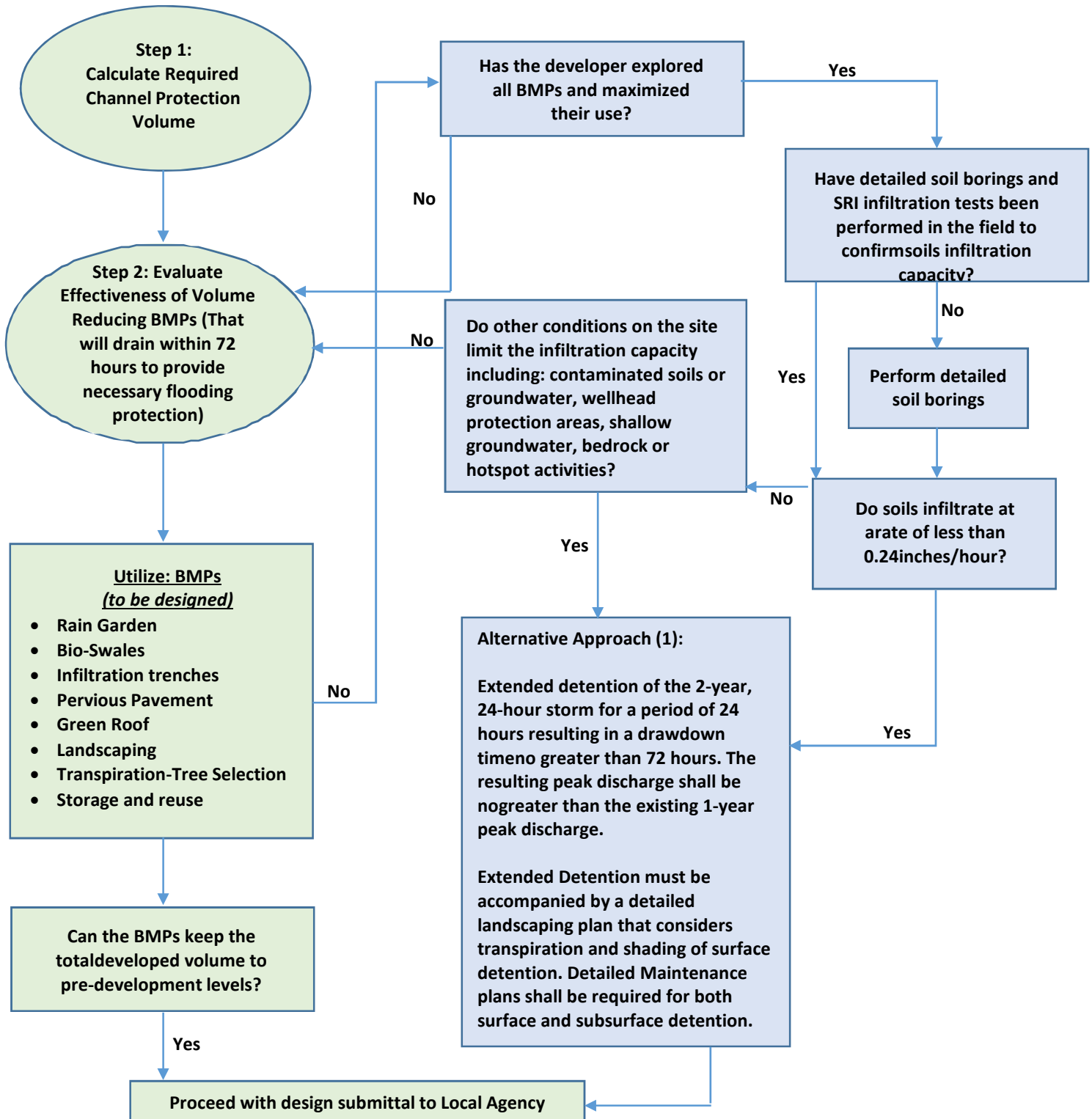
#### **IV. OTHER:**

Any questions on this policy and procedure should be directed to the Stormwater Program Manager.

#### **V. PROCESS FOR UPDATING/REVISING THIS PROCEDURE**

This procedure shall be reviewed on an annual basis by the designated agent for any updates to streamline the requirements.

MACOMB INTERMEDIATE SCHOOL DISTRICT  
MACOMB COUNTY, MICHIGAN  
STORM WATER STANDARDS  
CHANNEL PROTECTION PERFORMANCE STANDARD  
ALTERNATIVE APPROACH FLOW CHART



Ref: Lower Grand River Organization of Watersheds MS4 Stormwater Ordinance Committee Alternative Approach Flow Chart

- NOTE: If utilizing extended detention as a post-construction storm water runoff control, additional BMPs likely will be needed to maintain the pre-development volume and peak rate levels for all storms up to the 2-year, 24-hour event, through green infrastructure or specific low impact development (LID) on-site BMPs for meeting the performance standard.

# **Macomb Intermediate School District**

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## **Storm Water Management Program (SWMP)**



**Macomb Intermediate School District**

**44001 Garfield Road, Clinton Township, MI 48038**

**Revised:**

**June 17, 2019**

**August 17, 2021**



## Table of Contents

### Contents

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<b>Table of Contents</b>	2
Section I – Introduction and Permit Information	4
Section II – Contact Information	4
Section III – Permit Action	5
Section IV – Regulated Area	5
Section V – Discharge Points Location & Mapping	7
<b>Newly Constructed or Identified Outfalls</b>	7
<b>MS4 Discharge Point Labeling</b>	7
Section VI – Nested Jurisdictions	7
Section VII – Stormwater Management Program (SWMP)	8
Section VII.a – Enforcement Response Procedure	8
Section VII.b – Public Participation/Involvement Program (PPP)	9
Section VII.c – Public Education Program (PEP)	9
Section VII.d – Illicit Discharge Elimination Program (IDEP)	10
<b>Overview</b>	10
Section VII.e – Construction Stormwater Runoff Control Program	10
<b>Qualifying Local Soil Erosion &amp; Sedimentation Control Programs</b>	10
<b>Construction Stormwater Runoff Control</b>	11
Section VII.f – Post-Construction Stormwater Runoff Control for New Developments and Redevelopment	11
<b>Regulatory Mechanism</b>	11
<b>Water Quality Treatment Performance Standard</b>	12
<b>Channel Protection Performance Standard</b>	12
<b>Site Specific Requirements</b>	12
<b>Long-Term Operation &amp; Maintenance of BMPs</b>	13
Section VII.g – Pollution Prevention / Good Housekeeping for Municipal Operations	13
<b>Municipal Facility &amp; Structural Stormwater Control Inventory</b>	14
<b>Facility-Specific Stormwater Management</b>	14
<b>Structural Stormwater Control Operation &amp; Maintenance Activities</b>	15
<b>Municipal Operation and Maintenance Activities:</b>	15

Managing Vegetated Properties .....	16
Employee Training .....	16
Contractor Requirements & Oversight .....	16
Section VII.h – Total Maximum Daily Load (TMDL) Implementation.....	16
Sampling & Monitoring Procedure .....	17
Section VII.i. – Action Plan .....	18

## ***Appendices***

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Appendix A – Maps & Tables

Appendix B – Public Education Plan (PEP)

Appendix C – Illicit Discharge Elimination Plan (IDEP)

Appendix D – Policies, Ordinances & Regulations

Appendix E - Pollution Prevention & Good Housekeeping

Appendix F – Action Plan

## **Attachment**

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Combined Nested District Stormwater Maps

## Section I – Introduction and Permit Information

The National Pollutant Discharge Elimination System (NPDES) Program protects the surface waters of the state by assuring that discharges of wastewater comply with state and federal regulations. Anyone discharging or proposing to discharge wastewater to the surface waters of the State of Michigan must make an application for and obtain a valid NPDES permit prior to the wastewater discharge.

NPDES permits are required under Section 402 of the Federal Clean Water Act (the Federal Act), as amended (33 U.S.C. 1251 et seq., P.L. 92-500, 95-217), and under Part 31, Water Resources Protection, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (the Michigan Act). Part 31 of the Michigan Act also provides authority for the State to issue NPDES permits. The Michigan Department of Environment, Great Lakes and Energy (EGLE) administers the NPDES permit program for the State of Michigan. EGLE is the former Michigan Department of Environmental Quality (MDEQ).

Any public body that owns or operates a regulated Municipal Separate Storm Sewer System (MS4) may be eligible for permit coverage including, but not limited to, the United States, the State of Michigan, a city, village, township, county, public school district, public college or university, a single purpose governmental agency, or any other governing body which is created by federal or state statute or law.

Macomb Intermediate School District (MISD) and the nested school districts were previously nested under Macomb County Public Works Office (MCPWO) under their Certificate of Coverage (COC) MIG610052. MISD was notified by MCPWO by memorandum dated November 3, 2014 that the schools would no longer be nested under their COC or MCPWO's individual jurisdictional MS4 permit. MISD initially submitted a National Pollutant Discharge Elimination System Permit (NPDES) application for an individual jurisdictional Discharge of Stormwater to Surface Waters from a Municipal Separate Storm Sewer System (MS4) for MISD and nested school districts April 1, 2015. Based on comments received June 29, 2017, MISD submitted a revised application August 25, 2017. MISD and its consultant Anderson, Eckstein and Westrick, Inc. (AEW) through on-going communication have submitted supplements to the revised application up to and including an updated MISD IDEP and TMDL submittal dated October 29, 2018. This storm water management plan (SWMP) and the current permit application form incorporate updates to the previous supporting documents based on EGLE review comments and constitute a complete application.

## Section II – Contact Information

The Macomb Intermediate School District (MISD) and their nested school districts owns and operates the regulated MS4 system. The MISD personnel responsible for the operation, maintenance and MS4 permit compliance are listed with their contact information in the Table on page 1 of the Storm Water Discharge Permit Application provided with this Storm Water

Management Plan (SWMP).

### Section III – Permit Action

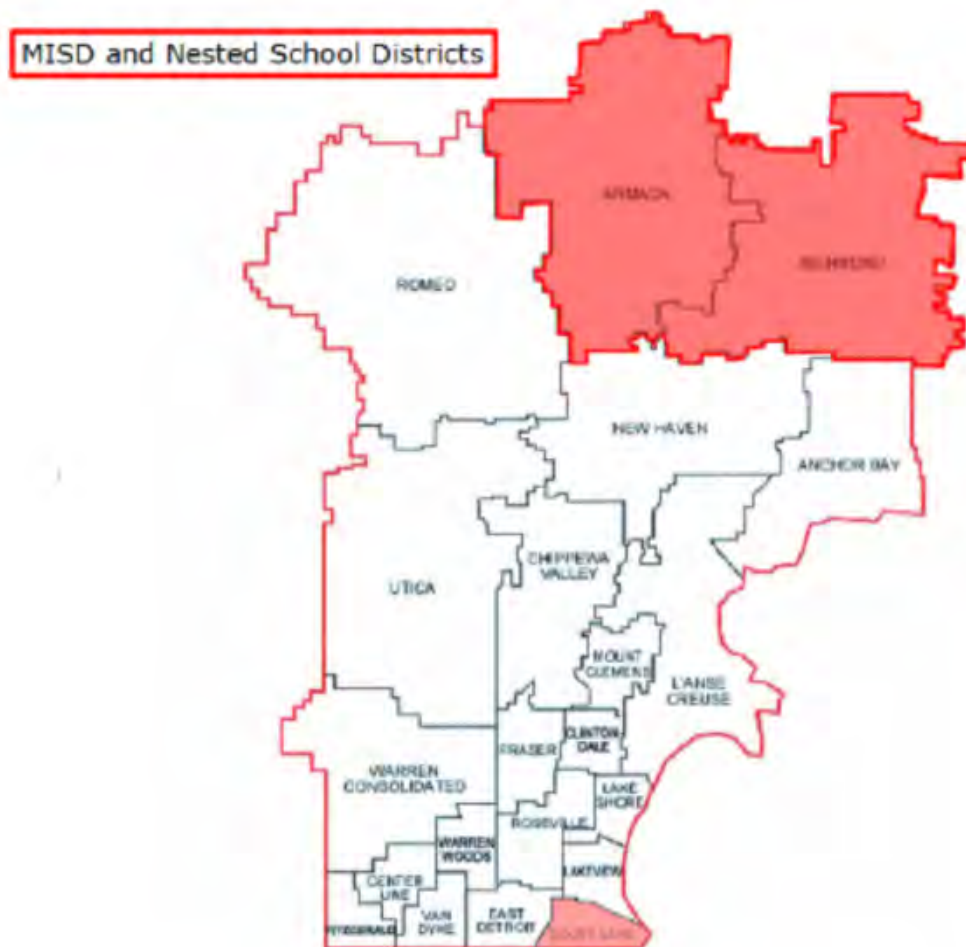
The Macomb Intermediate School District and nested school districts are primarily located within the Clinton River watershed. The Clinton River East Subwatershed (CREW), covers the final stretch of the river, from its discharge point in Harrison Township upstream to Shelby Township (where the river enters Macomb County). The CREW is a 132 square mile, Michigan Department of Environmental Quality (MDEQ)-approved basin that also incorporates the entire drainage area of the Middle Branch of the Clinton River.

The Watershed Management Plan (WMP) was developed by the CREW Subwatershed Advisory Group (SWAG) to: 1) fulfill the National Pollutant Discharge Elimination System (NPDES) Phase II requirements (EGLE's General Permit No. MIG619000 for Coverage of Storm Water Discharges for Municipal Separate Storm Sewer Systems Subject to Watershed Plan Requirements) for non-Phase I governmental units in the urbanized area; and 2) make all of the entities represented in the subwatershed eligible for various grant funding opportunities to implement actions for watershed improvement.

The MISD and nested school districts recognized that by working collectively with the other stakeholders on a regional and watershed basis illicit discharge elimination, public education and other water management activities, could be implemented more effectively and cost-efficiently. Subsequent to the further implementation and expansion of the NPDES Phase II requirements based on the 2010 Urbanized Areas Maps, the MISD and nested school districts applied for an individual jurisdictional permit as a Small MS4 on April 1, 2015.

### Section IV – Regulated Area

MISD jurisdictional Boundary map is shown in Figure 01 below.



**Figure 01: MISD and nested school districts**

Urbanized area map within the jurisdictional boundary as defined by the 2010 Census included in Appendix A – Maps and Tables.

## Section V – Discharge Points Location & Mapping

MISD owns and operates ten (10) facilities within their boundary and listed below,

1. Auxiliary Services Center (Millar Building)
2. Bozymowski Center for Education
3. Flynn Middle School
4. Glen H. Peters School
5. Keith Bovenschen School
6. Lutz School for Work Experience
7. Maple Lane Elementary School
8. MISD Educational Service Center/Bus Garage Complex
9. Neil Reid High School
10. Rockwell Junior High School

MISD operated and known discharge points from its owned and operated facilities into the County Drain System or other MS4s are identified in Appendix A – Maps and Tables as maps A-1 through A-9 and listed as Table 1 with the corresponding receiving County Drain, and the latitude and longitude of each is identified accordingly.

MISD Administration office maintains electronic digital copies and/or hardcopies of its MS4 infrastructure. District storm sewer maps are continuously revised to reflect any changes in the system, typically within 30 days of receiving updated information.

### Newly Constructed or Identified Outfalls

In order to seek authorization for discharge, for any discharge point that is identified, constructed or installed after November 1, 2018, the District will provide an updated outfall map clearly showing the location of the discharge point, its identifying number, the latitude and longitude of the discharge point, and the receiving Macomb County Drain or waters of the state within thirty (30) days of the identification, construction or installation.

### MS4 Discharge Point Labeling

The School District provide permanent identification for all of its outfalls/discharge points as required under the permit including stencil format or appropriate signage.

## Section VI – Nested Jurisdictions

Macomb Intermediate School District (MISD) submitted a National Pollutant Discharge Elimination System Permit (NPDES) application for Discharge of Stormwater to Surface Waters from a Municipal Separate Storm Sewer System (MS4) for MISD and nested school districts and those are listed below and tables listing the facilities for each district are included in Appendix A – Maps and Tables:

- Anchor Bay School district
- Center Line Public Schools
- Chippewa Valley Schools
- Clintondale Public Schools
- Eastpointe Community Schools
- Fitzgerald Public Schools
- Fraser Public Schools
- L'Anse Creuse Public Schools
- Lake Shore Public Schools
- Macomb Community College
- Mount Clemens Community Schools
- New Haven Community Schools
- Romeo Community Schools
- Roseville Community Schools
- Utica Community Schools
- Van Dyke Public Schools
- Warren Woods Public Schools
- Lakeview Public Schools
- Warren Consolidated Schools

Recent updated Southeast Macomb Sanitary District (SEMSD) mapping of the combined/separated sewer system areas helped to clarify the MS4 coverage of some of the nested districts (see Appendix A - Table 1 per district).

## Section VII – Stormwater Management Program (SWMP)

This Storm Water Management Program (SWMP) document is a compilation of several plans, programs, procedures, and policies, such as the School District's Action Plan, Illicit Discharge Elimination Plan (IDEP), and Public Education Plan (PEP). Combined these documents constitute the School District's permit obligations and commitments aimed at helping to reduce the discharge of pollutants from the drainage system to the Maximum Extent Possible (MEP). This includes implementing Best Management Practices (BMPs) to comply with the six minimum control measures (40 CFR 123.34(b)) and documenting the effectiveness of the BMPs. Documentation required under the individual jurisdictional permit shall be included in the required Biennial Progress Reports to be submitted to the EGLE every two years of the permit cycle.

### Section VII.a – Enforcement Response Procedure

Macomb Intermediate School District and nested school districts are committed to performing complete stormwater management practices; including observance of and adherence to all local, state, and federal stormwater statutes, rules, and regulations. Enforcement of the policies, procedures, and best management practices (BMPs) outlined in this SWMP is the responsibility of the district Superintendent or their designee. Appendix D - Policy, Procedures and Regulations includes Policy S2 which describes the MISD and nested school districts Enforcement Response Procedure. Any questions on this policy and procedure should be directed to the Storm Water Manager. This procedure shall be reviewed on an annual basis by the Stormwater Manager for any updates to streamline the requirements.

## Section VII.b – Public Participation/Involvement Program (PPP)

Engaging the public and encouraging public participations in the work to reduce the impacts of stormwater runoff is a main part of the public involvement/participation program. This procedure includes a description of the opportunities for the public to provide comment on the Stormwater Management Plan and inviting public involvement and participation in the implementation and period review of the Stormwater Management Plan (SWMP).

Appendix D – Policy, Procedures and Regulations includes Policy S1 which describes the MISD and nested school district Public Participation/Involvement Program (PPP). Any questions on this policy and procedure should be directed to the Storm Water Manager. This procedure shall be reviewed on an annual basis by the Stormwater Manager for any updates to streamline the requirements.

## Section VII.c – Public Education Program (PEP)

Public Education Program is designed to promote stormwater pollution prevention, publicize the district's students and their families to stormwater related topics and facilitate education for the purpose of encouraging the public to reduce the discharge of pollutants into the separate storm sewer system.

MISD and nested school districts Public Education Plan (PEP) have been developed and implemented jointly in a collaborative effort of the members of the Clinton River Watershed Council (CRWC) and Lake St. Clair Direct Drainage. According to the MS4 permit application, following 11 topics were assessed and prioritized based on requirements,

- A. Personal Watershed Stewardship
- B. Ultimate Stormwater Discharge Locations and Potential Impact
- C. Public Reporting of Illicit Discharges
- D. Procedure for Car, Pavement , and Power Washing
- E. Pesticides, Herbicides and Fertilizers Education
- F. Grass Clippings, Leaf Litter , and Animal wastes Disposal
- G. Waste Management Assistances
- H. Septic System Maintenance
- I. Benefits of Green Infrastructure and Low Impact Development (LID)
- J. Management of Riparian Lands
- K. Commercial, Industrial, and Institutional Education

Prioritization procedure for communities within the Clinton River East Sub-watershed (CREW), Red Run Drain (R2W) and Lake St. Clair Direct Drainage (LSCW) sub-watersheds are described in Appendix B - PEP. The Collaborative PEP approval letter from MDEQ is dated February 19, 2019 and Activities Detail Table 1 (revised February 4, 2019) are included in Appendix B.



Also MISD and nested school districts have pursued cooperative partnerships, plus information and resource sharing, with several organizations, including: Macomb County Public Works Office, Macomb County Health Department, Macomb County Department of Roads, Michigan Department of Environmental Quality (MDEQ), and Southeast Michigan Council of Governments (SEMCOG). Following types of tasks are conducted to maintain proper Public Education Program throughout the district,

- Display the Exhibit “Our Actions”- Seven Simple Steps to Clean Water
- Distribute Environmental Information Materials
- Post Environmental Information and links on Webpage:
- Distribute Newsletters with Environmental Articles and Tips
- Participate in regional planning efforts facilitated by the CRWC, county agencies, SEMCOG and other groups. (CRWC meetings attended by Consultant)
- Promote & participate in stewardship efforts coordinated by local organizations

Appendix D - Policy, Procedures and Regulations includes Policy S4 which describes the MISD and nested school district Public Education Plan (PEP).

## Section VII.d – Illicit Discharge Elimination Program (IDEP)

### Overview

The purpose of the IDEP section of the SWMP is to effectively eliminate illicit discharges (including the discharge of sanitary wastewater) into the separate stormwater drainage system that is under the School District’s jurisdiction. The MISD owns or operates known discharge points that outlet in Clinton Township, Sterling Heights, Macomb Township, Warren MS4s. As noted previously, maps detailing the School District’s MS4 facilities are available for viewing in electronic digital and/or hardcopy form by contacting the MISD’s Administration Division. Maps A-1 through A- 9 identify the MISD’s discharge points. Table 1 in Appendix A – Maps and Tables provides further information regarding these discharge points. By right of ownership, the School district maintains the authority to inspect, investigate, and monitor suspected illicit discharges to the district’s MS4, which is limited to facilities located on district owned and operated property within the urbanized area. The District’s IDEP program is detailed in Appendix C – IDEP.

## Section VII.e – Construction Stormwater Runoff Control Program

### Qualifying Local Soil Erosion & Sedimentation Control Programs

Each School District ensures that their own facilities avoid discharges of soil, sediment, or other pollutants such as pesticides, petroleum derivatives, construction chemicals, and solid wastes into their MS4. However the District tracks the receipt of complaints submitted by or to the individual nested school districts and any observed discharges.

Soil Erosion & Sedimentation Control for any development within the district is regulated by the MCPWO. Appendix D – Policy, Procedures and Regulations, Policy S3 describes the MISD and nested school districts' Construction Site Runoff Control Procedure including notification of the Part 91 Agency.

### Construction Stormwater Runoff Control

School district construction or redevelopment projects are implemented in a manner such that runoff from the site is reduced to the greatest extent possible. Control measures utilized may include holding basins, diverting water through grassed swales, etc. Waste such as building materials, concrete washout, chemicals, litter, and sanitary waste is controlled to prevent infiltration into the MS4. Consideration is given to phasing projects to limit the amount of exposed soils. Interim soils stabilization methods such as temporary seeding, mulching, etc. may be utilized as applicable.

Trained inspectors visit construction project sites on a daily basis or as required under the SESC permit to enforce required Soil Erosion and Sedimentation Control measures ensuring that discharges into the MS4 do not occur. All contractors are provided with contact information for the district's inspectors. Should a soil, sediment, or pollutant discharge occur, the contractors are required to contact a School district's inspector notifying him/her of the event so that remedial action can be prescribed and implemented in an expedient manner. The MCPWO is the regulating authority.

The School District is the landowner or recorded easement holder in the case of its own construction projects and is cognizant of the State of Michigan Permit by Rule (Rule 323.2190).

Appendix D – Policy, Procedures and Regulations, Policy S3 describes the MISD and nested school districts' Construction Site Runoff Control Procedures.

## Section VII.f – Post-Construction Stormwater Runoff Control for New Developments and Redevelopment

### Regulatory Mechanism

The MISD has adopted Policy S5 as the standards applying to Post-Construction Stormwater Runoff Control for areas of new development and significant redevelopment at MISD and nested school districts owned facilities. In the event the District acquires or constructs new structural stormwater controls which discharge to county drains, the design of these structures will comply with the current Macomb County Standards. Enforcement of these standards is accomplished through site plan review by the school district, or its consultants, to ensure the appropriate standards are met.

### Water Quality Treatment Performance Standard

According to Macomb County Stormwater Design Standards, MISD and nested School districts include water quality treatment volume standards for each new development or redevelopment of projects where the area of disturbance exceeds one acre as required by the EGLE NPDES phase II Stormwater Discharge Permit. The required standard is adopted by MISD and nested districts as Policy S5 included in Appendix D – Policy, Procedures and Regulations.

### Channel Protection Performance Standard

Channel protection criteria was developed to prevent or minimize the channel enlargement process. The channel protection volume for 2 year storm must be stored and released over a period of at least 24 hours. The MISD adopted standard is included in Policy S5 in Appendix D – Policy, Procedures and Regulations.

### Site Specific Requirements

Each site has its own special circumstances and conditions the following BMPs are used as appropriate according to the site conditions.

- Reduce runoff from the site to greatest extent possible
- Prevent spills and discharges
- Control waste such as building materials, concrete washout, chemicals, litter, and sanitary waste
- Phasing are considered to limit amount of exposed soils
- Interim soils stabilization methods are to be considered (temporary seeding, mulching etc.)
- Buffer preservation ( avoid exposing soils to property limits)
- Inspection staff are trained in proper maintenance and operation of Soil Erosion and Silt Prevention measures.

As the MCPWO is the primary enforcing authority, all new development and redevelopment specifically those discharging to county drains must comply with the standards contained in the current MCPWO, Procedures and Design Standards for Stormwater Management. It has numerous rules and procedures addressing proposed projects in areas of soil or groundwater contamination and potential hotspots. There is no District owned land with areas of soil or groundwater contamination within the urbanized area. The MISD and nested School district does not expect to construct any facilities with the potential to be considered a hot spot during the term of the current permit. The MISD adopted standard is included as Policy S5 in Appendix D – Policy, Procedures and Regulations.

### Long-Term Operation & Maintenance of BMPs

The MISD identify all stormwater controls and mechanisms for all new development or redevelopment projects where the area of disturbance exceeds one (1) or more acres by utilizing following information,

- Existing map of each facility identifying the location and type of structural controls, which are in Appendix A.
- Table 1 of MISD and nested school districts' facilities and Discharge Points, are included in Appendix A.
- The District's Stormwater Pollution Prevention Plan (SWPPP), and Standard Operation Procedures (SOPs) in Appendix E.

These show the existing discharge points and provide a listing of structural controls including a site diagram showing the location of each control, instructions for inspection and operation, and the inspection and/ or maintenance schedules for each control mechanism as standard operating procedures (SOPs) included in Appendix E – P2/GH and as adopted as Policy S5 in Appendix D – Policy, Procedures and Regulations.

- Stormwater runoff facilities, after construction and approval, shall be maintained in good condition, in accordance with the approved stormwater plan
- Update and revise the stormwater structural controls on facility site diagrams as identified during scheduled inspections or within 30 days following the completion a new facility or reconstruction/ redevelopment site project

The MCPWO is the regulating and enforcing authority for long-term maintenance of BMPs associated with all new developments and redevelopment projects within the MISD MS4 including projects which discharge to county drains. MCPWO, Procedures and Design Standards for Stormwater Management addresses maintenance covenants and plans.

### Section VII.g – Pollution Prevention / Good Housekeeping for Municipal Operations

Develop, implement, and ensure compliance through a program of operation & maintenance of BMPs, with the ultimate goal of preventing or reducing pollutant runoff to the maximum extent practicable from operation that discharge stormwater to surface waters of the state. Listed below are the pollution Prevention & Good Housekeeping Program Objectives,

- Maintain an up-to-date inventory of owned facilities and stormwater structural controls.
- Procedure for updating and revising inventory of stormwater structural controls.
- Procedure for assessing each facility for the potential to discharge pollutants.
- Develop an SOP (SWPPP) for all facilities with a high potential for pollutant runoff.

- Procedure identifying BMPs currently implemented or to be implemented to prevent or reduce pollutant runoff at each facility with medium and lower potential to discharge.
- Procedure for prioritizing of catch basins/manholes for maintenance and cleaning.
- Schedule for routine catch basin/manhole inspection, maintenance and cleaning.
- Provide the geographic location of stormwater structures.
- Procedure for dewatering, storage and disposal of materials extracted from storm sewer cleaning.
- Procedure for inspecting and maintaining storm water controls.
- Procedure for new structural controls to be designed and implemented in accordance with post- construction stormwater runoff control performance standards.
- Best management practices for operation and maintenance activities.
- Procedure for street sweeping.
- Procedure for pesticide application.
- Training.
- Contractor requirements and oversight.

### Municipal Facility & Structural Stormwater Control Inventory

An inventory of the School district's owned and operated facilities appears in Appendix A, Table 1 and Maps.

### Facility-Specific Stormwater Management

The District owned and operated facilities have been assessed for their potential to discharge pollutants to the waters of the State. Each facility has been 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 water bodies
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 has been rated high, medium, or low. For low priority facilities where no assessment factors are present: catch basin cleaning, inspection of waste containers and street sweeping have been performed as indicated in the applicable procedures for these activities. For medium priority facilities, appropriate BMPs are considered and implemented based on the assessment factors present to prevent or minimize the potential for pollutants from entering surface waters of the State.

All the facilities with a high potential for pollutant runoff, have developed Stormwater Pollution Prevention Plans (SWPPPs) which are included in Appendix E – P2/GH.

Updating/revisions of maps and inventory are done within 30 days following adding/removing a facility or structural stormwater control. This inventory are updated within 30 days as facilities and structural stormwater controls are added, removed, or no longer owned or operated by the applicant. Priority level assessments are revised within 30 days prior to discharging stormwater at a new facility, or when there are changes in stored materials and for equipment, or vehicle changes at a facility.

The MISD's adopted Standard Operation Procedures (SOPs) are included in Appendix E – P2/GH.

### Structural Stormwater Control Operation & Maintenance Activities

Appendix A, Table 1 lists the Structural Controls at each MISD and nested Districts owned and operated facilities (by District). The MISD maintains a total of 110 catch basins within their owned facilities.

### Municipal Operation and Maintenance Activities:

The MISD owns the parking lots of their MS4. Repairs to parking lots or other municipal maintenance activities are done on an as needed basis by either the District Maintenance Department or a licensed contractor. A district representative is on site to oversee the work and ensure that left over material and other associated pollutants are disposed of, or stored properly at the Maintenance Yard. Coal-tar sealants are prohibited for use at MISD's facilities.

The District owned parking lots are assigned the same priority level and swept annually by using certified contractors. Collected materials are hauled away by a licensed contractor.

During cold weather operations the District applies road salt or sand to maintain safe walking and driving condition, as weather conditions dictate.

MISD's adopted SOPs are included in Appendix E – P2/GH.

The District conducted proper operation and maintenance activities in their owned and operated facilities. It includes maintenance of clean dry surface, regular pickup of waste materials, preventive maintenance on equipment, routine inspections for leaks or spills. Materials are

properly stored in the site. Employees are training on pollution prevention and good housekeeping activities.

The District will retain its associated records, in-house for a minimum of three years after termination of the permit. The records are available upon request by EGLE and shall include, but not be limited to:

- Information regarding the effectiveness of these activities;
- Records of analyses performed;
- Calibration and maintenance of instrumentation, if used; and
- Recordings from continuous monitoring instruction.

These records and supporting documents are retained by the District, and submitted to EGLE upon request.

### Managing Vegetated Properties

MISD premises' pesticides use is controlled by Michigan certified contractors and in compliance with the adopted SOPs included in Appendix E – P2/GH.

### Employee Training

Maintenance Staff have been trained on stormwater pollution prevention and good housekeeping at least once per permit cycle. New employees have been trained within the first year of employment. Employees have been trained using EGLE stormwater on-demand training videos that are found on their website and required topics are covered along with Monthly Safety Briefings. All topics related to stormwater pollution prevention/good housekeeping of municipal facilities and activities are covered during the training.

### Contractor Requirements & Oversight

Contractors hired by the School Districts to perform municipal operation and maintenance are contractually required to comply with all pollution prevention and good housekeeping BMPs as are applicable to the activities performed. School District staff/inspectors are on-site daily to ensure contractual obligations have been met.

### Section VII.h – Total Maximum Daily Load (TMDL) Implementation

A study or analysis that calculates the maximum amount of a pollutant that a water body can receive and still meet water quality standards. The TMDL establishes a pollutant budget and then allocates portions of the overall budget to the pollutant's sources.

Total Maximum Daily Loads (TMDLs) are developed by the states for water bodies that are not meeting water quality standards. TMDL development is required by "Section 303(d) of the federal Clean Water Act and the United States Environmental Protection Agency's (USEPA's) Water Quality Planning and Management Regulations (Title 40 of the Code of Federal Regulations [CFR],

Part 130)". The TMDL process sets the allowable levels of pollutants for a body of water, and provides the states with a basis for determining the pollution reductions necessary to restore and maintain the quality of their water resources.

*Escherichia coli* (*E. coli*) is a type of bacteria (single cell organism) that is used by the State of Michigan as a water quality indicator. When *E. coli* is found in surface waters, it means that there has been fecal contamination. While *E. coli* itself may be harmful to human health, other disease causing organisms might also be present. Once these pathogens are in a stream or lake, they can infect humans through ingestion or skin contact, resulting in diseases such as gastroenteritis (diarrhea), giardia, hepatitis, or cholera.

For the water bodies impacted or potentially impacted by the MISD MS4, the following TMDL's have been established:

E. coli Clinton River	-	TMDL	ID-91
E. coli Lake St. Clair and Metro Beach	-	TMDL	ID-72
E. coli Red Run Drain and Bear Creek	-	TMDL	ID-58

### Sampling & Monitoring Procedure

The MISD and nested school districts IDEP and TMDL are detailed in Appendix C – IDEP and the scheduled tasks are included in Appendix F – Action Plan. The BMP's provided in Appendix F, Action Plan provide for the MISD and nested districts to minimize the impact of the stormwater discharges from their MS4's to the Maximum Extent Possible (MEP). The TMDL monitoring locations are listed in Table 1 in "Appendix A – Maps and Tables" and are displayed graphically on the maps provided in the appendix. The results of the sampling are assessed and summarized in the biennial progress report. Based on a review of the sampling results, BMP implementation is reviewed and BMPs may be updated or revised to ensure progress toward achieving TMDL pollutant load reductions.



## Section VII.i. – Action Plan

Phase II communities are required to develop and implement a stormwater management plan with the following six minimum control measures:

1. **Public Education and Outreach** - Distributing educational materials and performing outreach to inform citizens about the impacts polluted stormwater runoff discharges can have on water quality.
2. **Public Involvement and Participation** - Providing opportunities for citizens to participate in program development, implementation, and review, including effectively publicizing public hearings or participation.
3. **Illicit Discharge Detection and Elimination** - Developing and implementing a plan to detect and eliminate illicit discharges to the storm drain system including illicit connections and illegal dumping.
4. **Construction Site Runoff Control** - Developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb one or more acres of land.
5. **Pollution Prevention / Good Housekeeping for Municipal Operations** - Developing and implementing a program to prevent or reduce pollutant runoff from municipal operations. (This is a primary focus of this handbook.)
6. **Post-Construction Stormwater Management in New Development and Redevelopment** - Developing, implementing, and enforcing a program to address discharges of stormwater runoff from new and redevelopment areas.

The action plan in “Appendix F – Action Plan” summarizes the implementation activities necessary to meet these measures.

## E.17 Landscaping Native, Non-Native, and Invasive Species

### Description

Vegetation Management on Properties

#### ***What is a Native Plant?***

Native plants (also called indigenous plants) are plants that have evolved over thousands of years in a particular region. They have adapted to the geography, hydrology, and climate of that region. Native plants occur in communities, that is, they have evolved with other plants in association with animals, parasites, and disease-causing organisms. As a result, a community of native plants provide habitat for a variety of native wildlife species such as birds and butterflies.

#### ***What is a Non-Native Plant?***

While native species occur in their natural regions without the direct or indirect activities of humans, “non-native” species occur outside that natural range. In North America, many non-native plants were brought over for agricultural, medicinal, and ornamental purposes. Many plants were introduced accidentally as well. The introduction of the non-native organisms continues to be a problem today due to our increased travel and international trade. Not all non-native plants or animals become a problem. However, some of these plants have certain aggressive traits that make them an invasive species.

#### ***What is an Invasive Species?***

Invasive species are those non-native species that can significantly disrupt natural communities causing environmental or economic harm. In a new environment, invasive plants are released from the natural constraints of their native ranges. They lack the control of herbivores, parasites, diseases, and competition that was present in their native habitats. Invasive plants exhibit both rapid growth and reproduction rates because of abundant seed production, reproduction through vegetative clones, and/ or extended growing seasons.

#### ***Why are Invasive, Non-Native Plants a Concern?***

Invasive, non-native plants displace native plants and animals, and so disrupt ecological processes, and degrade biological resources. Invasive plants often lack the natural population controls that keep them in check in their native ecosystems. Controls existing in the new ecosystem (herbivores, parasites, diseases, and native plants) is not adapted to make use of the non-native invaders. This disparity of population controls, in addition to their rapid growth and reproduction, creates a situation in which the invasive plants are better competitors. They reduce the amount of sunlight, water, nutrients, and space available to native plants, eventually competing with and replacing natives. This represents a loss in habitat and food source for wildlife. Invasive plants have even shown to alter hydrological patterns and soil chemistry. In the big picture, invasive plants reduce biodiversity.

# Stormwater Management – Illicit Discharge Regulatory Policy

Revision date: July 22, 2021

This illicit discharge regulatory policy was developed by the district as a regulatory policy for prevention of pollution from storm water runoff and to protect the quality of the waters of the State of Michigan through the regulation of non-stormwater discharges to the municipal separate storm sewer system (MS4) to the maximum extent practicable as required by federal and state law. This regulatory mechanism establishes methods for controlling the introduction of pollutants into the MS4 in order to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) permit through the Michigan Department of Environment, Great Lakes, and Energy (EGLE). The objectives of the regulatory mechanism are:

1. To regulate the contribution of pollutants to the MS4 by stormwater discharges by any user.
2. To prohibit illicit connections and discharges into the MS4.
3. To establish authority to investigate, inspect, and monitor suspected illicit discharges.

At all district facilities.

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**Illicit Discharge** means any discharge to, or seepage into the separate stormwater drainage system that is not composed entirely of stormwater or uncontaminated groundwater except discharges pursuant to an NPDES permit.

**Illicit Connection** means a physical connection to the MS4 separate stormwater system that primarily conveys non-stormwater discharges other than uncontaminated groundwater into the MS4 separate storm sewer system; or a physical connection not authorized or permitted by the local authority, where a local authority requires authorization or a permit for physical connections.

## Prohibitions of Illicit Discharges

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1. Prohibition of Illicit Discharges:
  - a. The district prohibits the discharge of non-stormwater discharges into the storm drain system, including but not limited to pollutants or waters containing any pollutants.
  - b. No person shall throw, drain, or otherwise discharge, cause, or allow others under its control to throw, drain, or otherwise discharge into the MS4 any pollutants or waters containing any pollutants, other than stormwater.
2. The following discharge is **not prohibited**:
  - a. This policy excludes prohibitions from the discharge or flows from firefighting activities to the district MS4. Discharge or flows from firefighting activities will be addressed only if they are identified as significant sources of pollutants to surface waters of the state.
  - b. The following activities are **not prohibited** under this policy unless they are determined to be significant sources of pollutants to surface waters of the state:
    - Water line flushing and discharges from potable water sources.

- Landscape irrigation runoff, lawn water runoff, and irrigation waters.
- Diverted stream flows and flows from riparian habitats and wetlands.
- Rising groundwater and springs.
- Uncontaminated groundwater infiltration and seepage.
- Uncontaminated pumped groundwater, except groundwater cleanups specifically authorized by NPDES permits.
- Air conditioning condensation.

## Prohibition of Illicit Connections

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1. The construction, use, maintenance, or continued existence of illicit connections to the MS4 is prohibited.
2. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.
3. A person is considered to be in violation of this regulatory mechanism if the person connects a line conveying sewage to the MS4 or allows such a connection to continue.
4. Improper connections in violation of this regulatory mechanism must be disconnected and redirected.
5. Illicit discharge and connections will be eliminated immediately.

## Enforcement

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The district's Stormwater Program Manager will administer and enforce the stormwater management program, including investigate, inspect, and monitor suspected illicit discharges or illicit connections.

**If you witness or think a discharge is taking place, please contact:**

1. **The Stormwater Program Manager, or**
2. **REPORT A POLLUTER - 24-Hour Toll Free Water Pollution Hotline 1-877-679-4337**

## **E.18 Refuse Best Management Practices (BMP)**

### **Description**

The District will review alternatives for refuse management, ensuring storm water compliance. The following BMPs apply at all facilities where any waste, scrap, trash, or debris is generated.

### **Pollution Prevention**

- Keep all trash container lids closed at all times unless adding or removing material.
- All waste receptacles (dumpsters or cans) should be leak-tight with tight-fitting lids or covers.
- Do not place outdoor waste receptacles near storm drains or ditches unless at a lower elevation.

### **Protocols**

- Return leaking dumpsters to the owner for replacement.
- Repair or replace missing or poorly fitted lids or covers on waste receptacles promptly.
- Never place liquids or liquid-containing wastes in a dumpster or trash receptacle.
- Sweep up around outdoor waste containers regularly.
- Do not wash out waste containers or dumpsters outdoors