Rochester Community Schools

STORMWATER MANAGEMENT PROGRAM PLAN

Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System Permit

April 1, 2015
Revision Date: October 25, 2015
October 8, 2019
July 7, 2020

environmental group

Rochester Community Schools

STORMWATER MANAGEMENT PROGRAM PLAN

Approved & Submitted by

Mr. Michaiah McCollum
Contract Manager
Rochester Community Schools
1402 W. Hamlin Road
Rochester Hills, Michigan 48309

Prepared by

Ms. Jenna G. Sendra
Manager, cleanWATER
Certified Stormwater Operator No. I-10665
Arch Environmental Group
37720 Interchange Drive
Farmington Hills, Michigan 48335

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Table of Contents

Attachments

Stormwater Management Program Plan

1.0 Introduction

This Stormwater Management Plan (SWMP) has been developed, 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 Michigan Act 451, Public Acts of 1994, Part 31, and the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq.). Rochester Community Schools (ROCS) will implement and enforce this SWMP to the Maximum Extent Practicable. In order to retain the authorization to discharge, ROCS is required to submit this plan with the "NPDES Application for Discharge of Stormwater to Surface Waters from a Municipal Separate Storm Sewer System (MS4)".

This Stormwater Management Plan commits to action from 2016 through 2020. This SWMP includes measurable goals for Best Management Practices (BMP), focusing on the six minimum measures. Measurable goals describe the actions ROCS will take to implement each BMP and allow ROCS to evaluate progress toward meeting key objectives outlined in the following sections.

Rochester Community Schools owns and operates twenty-four (24) public facilities within the boundaries of the "Detroit Urbanized Area". All of ROCS properties are within the urbanized area based off of the 2010 Census data, and the facilities include:

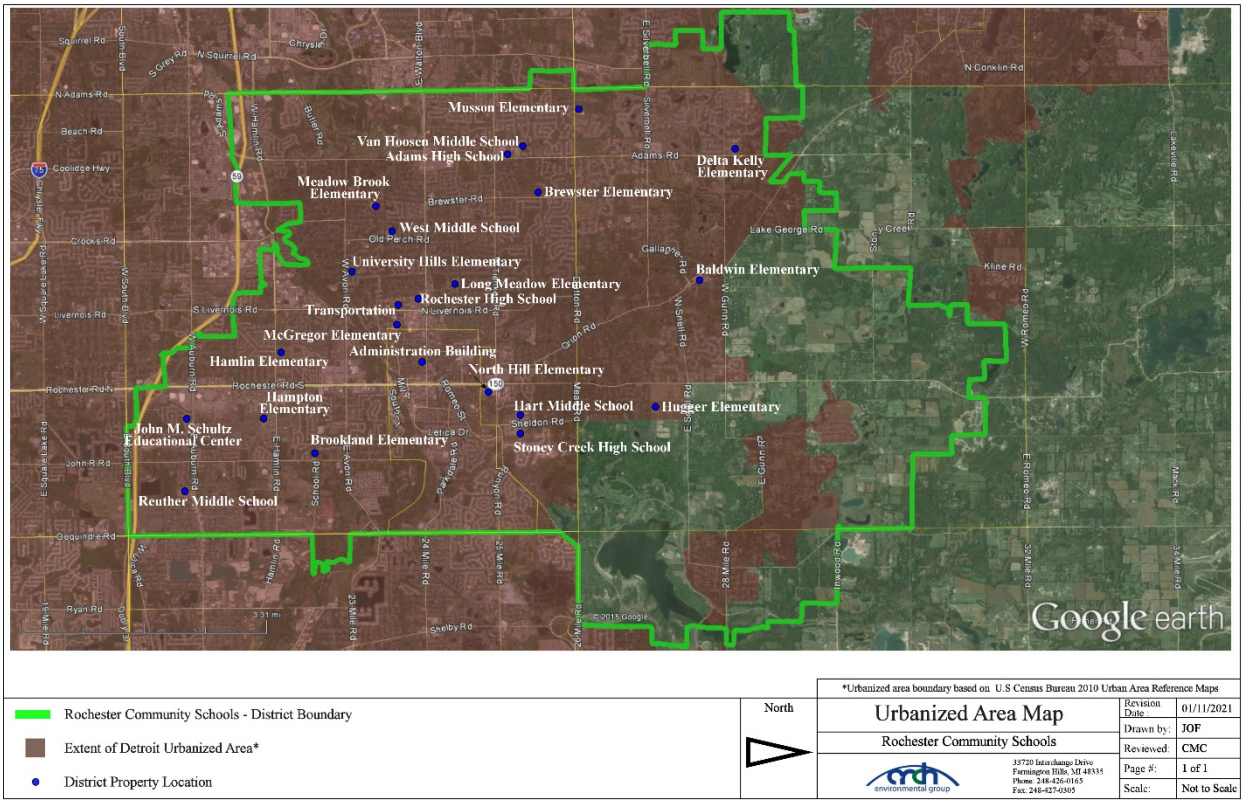
1. Adams High School & Van Hoosen Middle School Complex
2. Administration Building
3. Baldwin Elementary School
4. Brewster Elementary School
5. Brooklands Elementary School
6. Delta Kelly Elementary School
7. Facilities Operation Center
8. Hamlin Elementary School
9. Hart Middle School
10. Hugger Elementary School
11. John M. Schultz Educational Center (formerly Alternative Center for Education High School)
12. Livernois Transportation Facility
13. Long Meadow Elementary School
14. McGregor Elementary School
15. Meadow Brook Elementary School
16. Musson Elementary School
17. North Hill Elementary School
18. Reuther Middle School
19. Rochester High School
20. Stoney Creek High School
21. University Hills Elementary School
22. West Middle School

Currently, the Facilities Operation Center is managed under the Storm Water General Permit (Permit No. 110000), Certificate of Coverage MIS111754. Additionally, the Livernois Transportation Facility is managed under the Storm Water General Permit (Permit No. 110000), Certificate of Coverage MIS111753. The Facilities Operation Center and the Livernois Transportation Facility are not included in the development of this stormwater management plan and associated permit application.

1.1 Regulated Area

A jurisdictional boundary map identifying the ROCS urbanized area as defined by the 2000 Census is provided below in Map 1.

Map 1 – District Jurisdictional Boundary Map – Urbanized Area[1]



1.2 Outfalls & Discharge Points/ Receiving Waters

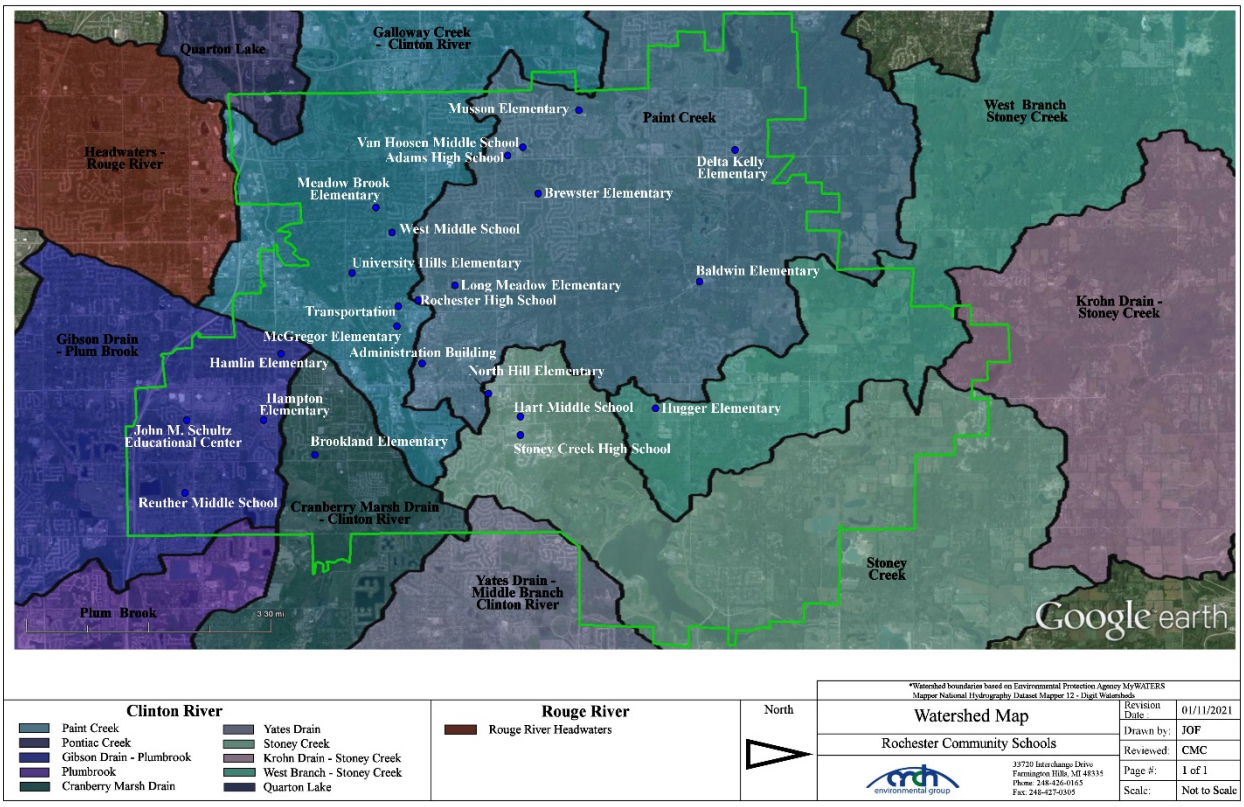
The general permit authorizes the discharge of stormwater from municipal separate stormwater drainage systems to waters of the state from all existing outfalls or points of discharge.

Rochester Community Schools has identified outfalls and discharge points that discharge directly into surface waters of the state and discharge points that discharge into other MS4 drainage systems. Rochester Community Schools' drainage system discharges directly or indirectly into the Clinton River Watershed and sub watersheds detailed in Map 2 below.

[1] Urbanized area boundary based on U.S. Census Bureau 2010 Urban Area Reference Maps.

Rochester Community Schools has completed site specific storm sewer system maps which identify outfall and discharge locations, discharge point source identification numbers, locations of discharge and receiving waters. A receiving water table and site specific storm sewer system maps are provided in Attachment "A". Any changes to the ROCS storm sewer system will be reflected on the storm sewer system maps and reported provided to the EGLE during progress reporting. The district watershed boundary map is provided in below in the map listed as "Map 2".

Map 2 – District Watershed Map[2]



1.3 Enforcement Response Procedures

Rochester Community Schools is committed to practicing sound stormwater management practices; including observance 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. ROCS had developed and passed a School Board Resolution requiring the district comply with the requirements of the Michigan National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit. Any questions regarding this policy and procedure should be directed to the Stormwater Manager. This procedure will be reviewed on an annual basis by the Stormwater Manager for any updates. In addition to the enforcement mechanisms noted in ordinance, additional tracking of instances of noncompliance occurs and includes the following information:

[2] Watershed boundaries based on Environmental Protection Agency MyWATERS Mapper National Hydrography Dataset Mapper 12-Digit Watersheds.

- Name
- Date
- Location of Violation (address, cross streets, etc.,)
- Business/Agency/Organization (as appropriate)
- Description of Violation
- Description of Enforcement Response
- Date Violation was Resolved

A copy of the approved resolution is included with and an example of the Municipal Separate Storm Sewer System Noncompliance Enforcement Tracking Sheet in Attachment "B".

2.0 Stormwater Management Program Plan (SWMP) Minimum Control Measures

This SWMP has been developed to describe the Best Management Practices (BMPs) ROCS will implement to meet the six minimum control measures and water quality requirements. The six minimum control measures include:

- **Public Participation/Involvement Program (PPP)**
- **Public Education Program (PEP)**
- **Illicit Discharge Elimination Program (IDEP)**
- **Construction Stormwater Runoff Control Program**
- **Post Construction Stormwater Runoff Program**
- **Pollution Prevention/Good Housekeeping Program**

Each BMP includes a measurable goal, implementation schedule, and measure of assessment.

2.1 Public Involvement/Participation Program (PPP)

Engaging and empowering the public in the effort to reduce the impacts of stormwater runoff is a key element of the public involvement/participation program.

2.1.1 Public Involvement/Participation Program Objectives

1. Process for making the Stormwater Management Plan available for public inspection and comment.
2. Process for inviting public involvement and participation in the implementation of SWMP best management practices and periodic review of the SWMP.

2.1.2 Public Involvement& Participation Procedure

1. The SWMP will be posted on the ROCS webpage for review and comment by the public when the application is submitted to the EGLE. The stormwater webpages will include the contact information to forward comments.
2. The public will be notified through announcements or newsletters that a copy of the SWMP is available on the ROCS stormwater webpage.
3. A public survey has been developed and placed on the ROCS stormwater webpage in an effort to provide input into stormwater implementation.

4. A link to a stormwater blog "Cleanwater Chronicles" has been added to the ROCS stormwater webpage. The stormwater blog explains water quality issues and promotes opportunities for public involvement.
5. Cooperation with local watershed protection groups.

2.1.3 Public Involvement& Participation Assessment

1. ROCS will review the public involvement & participation BMPs as part of annual SWMP review to determine level of district involvement and identify areas of improvement.

2.1.4 Public Involvement & Participation Program (PPP) BMP Table

BMP	Implementation of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #1 Public notice of SWMP	Make SWMP available for public review through stormwater webpage.	Annually 2016-2020	Public notice published in annual district wide newsletter announcing the availability of the SWMP for review, including contact information for comments.	Verify SWMP available on stormwater webpage, and track changes webpage posting of SWMP.	ROCS
	Notification in annual district newsletter to publicize updated SWMP and locations for review.			Keep copy of official SWMP posting notifications.	
	Contact information will be available on the stormwater webpages to forward comments regarding the SWMP.			Compile and track comments from the public.	
BMP #2 Stormwater Blog	Post link to stormwater blog on district website.	Ongoing 2016-2020	A link to a stormwater blog established and maintained on the district stormwater webpage to assist in distributing information and updating the public on the watershed and activities.	Copies of monthly stormwater blog postings for reporting period.	ROCS
BMP #3 Stormwater Education Program Survey	Post survey on district website.	Ongoing 2016-2020	Survey posted on the stormwater webpages and link maintained throughout the permit term to assess community knowledge and provide input into stormwater implementation.	Results of completed surveys.	ROCS
BMP #4 Cooperation with local watershed protection group- CRWC	Engage the Clinton River Watershed Council (CRWC) to collaborate with ROCS in Public education services.	Ongoing 2016-2020	Maintain service agreement with the Clinton River Watershed Council.	Copy of the agreement.	ROCS

BMP	Implementation of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #5 Public Involvement & Participation Program Assessment	Evaluate the effectiveness of the public involvement program.	Annually 2016-2020	Complete as part of annual SWMP review to determine level of district involvement and identify areas of improvement. Program activities may be adjusted based on the results of the assessment.	Copies of annual SWMP review noting any areas of needed improvement.	ROCS

2.2 Public Education Program (PEP)

Rochester Community Schools' "Public Education Program (PEP)" is designed to promote, publicize, and facilitate education for the purpose of encouraging the public to reduce the discharge of pollutants into the ROCS separate storm sewer system.

The term "Public" as referred in to in this program is defined to include all persons who could potentially affect the quality of stormwater discharges from ROCS properties including but not limited to ROCS faculty, staff, contractors, and students of ROCS, as well as area residents, visitors, public employees, local businesses, industries, construction contractors and property developers. This PEP will include a variety of mechanisms and venues to provide watershed awareness and pollution prevention education throughout the ROCS jurisdiction.

2.2.1 Public Education Program Objectives

1. Responsibility and stewardship in their watershed.
2. 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.
3. Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4.
4. Promote preferred cleaning materials and procedures for car, pavement, and power washing.
5. Inform and educate the public on the proper application and disposal of pesticides, herbicides, and fertilizers.
6. Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter the MS4.
7. Identify and promote the availability, location, and requirements of facilities for collection or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, yard wastes, and motor vehicle fluids.
8. Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure.
9. Promote methods for managing riparian lands to protect water quality.
10. Identify and educate commercial, industrial, and institutional facilities about good housekeeping.
11. Provide training for staff.

2.2.2 Public Education Program Procedure

Rochester Community Schools and the Clinton River Watershed Council (CRWC) are working cooperatively to promote citizen awareness and facilitate public awareness activities. ROCS has entered an agreement for services with the CRWC to provide all relevant public education activities during the permit cycle. The CRWC has assessed high community wide and targeted issues on feedback received from surveys. A copy of the Clinton River Watershed Council Clinton Main and Stoney-Paint Creek prioritization procedure are in provided in Attachment "C". Additionally, a copy for the Clinton River Watershed Councils Clinton Main and Stoney-Paint Priority Table (Table 2) are provided in Attachment "C".

ROCS has joined the CRWC along with others to help reduce pollutant through collaborative efforts. Please see the attached Clinton River Watershed Councils Collaborative Public Education Plan located in Attachment "D". ROCS is implementing the Clinton River Watershed Councils Collaborative Public Education Plan as part of the Stormwater Education Program facilitated by the CRWC. The PEP includes district specific activities that ROCS will conduct, document and report on. These activities are outlined in 2.2.3 Public Education Program BMP Table. A copy for the Clinton River Watershed Councils Permittee PEP Action Table is provided in Attachment "E".

2.2.3 Public Education Program BMP Table

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #1 Presentations & Displays Rev. 01.21.19	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.	Minimum of once during 5-year permit cycle	Host display once during permit cycle	Photo of display and dates posted.	ROCS
BMP #2 Regional Public Education Efforts Rev. 01.21.19	Distribute resources available from SEMCOG including: Seven Simple Steps to Clean Water brochures, tip cards and kids' activity sheets. Topics include fertilizer, car care, pet care, household hazardous waste disposal, earth-friendly landscaping, water conservation and storm drain awareness.	Annually Throughout Permit Cycle	Distribute educational materials (pamphlets, brochures, tip cards) on request from MS4 permit communities, on various topics at community facilities and events. MS4 communities have an excel spreadsheet to track distribution.	Track the number and type of materials distributed/ Document the number of posters/tip cards distributed in each facility. Provide working links on webpage for fertilizer, pet care, native landscaping, and storm drain awareness. Track link locations and website hits on Clinton River watershed Appendix B Clinton River Tracking Form.	ROCS
BMP #3 Sub watershed Website Rev. 01.21.19	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.	The website is in place and is continuous Throughout Permit Cycle	Personal watershed stewardship, ultimate stormwater discharge locations and potential impacts, public reporting of illicit discharges, personal actions that can impact the watershed, waste management assistance, septic system maintenance, benefits of native vegetation, and management of riparian lands.	Report annually: Provide working links to web sites (link to CRWC). Track and document webpage review.	ROCS

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #4 Household Hazardous Waste Information Rev. 01.21.19	Continue to publicize information on the Household Hazardous Waste Disposal via web links or brochures. Oakland *https://www.oakgov.com/advantageoakland/planning/wasteandrecycling/Pages/nohaz.aspx* Macomb *https://health.macombgov.org/Health-Programs-EnvironmentalHealth-RiskAssessment-HouseholdWaste* Wayne *https://www.waynecounty.com/departments/environmental/landresources/household-hazardous-waste.aspx*	Continuous Throughout Permit Cycle	Personal watershed stewardship, public reporting of illicit discharges and waste management assistance.	Provide working links to web sites. Track and document webpage review.	ROCS
	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.			Document public reporting of illicit discharges.	
BMP #5 Riparian Information Distribution	Distribute riparian landowner educational material such as the Waterfront Wisdom brochure, or other information. Make available to their public via mailings or through web links, events, meetings, and through mailings.	Annually Throughout Permit Cycle	Distribute riparian landowner educational material such as the Waterfront Wisdom brochure, or other information. Make available to their public via mailings or through web links, events, meetings, and through mailings.	Provide working links to Web sites. Track and document webpage review.	ROCS

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #6 Cooperation with local watershed protection group- CRWC	Engage the Clinton River Watershed Council (CRWC) to collaborate with ROCS in Public education services.	Ongoing Throughout Permit Cycle	Maintain service agreement with the Clinton River Watershed Council.	Copy of the agreement.	ROCS
BMP #7 School Curriculum	Encourage schools to incorporate watershed awareness, pollution prevention, recycling, ecology, and energy conservation into the core curriculum throughout the district.	Annually Throughout Permit Cycle	Review and update curriculum table/adjust as necessary (see Table 3, Stormwater Program Related Science Curriculum K-12th Grade).	Update and maintain listing of # students for each topic/grade level. Document additional watershed curriculum opportunities when available.	ROCS
			Communicate with faculty regarding the resources available to reach the student audience.	Maintain documentation of communication with faculty.	ROCS

2.2.4 CURRICULUM

ROCS has conducted a review of the current State of Michigan K-12 science curriculum to determine which topics and grade levels have applicability toward the goals of the SWMP. The ROCS K-12 science curriculum has been developed as required under Michigan Department of Education "Grade Level Content Expectations". ROCS encourages schools to incorporate watershed awareness, pollution prevention, recycling, ecology, and energy conservation into the core curriculum throughout the district.

The current K-12th grade Earth Science curriculum provides students with a wide range of topics specifically related to this permit. A listing of current elementary (K-12) grade level curriculum topics including grade level, curriculum code, description, and any additional activities included in the specific course work is provided below.

Stormwater Program Related Science Curriculum K-12th Grade

Grade	Code	Description
K	K-ESS3-3	Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.
2	2-ESS1-1	Use information from several sources to provide evidence that Earth events can occur quickly or slowly
2	2-ESS2-2	Develop a model to represent the shapes and kinds of land and bodies of water in an area.
2	2-ESS2-3	Obtain information to identify where water is found on Earth and that it can be solid or liquid.
4	4-ESS2-1	Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation
5	5-ESS2-2	Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.
5	5-ESS3-1	Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
6-8	MS-ESS2-4	Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

Grade	Code	Description
6-8	MS-ESS3-1	Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.
6-8	MS-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
6-8	MS-ESS3-4	Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
9-12	HS-ESS2-5	Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
9-12	HS-ESS3-1	Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity
9-12	HS-ESS3-6	Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

2.2.5 Public Education Program Effectiveness

The effectiveness of the public education program will be evaluated based on progress made towards meeting the BMP objectives described above. ROCS will participate in all future CRWC surveys to evaluate impacts of the collaborative public education plan.

Additionally, ROCS is implementing an internal "Watershed Awareness Survey" to be used as an evaluation. ROCS will implement this survey during the 2016/17 fiscal year. This idea is in the preliminary planning stages and will be further addressed in upcoming progress reports. The purpose of these surveys is to provide an assessment of public understanding of issues in the watershed related to pollution from stormwater runoff. Results would be used to guide ROCS in identifying opportunities for enhancement of the PEP.

2.3 Illicit Discharge Elimination Program (IDEP)

The following ROCS Illicit Discharge Elimination Program is designed to identify, locate, prohibit and effectively eliminate illicit discharges, including discharges of sanitary wastewaters, to the permitted separate stormwater drainage systems.

2.3.1 Illicit Discharge Elimination Program (IDEP) Program Objectives

1. Establish authority to investigate, inspect and monitor suspected illicit discharges.
2. Maintain maps of the MS4, points of discharge, and outfalls.
3. Prohibit non-stormwater discharge into the MS4.
4. Provide regular training to staff.
5. Instruct contractors to prevent dumping into the MS4.
6. Conduct routine dry weather screening.
    - Conduct source investigations if the source of an illicit discharge/connection is not identified by field screening.
7. Illicit discharge identification and elimination program performance & effectiveness.

2.3.2 Facility Site Storm Sewer System Maps and Lists

ROCS and consultants completed storm sewer system mapping at each of the owned operated properties identified in Section 1.0 of this Stormwater Management Plan. Storm sewer system maps include detailed information of the storm sewer system, including the locations of outfalls, points of discharge, and waters of the State that receive the discharges. The maps include a unique identification number for each storm sewer location identified on the map. Latitude and longitude are also noted for outfall and points of discharge location. Storm sewer system information will be maintained and updated and reported in Progress Reports.

Copies of the of current facility storm sewer system maps are available at the Facility Operations Building, 1401 West Hamlin Road, Rochester Hills, Michigan 48309. Additionally, copies of the storm sewer system maps and a list of the outfalls and points of discharge are provided in Attachment “A”.

2.3.3 Illicit Discharge Identification & Investigation Procedure – Field Observations

ROCS will conduct field observations for 100% of all outfalls and discharge locations during dry weather or more expeditiously if ROCS becomes aware of a non-stormwater discharge. Outfalls and points of discharge will be inspected by personnel trained to recognize all signs of possible illicit discharges. Dry weather screening will occur at least once every 5 years. ROCS next 5 year dry weather screening cycle will be conducted starting between year 2018 and year 2019. Preferably, each outfall or discharge point will be inspected and evaluated following a period of at least 48-72 hours of dry weather.

The field observations will focus on visual inspection for the following:

- Outfall/point of discharge number
- Date/name of inspector
- Date of last rainfall
- Presence or absence of flow
- Presence or absence of standing water
- Water clarity and color
- Presence of oil sheen, trash and or other floatable materials
- Presence of bacterial sheen or slimes
- Excessive vegetative growth
- Odor
- Suds

- Presence of oil
- ❖ These Characteristics are documented even if no flow is observed at the time of the inspection.

All field observations are detailed on a "Screening Inspection Log". A copy of the Screening Inspection Log is provided in Attachment "F".

If, at the time of the outfall or point of discharge inspection, if dry weather flow is observed it is obvious that an illicit discharge is present and the source is obvious, ROCS will document the observations and the source and follow-up with applicable parties. Once a potential discharge is indicated at an outfall or point of discharge, additional inspection, field screening and source investigation activities are conducted.

2.3.4 Illicit Discharge Identification & Investigation Procedure – Field Screening & Source Investigation

At the time of the outfall or point of discharge inspection, if dry weather flow is observed and the source is not obvious or identified during the regular field observations, then the inspector who identified the discharge shall, within two weeks of the initial discovery, will conduct an upstream source investigation to determine the origin of the flow. The initial investigation includes visual and olfactory observations upstream from the outfall/point of discharge. If necessary, relevant indicator field screening, video camera inspection and/or dye tracing will be conducted.

If the origin of the flow is not identified during the upstream investigation; within 24 hours of the observed dry weather flow, a grab sample is collected from the discharge for indicator field screening analysis. Indicator monitoring/field screening is the secondary tool utilized for dry weather flow without obvious indicators such as very high turbidity, strong odors or visible discharge. Screening may include some or all of the indicator parameters:

- Temperature
- pH
- Detergents (i.e., surfactants)
- Chlorine
- Ammonia (NH3-N)
- Turbidity
- Conductivity

Indicator parameters used to assess the dry weather flow shall be determined by the visual and olfactory observations and upstream source investigation.

Additional grab samples will be collected and delivered for external laboratory analysis only if additional test parameters are required for the source investigation. The laboratory analysis parameters for grab samples are determined by the type of contamination suspected at the time of the source investigation. A copy of the AEG Stormwater Sampling and Analysis Protocol Screening is included in Attachment "F".

Laboratory indicator parameters are based on EGLE guidance and as specified in the reference sources identified above. The selected laboratory parameters are:

- Fluoride
- Coliform

- E-coli
- Potassium
- Color
- Ammonia

The exact procedure for tracking the illicit discharge will depend on the particular facts of each incident. At the time of the identification of the observed dry weather flow, the flow will be tracked upstream until the source is isolated. Once the source has been isolated down to a specific site location, the work will become source confirmation. If the source is not confirmed, additional fieldwork, building evaluation, or dye testing may be necessary. Additional source investigations will be conducted within 30 days of the original observed dry weather flow.

Once the elimination of an illicit connection or illicit discharge has occurred, an elimination report detailing the corrective actions with attached work orders, photos or dye tracing results will be compiled for documentation purposes. Field inspections will continue until it can be reported that no illicit connection or discharge is present at that outfall/point of discharge. Information regarding specific techniques are provided in the AEG Stormwater Sampling and Analysis Protocol Screening included in Attachment "F".

2.3.5 Illicit Discharge/Connection Elimination Procedure

Illicit discharges and connections are identified through reporting, routine storm sewer system inspections and dry weather screening inspections. A "How to Spot Illicit Discharges" poster along with a "How to Report/Hotline Numbers" posters are placed in the receiving/custodial areas in each facility to report concerns. ROCS goal is to evaluate all potential unauthorized or suspected illicit discharge to the municipal separate storm sewer system (MS4), and perform any necessary notifications and reporting to the applicable agencies (i.e., EGLE, local drain commission, etc.) within the required time period(s).

ROCS will evaluate and conduct the following actions regarding reported or observed illicit discharges/illegal dumping spills into the storm drainage system.

- If, in the opinion of ROCS, immediate action to address the suspected discharge is indicated, ROCS will ensure that the site is investigated within one week.
- Conduct source investigations, including applicable field screening to trace the origin of the materials within two weeks of the reported/observed illicit discharge.
    - ROCS will follow existing spill response procedures outlined in Section 2.3, under Spill response, Policy & Procedures, if required.
- Once the source has been isolated down to a specific site location, the work will become source confirmation
- If the responsible party is identified, educate the party on the impacts of their actions, explain the stormwater requirements and provide information regarding Best Management Practices.
- Evidence of illicit discharges traced to other MS4 jurisdictions will be provided to the responsible MS4 operator along with any collected data to assist that MS4 operator in completing their investigations to correct the illicit discharge or connection.
- ROCS will cooperate with the MS4 operator in determining the source or type of illicit discharge and/or connection and will follow-up to ensure that appropriate action has been completed by the MS4 operator to eliminate the discharge.

- Continue inspection and follow-up activities until the illicit discharge activity has ceased.
- Document all activities utilizing the Illicit Discharge/Illegal Dumping Reporting form.

A copy of the Illicit Discharge/Illegal Dumping Reporting form is located in Attachment "G".

Once an illicit discharge has been confirmed from a ROCS facility, the discharge will be corrected using the most expedient method possible based on the type and configuration of the discharge or connections. Other illicit discharges or releases of polluting materials will be corrected through administrative measures including employee training, placement of signs or markings, policy revisions, or any other steps necessary to eliminate the continued release of polluting materials to the MS4.

Within 60 days of a confirmed illicit connection from a ROCS facility, ROCS will take steps to fix or eliminate the illicit connection. These steps include a review of corrective methods to be used to repair or eliminate the connection, determine the length of time the repair or elimination will take to complete, the cost of the elimination, the pollution potential and consider how the removal of the illicit connection will be confirmed. Corrective methods include capping, closing, or re-routing illicit connections to the sanitary sewer or other collection systems.

2.3.6 Illicit Discharge Elimination Program Policy

Prevention of pollution from storm water runoff and the protection of the quality of the waters of the State of Michigan are of utmost importance to Rochester Community Schools. ROCS does not have regulatory authority to create or enforce ordinances. ROCS has developed a Board Policy Resolution to direct compliance and identify specific actions to be taken by ROCS to ensure compliance with applicable NPDES permit Standards.

Rochester Community Schools has a board policy resolution to direct compliance with these requirements. The ROCS updated School Board Resolution will be reviewed and passed in 2016. A copy of the original School Board Policy Resolution and the updated School Board Policy are provided in Attachment "B".

The ROCS Stormwater Manager or designee will be provided full access to all ROCS facilities and properties owned and operated by the district as required to inspect, investigate, and monitor suspected or confirmed illicit discharges or connections to the MS4.

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 discharges include but are not limited to the following:

- Dumping of motor vehicle fluids
- Improper disposal of household hazardous wastes
- Grass clippings
- Leaf litter
- Pet & other animal wastes
- Unauthorized discharges of sewage
- Industrial wastes
- Restaurant wastes
- Vehicle & equipment wash waters

- Any non-stormwater waste

Document all activities utilizing the Illicit Discharge/Illegal Dumping Reporting form.

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.

Rochester Community Schools' (ROCS) policy is to eliminate all illicit connections or discharges from their facilities and restrict the discharge of polluting substances to the separate storm sewer system. The process to achieve these goals will consist of the inspection and screening of all storm sewer systems and elimination of any improper connection from any ROCS facility to any waterway or the municipally owned separate storm sewer system (MS4).

Discharge Prohibitions

1. Prohibition of Illicit Discharges. ROCS prohibits the discharge of non-stormwater discharges into the storm drain system, including but not limited to pollutants or waters containing any pollutants.
2. The following discharge is not prohibited.
    a. This policy excludes prohibitions from the discharge or flows from firefighting activities to the ROCS 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
        - Foundation drains, water from crawl space sumps, footing drains, and basement sump pumps
        - Air conditioning condensation
        - De-chlorinated swimming pool water from single, two, or three family residences. (swimming pools operated by ROCS shall not be discharges to the separate storm sewer system or a surface water of the state without NPDES permit authorization).

Prohibition of Illicit Connections

1. Improper connections in violation of this regulatory mechanism must be disconnected and redirected.
2. Illicit discharge and connections will be eliminated.
3. The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited by ROCS. 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.

2.3.7 Illicit Discharge Elimination Training

A training program is an important component of to an effective IDEP. Training is required for all employees whose job responsibilities involve illicit discharge related activities, or indicate a potential to cause, witness, or report and illicit discharge or connection. Training is discussed in detail in Section 3.0 of this SWMP.

2.3.8 Illicit Discharge Elimination Program Effectiveness

ROCS is required to track implementation of the illicit discharge elimination program stormwater management items and evaluate its effectiveness. Documentation of these items includes documentations of actions taken to eliminate illicit discharges. The following are examples of the types of performance measures and effectiveness measures that may be used to evaluate the effectiveness of the IDEP program. The following information will be reviewed annually, and will be used to focus and modify activities to maximize environmental benefits of the plan.

- Verify the distribution of public education posters.
- Number of outfalls/discharge points screened.
- Number of illicit connections found.
- Number of illicit connections eliminated.
- Number and type of discharges that are investigated.
- Actions conducted to follow-up discharges that are identified or reported.
- Number of scheduled clean-outs and routine maintenance work conducted.

2.3.9 Illicit Discharge Elimination Program – BMP Table

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #1 Facility Storm Sewer System Maps	Provide an up to date storm sewer system map. The maps shall identify the storm sewer system, location of outfalls and points of discharge, and names and locations of the surface waters of the state receive the discharge.	Maps Completed Updates Ongoing as Needed 2016-2020	100% of facilities mapped, and 100% of storm sewer system updates mapped.	Maintain facility site maps at Facility Operations Building.	ROCS
				Update facility map with sewer system updates. Maintain maps for progress report submittal.	ROCS
BMP#2 Enforcement	Written policy to enforce elimination of illicit discharges into MS4 owned by the Permittee.	Original Board Resolution Passed Updated Board Policy to be passed in 2016	Updated Board Policy Resolution approved.	Copy of Board Policy Resolution.	ROCS
BMP #3 Dry Weather Screening	Dry Weather Screening conducted every 5 years. Dry weather screening will be conducted by personnel trained to recognize all signs of possible illicit discharges.	2018-2019	100% of outfalls and point of discharges inspected and evaluated following a period of 48-72 hours of dry weather. Outfalls/points of discharges re-inspected if necessary.	Maintain dry weather screening inspection logs/reports.	ROCS
BMP #4 Illicit Discharge Reporting	Eliminate illicit discharges and connections through reporting, routine storm sewer system inspections and dry weather screening inspections.	Ongoing 2016-2020	Place "How to spot illicit discharge/ How to Report-Hotline Numbers" posters placed in Receiving Rooms at each ROCS facility. Goal is to have one poster at each facility.	Annually verify number of posters in place throughout the district.	ROCS
			Advertise reporting hotline on district webpage.	Track number of calls and document calls onto Illicit Discharge/Illegal Dumping Reporting form. (Attachment "G").	

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #5 Unauthorized Discharge/ Illicit Discharge Complaint Response	ROCS will immediately evaluate any potential unauthorized or suspected illicit discharge to the municipal separate storm sewer system (MS4) and perform any necessary notifications and reporting to the applicable agencies (i.e., EGLE, local drain commission, etc.) within the required time period(s).	Within 30 days of reported suspected discharge. In the opinion of ROCS, immediate action the suspected discharge is indicated, follow up in 1 week.	100% of unauthorized or suspected illicit discharges evaluated (field observation, field screening, and source investigation) and eliminated.	Documentation of relevant field observations, field screening or source investigations.	ROCS
BMP #6 Illicit Connections	Reroute, repair, or disconnect any illicit connections.	Within 60 days of identified illicit connection	Take steps to eliminate 100% of identified illicit connections.	Work order, receipt or report detailing the illicit connection correction activities.	ROCS
BMP #7 Illicit Discharge Elimination Training	Train staff on the identification and reporting of illicit discharges or improper connections and the cleanup/notification procedures for spills of polluting materials.	Once per permit cycle or during the 1st year of employment 2016-2020	Goal of providing illicit discharge elimination training to all maintenance, transportation, custodial and skilled trade staff who work for ROCS. **[All Stormwater Training is outlined in Section 3.0 Training]**	Copy of sign in sheets and Agenda (if available).	ROCS
BMP #8 Notice of Intent to Discharge Tracer Dyes	Maintain approval from the EGLE for authorization to discharge tracer dyes in surface waters per General Rule 97 to conduct source investigations.	As Needed 2016-2020	EGLE approval to discharge tracer dyes.	Documentation of EGLE approval.	ROCS
BMP #10 IDEP program Performance & Effectiveness	Review performance measures to evaluate the effectiveness of the IDEP program. Items include; posting of IDEP public education posters, number of outfalls/discharge points screened, number of illicit connections found, number of illicit connections eliminated, number and type of violations investigated, and number of scheduled clean-outs and routine maintenance work conducted.	Annually 2016-2020	Annual review of SWMP IDEP program performed.	Maintain copy of SWMP annual review and evaluation information for progress reporting.	ROCS

2.3.10 Polluting Materials Emergency and Spill Response Policy and Procedures

Purpose

This policy and associated procedures have been developed to define appropriate and safe response procedures for spill or accidental releases of hazardous materials or substances at all Rochester Community Schools' facilities.

Policy

Rochester Community Schools will comply with all Federal, State, and local regulatory requirements for the management and reporting of all hazardous materials and/or waste releases.

The Maintenance Department will maintain responsibility for monitoring any changes in regulatory requirements regarding hazardous materials and waste spills or accidental releases. This policy will be revised as necessary based upon any changes in the regulatory requirements or internal experiences. All hazardous materials spills or releases will be thoroughly investigated by the Director of Operations. The Director of Operations will be responsible for developing, maintaining, and implementing procedures for managing significant or hazardous materials spill response and associated employee education and training for compliance with the policy and procedures.

The Director of Operations will immediately report any release of any polluting materials from the MS4 to surface waters or groundwater 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.

If it is determined that the release poses a threat to the safety or the environment outside the facility, the Director of Maintenance and Operations will report the release during regular working hours to the **EGLE District Office at (586)-753-3700**, or after hours to the 24-hour **Michigan Pollution Emergency Alerting System (PEAS) at 1-800-292-4706** immediately or within 24 hours of knowledge of the release. Any release of oil (includes gasoline, diesel fuel, used oil and mineral spirits) to navigable waters or adjoin shorelines will be reported to the 24-hour **National Response Center (NRC) at 1-800-424-8802** immediately or within 24 hours of knowledge of the release. In the event the spill takes place after working hours, site personnel will contact the assigned coordinator to notify the Director of Plant Operations & Services that an incident has occurred.

The Director of Maintenance and Operations will be responsible for developing, maintaining, and implementing procedures for managing significant or hazardous materials spill response and associated employee education and training for compliance with the policy and procedures. The Director of Maintenance and Operations is responsible for notifying the EGLE and/or other local, state, or federal regulatory agencies in the event that a release to the MS4 or surface waters occurs at levels above the threshold reporting quantities referenced in the PA 451 Part 5 rules.

Emergency Spill Response Procedures

Each facility having the potential for the release of a hazardous material or substance shall have trained and knowledgeable staff members to respond and/or implement spill response procedures for that facility. Spill containment materials such as absorbent pigs, pads, booms, diking materials, storm drain covers, etc. are to be stored and maintained at all facilities for use by trained employees in the event of a spill or accidental release.
The following general guidelines are to be implemented as applicable in managing spills and accidental releases:

1) For spills in which there is no immediate dangers to employees, students, or the general public and does not represent a danger of contamination to a sanitary sewer, storm sewer, of the ground:

A. Contain spill to the smallest area possible.
B. Review the Material Safety Data Sheet for determination of proper spill handling, and appropriate personal protective equipment selection.
C. Place compatible absorbent material or spill pads on the area.
D. Clean up and containerize the absorbent materials.
E. Contact the Maintenance and Operations Department for waste disposal instructions and additional cleaning requirements.

2) For a spill that represents an immediate danger to employees, students, or the general public and/or has the potential to impact the sanitary sewer, storm sewer, or the ground:

A. Notify the Maintenance and Operations Department.
B. If there is the treat of fire, explosion, or if any person(s) exhibits severe symptoms of exposure, contact 911 to initiate local emergency services.
C. Alert anyone in the area and begin evacuation procedures.
D. Use absorbent socks, booms, or other absorbents to dike the spill area if safe to do so, and secure the area from unauthorized personnel. Refer to the Material Safety Data Sheet to determine the proper personal protective equipment.
E. Remove all sources of ignition for releases of flammable or combustible materials.
F. The Maintenance and Operations Department will initiate all notification procedures and contact the contracted emergency response contractor to mitigate and remediate the release.
G. Complete the "Hazardous Material or Waste Spill Exposure Form" for all exposed persons.
H. The Director of Operations will assess the spill and notify all agencies as required.

3) Spills of Elemental Mercury

A. Contact the Maintenance and Operations Department immediately.
B. Remove all personnel from the immediate spill area without traveling through the spill area, and if possible, close the door and lower the thermostat in the affected room.
C. Keep all potential contaminated persons in a close area to the spill but outside of the affected area to minimize additional exposure to mercury vapors.
D. Remove and containerize any potentially contaminated clothing or other articles from affected persons.
E. The Director of Operations will contact the appropriate emergency response contractor to clean-up the spill and properly decontaminate and/or dispose of all contaminated articles.

This guidance has been developed in anticipation of potential releases of hazardous materials and substances. The procedures outlined in this guidance should only be implemented by those persons who have received sufficient training and are competent in the handling of the released material.

As appropriate, illicit discharges or releases of polluting materials will be corrected through administrative measures including employee training, placement of signs or markings, policy revisions, or any other steps necessary to eliminate the continued release of polluting materials to the MS4. ROCS will conduct follow-up inspections and sampling as needed to ensure that appropriate action has been completed.

2.4 Construction Site Stormwater Runoff Control Program

ROCS goal is to establish procedures for construction stormwater runoff control to meet minimum measure requirements to maximum extent practicable.

Construction refers to actions that result in a disturbance of the land, including clearing, grading, excavating, and other similar activities.

Construction-related activities are activities that support the construction project such as stockpiles, borrow areas, concrete truck washouts, fueling areas, material storage areas and equipment storage areas.

2.4.1 Construction Site Stormwater Management Program Objectives

A. Process for notify the Part 91 Agency appropriate staff when soil or sediment is discharged to the MS4 from a construction activity.
   - The procedure shall allow for the receipt and consideration of complaints or other information submitted by the public or identified internally as it relates to construction stormwater runoff control.

B. Procedure for when to notify the EGLE when soil, sediment, or other pollutants are discharged to the MS4.
   - Other pollutants include pesticides, petroleum derivatives, construction chemicals, and solid wastes that may become mobilized when land surfaces are disturbed.

C. Procedure for ensuring that construction activity one acre or greater in total land disturbance obtains a Part 91 Permit.

2.4.2 Construction Notification Procedure

The EGLE certified construction stormwater operator inspector conducting site inspections will normally detect any soil or sediment entering the MS4.

In the event an inspector identified a discharge during an inspection:

1. The inspector shall document all details of the soil erosion and sedimentation control deficiency and report to the Director of Operations/ROCS Stormwater Manager.
2. The Director of Operations/ROCS Stormwater (or designee) is responsible for assessing any suspected or confirmed discharge and notifying the appropriate agency.
3. ROCS will notify the local Part 91 agency or EGLE when significant runoff of soil, sediment, or other pollutants such as pesticides, petroleum derivatives, construction chemicals, or solid wastes from the construction site discharges to the MS4 or surface waters of the state within 24 hours of discovery or as otherwise required by the issuing agency.

In the event of a public complaint:

ROCS will track the receipt of complaints submitted by the public or noted by staff during regular course of business of soil, sediment, or other pollutants such as pesticides, petroleum derivatives, construction chemicals, and solid wastes are being discharged into the MS4.

The tracking will include:

- Name of person providing the complaint.
- Location (address or nearest cross street)
- Description of follow up (e.g., date referred to the Part 91 enforcing agency).

ROCS will notify the Part 91 Agency, when soil, sediment, and other pollutants such as pesticides, petroleum derivatives, construction chemicals, and solid wastes are discharged into MS4.

ROCS ensures that construction activity one acre of greater in total earth disturbance with the potential to discharge to the MS4 does obtain a Part 91 Permit and State of Michigan Permit by Rule.

2.4.3 Part 91 Permit

ROCS will ensure that any construction activity that results in a land disturbance meeting the following criteria:

- Greater than or equal to one (1) acre, or
- Disturb less than one (1) acre that is part of a common plan of development or sale.

Will obtain a Part 91 Permit through the site plan review process with the appropriate county or municipal permitting agency.

2.4.4 Permit by Rule Compliance

Rochester community schools shall comply with the State of Michigan Permit by Rule (Rule 323.2190) for stormwater discharge from construction activity. Sites disturbing one (1) to five (5) acres with a point source discharge to the waters of the state receive automatic storm water coverage upon securing a SESC permit from the appropriate county or municipal permitting agency, or being designated an Authorized Public Agency (APA) under the authority of Part 91.

1. Construction sites with at least one (1) acre but less than five (5) acres of soil disturbance with a surface water discharge, must obtain a county or municipal SESC permit, and are required to follow the provisions of the Permit by Rule, but do not need to notify the EGLE of the construction activity.
2. Construction sites disturbing over five (5) acres with a point source discharge to the waters of the state must obtain a county or municipal SESC permit, and submit a Notice of Coverage (NOC) and other pertinent documents and the appropriate fee to the EGLE.

Requirements of Permit by Rule include, but are not limited to:

- Weekly site inspections conducted by a Certified Construction Stormwater Operator.
- Inspection within 24 hours of a precipitation event that results in a discharge from the site by a Certified Construction Stormwater Operator.

2.4.5 Construction Site Stormwater Management-BMP Table

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #1 Notification of Deposit during Inspection	ROCS will notify the local part 91 agencies or EGLE when runoff from the construction site discharges significant pollutants to the MS4 or surface waters of the state within 24 hours of discovery or as otherwise required by the issuing agency. The ROCS Stormwater Manager (or designee) is responsible for assessing any suspected or confirmed discharge and notifying the appropriate agency. (Refer to section 2.4.2)	As Necessary 2016-2020	100% discharges identified and appropriate agencies notified. Control of potential system failure.	Documentation of Construction Stormwater Operator site inspection.	ROCS
	Track complaints submitted by the public or noted by staff during regular course of business of soil, sediment, or other pollutants such as pesticides, petroleum derivatives, construction chemicals, and solid wastes are being discharged into the MS4.			Documentation of public complaint (Name of person providing the complaint, location [address or nearest cross street] description of follow up [e.g., date referred to the Part 91 enforcing agency]).	ROCS
BMP #2 Part 91 Permit	ROCS will ensure that any construction activity that result in a land disturbance greater than or equal to one (1) acre or disturb less than one (1) acre that is part of a common plan of development or sale will obtain a Part 91 Permit through the site plan review process.	As Necessary 2016-2020	100% of permits obtained.	Copy of permit and associated soil erosion and sedimentation control plans.	ROCS
	Construction sites between (1) acre but and five (5) acres of soil disturbance follow the	As Necessary 2016-2020	Goal of 100% of weekly and precipitation event inspection completed by certified Construction Stormwater Operator.	Copy of inspections.	ROCS

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
	provisions of the Permit by Rule, but do not need to notify the EGLE of the construction activity.				
BMP #3 Permit by Rule	Construction sites disturbing over five (5) acres with a point source discharge to the waters of the state must follow provisions of the Permit by Rule and submit a Notice of Coverage (NOC) and other pertinent documents and the appropriate fee to the EGLE.		Goal of 100% of weekly and precipitation event inspection completed by certified Construction Stormwater Operator.	Copy of inspections.	ROCS
			100% NOC obtained.	Copy of NOC	

2.5 Post Construction Stormwater Controls for New Developments & Redevelopments

Post-construction stormwater runoff is the stormwater that would flow from a project site to the MS4 after completion of a development and redevelopment project. The following sections describe the BMPs ROCS will implement as part of the post-construction program.

2.5.1 Post Construction Stormwater Management Program Objectives

The post-construction stormwater run-off controls are necessary to maintain or restore stable hydrology in receiving waters by limiting surface runoff rates and volumes and reducing pollutant loadings from sites that undergo development or significant redevelopment.

The objects of this program and associated procedures are to:

a. Develop and implement regulatory mechanisms to address post-construction stormwater runoff for new development and redevelopment projects, including preventing or minimizing water quality impacts.
b. Develop and implement regulatory mechanisms for projects that disturb one or more acre, including projects less than an acre that are part of a larger common plan of development or sale and discharge into the applicants MS4.
c. Ensure post construction controls to minimize water quality impacts by following water quality treatment standards.
d. Require that BMP's be designed on a site-specific basis to reduce post-development total suspended solids loading.
e. Procedure for the use of Infiltration BMP's to meet water quality treatment and channel protection standards of new development or redevelopment projects.
f. Address "hot spots".
g. Submit site development plans for review and approval.
h. Require adequate long-term O&M of BMPs by ordinance or other regulatory mean

Rochester Community Schools (ROCS) has developed a Post-Construction Stormwater Runoff Program, Policy & Procedures document and passed a board policy resolution on August 12, 2013, to direct compliance with these requirements. The following sections identify specific actions identified in the Stormwater Runoff Program, Policy & Procedures to be taken by ROCS to ensure compliance with the applicable standards. Rochester Community Schools has an updated board policy resolution to direct compliance with these requirements. The ROCS updated School Board Resolution will be reviewed and passed in 2016. A copy of the currant approved ROCS School Board Policy Resolution, updated Board Policy Resolution, and Stormwater Runoff Program, Policy & Procedures are provided in Attachment "B".

2.5.2 Water Quality Treatment Standard

ROCS goal is to include water quality treatment volume standards for each new construction or redevelopment of projects where the area of disturbance exceeds one (1) acre. One or more of the following treatment standards should be included as part:

1. Treat the first one inch of runoff from the area of new construction or redevelopment, or
2. Treat the runoff generated ninety percent (90%) of all runoff-producing storms for the project site.

The source of the rainfall data for the water quality treatment standard of requiring the treatment of the runoff generated from the ninety percent (90%) of all runoff-producing storms is:

- The EGLE memo dated March 24, 2006, which is available via the internet at https://www.michigan.gov/documents/deq/wrd-hsu-ninety-percent_557709_7.pdf.

Treatment methods shall be designed on a site-specific basis to achieve the following:

1. A minimum of eighty percent (80%) removal of total suspended solids (TSS), as compared with uncontrolled runoff, or
2. Discharge concentrations of TSS not to exceed 80 milligrams per liter (80mg/L).

A minimum treatment volume standard is not required where site conditions are such that TSS concentrations in storm water discharges will not exceed 80mg/L.

Treatment methods shall be designed on a site specific basis to reduce the discharge of sedimentation or TSS from the site. Such methods may include:

1. Stand pipe filters in storm water detention basins
2. Sediment filter tanks
3. Catch basin sumps
4. Aqua-Swirls®
5. Treatment trains
6. Rain Gardens
7. Pervious pavement systems

2.5.3 Channel Protection Performance Standard

Rochester Community Schools understands that channel protection criteria is necessary to maintain post-development stormwater runoff volumes and peak flow rates at or below existing levels for all storms up to the 2-year, 24-hour event. "Existing Levels" means the runoff volume and peak flow rate for the last land use prior to the planned new development or redevelopment.

Where more restrictive channel protection criteria already exists, or is needed to meet the goals of reducing runoff volume and peak flows to less than existing levels on lands being developed or redeveloped, Rochester Community Schools will consider use of the more restrictive criteria rather than the standard permit requirements.

A post-construction stormwater runoff program compliance assistance document is available via the internet at https://www.michigan.gov/documents/deq/wrd-storm-MS4-ComplianceAssistance_470350_7.pdf.

2.5.4 Site –Specific Requirements

Because each site has its' own special circumstances and conditions the following BMPs will be considered as appropriate according to site conditions.

- Reduce runoff from the site to greatest extent possible (provide holding basins, divert water through grassed swales).
- Prevent spills and discharges.
- Control waste such as building materials, concrete washout, chemicals, litter, and sanitary waste.
- Phasing will be 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 will be trained in the proper maintenance and operation of Soil Erosion and Silt Prevention measures.

Construction plans will be reviewed for sites with known soil and/or groundwater contamination, including potential "hot spots" and evaluate the use of infiltration BMPs to meet water quality treatment and channel protection criteria. Hot spots include areas with the potential for significant pollutant loading such as vehicle service and maintenance facilities, vehicle equipment cleaning facilities, fleet storage areas for buses, and outdoor liquid container storage.

Additional water quality standards or pretreatment measures may be required in addition to those included in the water quality criteria in order to remove potential pollutant loadings from entering either groundwater of surface water systems.

Pretreatment measures include:

Stormwater Hot Spots	Minimum Pre-Treatment Options
Vehicle service and maintenance facilities	1. Oil/Water Separators/Hydrodynamic Devices. 2. Use of Drip Pans and/or Dry Sweep Material under Vehicles/Equipment 3. Use of Absorbent Devices to Reduce Liquid Releases 4. Spill Prevention Response Program
Fleet storage areas for buses	BMPs that are part of a Stormwater Pollution Prevention Plan (SWPPP)
Vehicle Fueling Stations	1. Oil/Water Separators/Hydrodynamic Devices 2. Water Quality Inserts for Inlets 3. Spill Prevention Response Program
Vehicle equipment cleaning facilities	BMPs that are part of a Stormwater Pollution Prevention Plan (SWPPP)
Outdoor liquid container storage	Spill Prevention Response Program

2.5.5 Site Plan Review

ROCS 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 a form and manner as prescribed by the 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. The review of the stormwater site plan will provide local municipal, county, state or other governmental agency with the ability to ensure that water quality objectives, erosion and sediment control requirements, and BMP maintenance are adequately considered.

The goal of the site plan review is to:

- Minimize clearing and grading.
- Protect waterways.
- Limit soil exposure.
- Protect steep slopes and cuts.

2.5.6 Long-term Operation & Maintenance of Stormwater Controls

Rochester Community Schools 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. ROCS will develop "BMP Operation and Maintenance" guidance manuals for each property, including:

- Develop a map of each facility identifying the location and type of structural controls, if any exist.
- 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.
- Storm water runoff facilities, after construction and approval, shall be maintained in good condition, in accordance with the approved storm water 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 Director of Operations will ensure that local work instructions are developed based on BMP and O&M Guidance Manuals. ROCS trained staff or certified contractors will conduct routine inspection of all identified structural controls and complete maintenance, repair, or replacement as necessary.

2.5.7 Post Construction Stormwater Management-BMP Table

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #1 Regulatory Mechanism	Develop and implement regulatory mechanisms to address post-construction stormwater runoff for new development and redevelopment projects, including preventing or minimizing water quality impact Develop and implement regulatory mechanisms for projects that disturb one or more acre, including projects less than an acre that are part of a larger common plan of development or sale and discharge into the applicants MS4.	Board Policy Resolution passed August 12, 2013 Updated Board Policy Resolution to be passed in 2016	Updated Board Policy Resolution passed.	Copy of currant 2013 Board Resolution Policy. Copy of updated Board Resolution Policy when passed.	ROCS
BMP #2 Post Construction Standards	Ensure post-construction channel protection standards and water quality treatment standards are met.	As Necessary 2016-2020	All applicable site plan are reviewed by the appropriate local municipal, county, state or other governmental agency.	Copy of site plan.	ROCS
BMP #3 Site Specific	ROCS will review construction plans for sites with known soil and/or groundwater contamination, including potential "hot spots" and evaluate the use of infiltration BMPs to meet water quality treatment and channel protection criteria.	As Necessary 2016-2020	Reduce or eliminate discharge of pollutants during construction on contaminated sites.	Documentation of additional stormwater controls.	ROCS
BMP #4 Site Plan Review	Prepare and submit a written application, including site plan for construction of storm water management systems for all new construction or redevelopment projects where the area of disturbance meets or exceeds one (1) acre.	As Necessary 2016-2020	All applicable site plan are reviewed by the appropriate local municipal, county, state or other governmental agency.	Copy of reviewed plans.	ROCS

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #4 Operation & Maintenance	All ROCS owned sites will have an O&M guidance manual including location, description, instructions for inspection, repair, and maintenance, and a schedule for each BMP.	As Necessary 2016-2020 Within 30 days of following the completion a new facility or reconstruction/redevelopment site project.	Ensure O&M requirements are met for all ROCS owned BMPs.	Keep copies of BMP O&M plans and all inspection, maintenance, and repair reports conducted by staff or contractors.	ROCS

2.6 Pollution Prevention & Good Housekeeping Program

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.

2.6.1 Pollution Prevention & Good Housekeeping Program Objectives

a. Maintain an up-to-date inventory of owned facilities and stormwater structural controls.
b. Procedure for updating and revising inventory of stormwater structural controls.
c. Procedure for assessing each facility for the potential to discharge pollutants.
d. Develop an SOP (SWPPP) for all facilities with a high potential for pollutant runoff.
e. 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.
f. Procedure for prioritizing of catch basins/manholes for maintenance and cleaning.
g. Schedule for routine catch basin/manhole inspection, maintenance and cleaning.
h. Provide the geographic location of stormwater structures.
i. Procedure for dewatering, storage and disposal of materials extracted from storm sewer cleaning.
j. Procedure for inspecting and maintaining storm water controls.
k. Procedure for new structural controls to be designed and implemented in accordance with post-construction stormwater runoff control performance standards.
l. Best management practices for operation and maintenance activities.
m. Procedure for street sweeping.
n. Procedure for pesticide application.
o. Training.
p. Contractor requirements and oversight.

It is the ultimate goal of Rochester Community Schools to prevent and reduce pollutant/contaminant runoff from ROCS facilities to the maximum extent practicable. All BMPs are implemented at all low, medium and high priority facilities.

2.6.2 Structural Control Inventory & Schedule Table

No prioritization will be needed, as all structures are to be inspected and maintained equally. All structural controls will have routine inspection, maintenance schedules, and long-term procedures which adequately control, to the maximum extent practicable, pollution removal and control. Structural control effectiveness will be determined based on the results of these inspections and repaired, upgraded, or replaced as indicated.

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
Rochester Adams High School **& Van Hoosen Middle School** 1339 N. Adams, Rochester Hills, MI 48306	Medium	Catch Basins/Manholes	115	Inspect Annually, Clean Once per Permit Cycle
		Stabilized Outlet	1	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	4	Inspect Annually, Maintain as Needed
		Basin Drain	3	Inspect Annually, Maintain as Needed
		Landscape Drain	1	Inspect Annually, Maintain as Needed
		Infiltration Basins	11	Inspect Annually, Maintain as Needed
		Underground Detention System	1	Inspect Annually, Maintain as Needed
		Trench Drains	2	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	2	Inspect Annually, Maintain as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
Rochester Adams High School & Van Hoosen Middle School cont.		Detention Basin	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Reporting Numbers Poster	1	Replace as Needed
Administration Building 501 University Drive, Rochester, MI 48307	**Low**	Catch Basin/Manhole	15	Inspected Annually, Clean Once per Permit Cycle
		Trench Drain	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
Baldwin Elementary School 4325 Bannister Road, Rochester, MI 48306	Low	Catch Basin/Manhole	8	Inspected Annually, Clean Once per Permit Cycle
		Infiltration Basin	1	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	5	Inspect Annually, Maintain as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
Baldwin Elementary School cont.		Drainage Receptor	2	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	2	Inspect Annually, Maintain as Needed
		Detention Basin	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
Brewster Elementary School 1535 Brewster Road, Rochester Hills, MI 48306	Low	Catch Basin/Manhole	17	Inspected Annually, Clean Once per Permit Cycle
		Basin Drain	1	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	6	Inspect Annually, Maintain as Needed
		Drainage Receptor	2	Inspect Annually, Maintain as Needed
		Underground Detention System	1	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	2	Inspect Annually, Maintain as Needed
		Detention Basin	1	Inspect Annually, Maintain as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
Brewster Elementary School cont.		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
Brooklands Elementary School 490 E. Auburn Road, Rochester Hills, MI 48307	Low	Catch Basin/Manhole	22	Inspected Annually, Clean Once per Permit Cycle
		Infiltration Basin	1	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	1	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	1	Inspect Annually, Maintain as Needed
		Detention Basin	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
Delta Kelly Elementary School	Low	Catch Basin/Manhole	43	Inspected Annually, Clean Once per Permit Cycle
		Stabilized Outlet	6	Inspect Annually, Maintain as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
Delta Kelly Elementary School cont. 3880 Adams Road, Oakland, MI 48363		Open Pipe Outlet	6	Inspect Annually, Maintain as Needed
		Drainage Receptor	1	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	1	Inspect Annually, Maintain as Needed
		Detention Basin	1	Inspect Annually, Maintain as Needed
		Detention Pond	1	Inspect Annually, Maintain as Needed
		Creek	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
Facilities Operations Building 1402 W. Hamlin Road, Rochester Hills, MI 48309	Storm Water General Permit (Permit No. 110000), Certificate of Coverage MIS111754.	Salt Storage	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1	Replace as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
		Illicit Discharge Poster	1	Replace as Needed
		National Express Cooperation is responsible for all other structural controls		
Hamlin Elementary School 270 West Hamlin, Rochester Hills, MI 48307	Low	Catch Basin/Manhole	26	Inspected Annually, Clean Once per Permit Cycle
		Infiltration Basin	1	Inspect Annually, Maintain as Needed
		Underground Detention System	1	Inspect Annually, Maintain as Needed
		Flow Splitter	1	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	3	Inspect Annually, Maintain as Needed
		Detention Basin	1	Inspect Annually, Maintain as Needed
		Creek	1	Inspect Annually
		Outdoor Education Center	2	Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
		Illicit Discharge Poster	1	Replace as Needed
Hampton Elementary School 530 Hampton Circle, Rochester Hills, MI 48307	Low	Catch Basin/Manhole	13	Inspected Annually, Clean Once per Permit Cycle
		SEMCOG Posters	1-3	Maintain as Needed
		Illicit Discharge Poster	1	Maintain as Needed
Hart Middle School	Low	Catch Basin/Manhole	54	Inspected Annually, Clean Once per Permit Cycle
		Open Pipe Outlet	8	Inspect Annually, Maintain as Needed
		Drainage Receptor	4	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	2	Inspect Annually, Maintain as Needed
		Detention Basin	2	Inspect Annually, Maintain as Needed
		Creek	1	Inspect Annually
		SEMCOG Posters	1-3	Replace as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
		Illicit Discharge Poster	1	Replace as Needed
Hugger Elementary School 5050 Sheldon Road, Rochester Hills, MI 48306	Low	Catch Basin/Manhole	32	Inspected Annually, Clean Once per Permit Cycle
		Infiltration Basin	14	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	1	Inspect Annually, Maintain as Needed
		Landscape Drain	1	Inspect Annually, Maintain as Needed
		Underground Detention System	1	Inspect Annually, Maintain as Needed
		Septic Tanks	2	Inspect Annually, Clean Annually
		Grease Interceptor	1	Inspect Annually, Clean Annually
		Septic Field	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
John M. Schultz Educational Center (Formerly Alternative Center for Education High School) 1440 John R Road, Rochester, MI 48307 City of Rochester MS4 runs through property	Medium	Catch Basin/Manhole	23	Inspect Annually, Clean Once per Permit Cycle
		Flow Splitter	2	Inspect Annually, Maintain as Needed
		Hydrodynamic Separator	2	Inspect Annually, Maintain as Needed
		Underground Detention System	1	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Reporting Numbers Poster	1	Replace as Needed
Long Meadow Elementary School	Low	Catch Basin/Manhole	30	Inspected Annually, Clean Once per Permit Cycle

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
Long Meadow Elementary School cont. 450 Allson Road, Rochester Hills, MI 48309		Infiltration Basin	1	Inspect Annually, Maintain as Needed
		Trench Drain	1	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	2	Inspect Annually, Maintain as Needed
		Flow Splitter	1	Inspect Annually, Maintain as Needed
		Landscape Drain	1	Inspect Annually, Maintain as Needed
		Underground Detention Basin	1	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	2	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
McGregor Elementary School 1101 First Rochester Street, Rochester, MI 48307	Low	Catch Basin/Manhole	31	Inspected Annually, Clean Once per Permit Cycle
		Infiltration Basin	2	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	1	Inspect Annually, Maintain as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
McGregor Elementary School cont.		Underground Detention Basin	1	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	3	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
Meadow Brook Elementary School 2350 Munster Road, Rochester Hills, MI 48309	Low	Catch Basin/Manhole	28	Inspected Annually, Clean Once per Permit Cycle
		Infiltration Basin	1	Inspect Annually, Maintain as Needed
		Drainage Receptor	1	Inspect Annually, Maintain as Needed
		Underground Detention System	2	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
Musson Elementary School	Low	Catch Basin/Manhole	20	Inspected Annually, Clean Once per Permit Cycle

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
Musson Elementary School cont. 3500 Dutton Road, Rochester Hills, MI 48306		Infiltration Basin	1	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	4	Inspect Annually, Maintain as Needed
		Drainage Receptor	1	Inspect Annually, Maintain as Needed
		Stabilized Outlet	1	Inspect Annually, Maintain as Needed
		Rip Rap	2	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	1	Inspect Annually, Maintain as Needed
		Detention Pond	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
North Hill Elementary School 1385 Mahaffey Avenue, Rochester, MI 48307	Low	Catch Basin/Manhole	28	Inspected Annually, Clean Once per Permit Cycle
		Trench Drain	1	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	4	Inspect Annually, Maintain as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
North Hill Elementary School cont.		Drainage Receptor	2	Inspect Annually, Maintain as Needed
		Stabilized Outlet	2	Inspect Annually, Maintain as Needed
		Detention Basin	1	Inspect Annually, Maintain as Needed
		Detention Pond	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
Reuther Middle School 1430 E. Auburn Road, Rochester Hills, MI 48307	Low	Catch Basin/Manhole	36	Inspected Annually, Clean Once per Permit Cycle
		Infiltration Basin	8	Inspect Annually, Maintain as Needed
		Stabilized Outlet	1	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	2	Inspect Annually, Maintain as Needed
		Detention Basin	1	Inspect Annually, Maintain as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed
Rochester High School 1361 Walton Boulevard, Rochester Hills, MI 48309	Medium	Catch Basin/Manhole	88	Inspected Annually, Clean Once per Permit Cycle
		Basin Drain	10	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	3	Inspect Annually, Maintain as Needed
		Detention Basin	2	Inspect Annually, Maintain as Needed
		Drainage Receptor	2	Inspect Annually, Maintain as Needed
		Stabilized Outlet	1	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	4	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1	Replace as Needed
		Illicit Discharge Poster	1	Replace as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
Stoney Creek High School 6755 Sheldon Road, Rochester Hills, MI 48306	Medium	Catch Basin/Manhole	88	Inspected Annually, Clean Once per Permit Cycle
		Stabilized Outlet	2	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	6	Inspect Annually, Maintain as Needed
		Drainage Receptor	1	Inspect Annually, Maintain as Needed
		Infiltration Basin	3	Inspect Annually, Maintain as Needed
		Basin Drain	2	Inspect Annually, Maintain as Needed
		Landscape Drain	5	Inspect Annually, Maintain as Needed
		Stabilized Outlet	1	Inspect Annually, Maintain as Needed
		Detention Pond	1	Inspect Annually, Maintain as Needed
		Detention Basin	1	Inspect Annually, Maintain as Needed
		Creek	1	Inspect Annually
		SEMCOG Posters	1-3	Replace as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
		Illicit Discharge Poster	1	Replace as Needed
Transportation Building **Transportation Building cont.** 380 S. Livernois, Rochester, MI 49307	Storm Water General Permit (Permit No. 110000), Certificate of Coverage MIS111753	SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Reporting Numbers Posters	1	Replace as Needed
		National Express Corporation is responsible for all other structural controls		
University Hills Elementary School 600 Croydon Road, Rochester Hills, MI 48309	Low	Catch Basin/Manholes	5	Inspect Annually, Clean Once per Permit Cycle
		Stormwater Conveyance Channel	1	Inspected Monthly, Maintained as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Reporting Numbers Poster	1	Replace as Needed
West Middle School 500 Old Perch, Rochester Hills, MI 48309	Low	Catch Basins/Manholes	39	Inspect Annually, Clean Once per Permit Cycle
		Infiltration Basin	3	Inspect Annually, Maintain as Needed
		Lift Station	1	Inspect Annually, Maintain as Needed

Facility	Priority Level of Potential Discharge (High, Medium, Low)	Type of Structural Control	Number of Controls	Inspection/Maintenance Schedule
West Middle School cont.		Stabilized Outlet	2	Inspect Annually, Maintain as Needed
		Drainage Receptor	1	Inspect Annually, Maintain as Needed
		Open Pipe Outlet	4	Inspect Annually, Maintain as Needed
		Trench Drain	1	Inspect Annually, Maintain as Needed
		Stormwater Conveyance Channel	1	Inspect Annually, Maintain as Needed
		Detention Pond	1	Inspect Annually, Maintain as Needed
		SEMCOG Posters	1-3	Replace as Needed
		Illicit Discharge Reporting Numbers Poster	1	Replace as Needed

2.6.3 Facility Assessment & Prioritization

ROCS has identified all applicant owned facilities with a discharge of stormwater to surface waters of the state, and during mapping of each facility, inventoried the number of stormwater structural controls (i.e. catch basins, detention basins, etc.) at each site. Each location was assessed to determine high, medium and low potential to discharge pollutants to surface waters of the state.

ROCS considered the following when assessing each facility:

- Absence of any factors.
- Presence of urban pollutants stored at the site (i.e. sediment, nutrients, metals, hydrocarbons, pesticides, fertilizers, herbicides, chlorides, trash, bacteria, or other site-specific pollutants.
- Identification of improperly stored materials.
- Potential for polluting activities to be conducted outside (i.e. vehicle washing).
- Proximity to water bodies.
- Poor housekeeping practices.
- Discharge of pollutants of concern to impaired waters.

For facilities that have a high potential to discharge pollutants to surface waters of the state, a Stormwater Pollution Prevention Plan (SWPPP) and/or Pollution Incident Prevention Plan (PIPP) for salt storage facilities will continue to be implemented.

BMP's currently implemented by Rochester Community Schools at facilities with medium and lower potential for the discharge of pollutants to surface waters of the state include:

1. Good housekeeping practices
2. Employee training
3. Routine visual inspections
4. Spill prevention and response

This inventory will be updated as facilities and structural stormwater controls are added, removed, or no longer owner or operated by the applicant following routine inspections or following new construction or redevelopment projects. Priority level assessments will be revised within 30 days following the completion a new facility or reconstruction/redevelopment.

2.6.4 Storm Sewer Structure Controls Inspection & Maintenance Policy & Procedure

1. Develop a schedule for inspecting and maintaining catch basins and stormwater controls at each facility, the reduction of pollutant runoff. Schedule is included in Section 2.6.2 Structural Control Inventory & Schedule Table.
2. Visually inspect all stormwater controls identified on facility maps. Items to be reviewed during the inspection include structural integrity of the structure, sediment build-up, flow, overall functionality and erosion. A copy of the inspection form "Structural BMP Table" is located in Attachment "F".
3. Note inspection information on the inspection form.
4. When inspecting stormwater controls, review the site for BMPs currently implemented to prevent or reduce pollutant runoff at each facility. BMP's include:
    - Review of "No Dumping" stencils at storm drains

- Review of catch basins/manholes cleaned
- Dumpster good housekeeping practices
- SEMCOG poster placement at facilities
- Illicit discharge reporting numbers poster placement at facilities
- How to spot illicit discharge posters placement at facilities
- Spill kit availability at facilities

5. Document BMPs identified during inspection.
6. Following the inspection, the stormwater controls should be prioritized for cleaning and maintenance. Prioritize locations based on the following:
    - Drainage structures that are designated as consistently generating the highest volumes of trash and/or debris.
    - Areas with high amounts of build-up sediment. A build-up of accumulated solid material that is greater than or equal to the one-third guideline established by the EPA. Areas of significant erosion.
    - Areas of significant cracking or sinkholes.
3. Once the inspection is complete, the stormwater manager or designated person will review the report and determine if a work order or other item is needed to needed to work with relevant departments or contractors to fix any problems.
4. If an illicit discharge is suspected, follow the procedure outlined in Section 2.3 Illicit Discharge Elimination Program.
5. Retain inspection forms for each stormwater structural control inspected.
6. Retain documentation regarding the scheduling or completion of the repair/maintenance if completed.
7. Debris and maintenance wastes removed as part of the maintenance and/or repairs shall be disposed of in accordance with Structural BMP Operation & Maintenance Waste Disposal procedures.

Furthermore, staff members conducting maintenance and grounds activities are provided IDEP and pollution prevention/good housekeeping training. All structural controls will have routine inspection, maintenance schedules, and long-term procedures which adequately control, to the maximum extent practicable, pollution removal and control. Structural control effectiveness will be determined based on the results of these inspections and repaired, upgraded, or replaced as indicated. This procedure will be reviewed on an annual basis and updated as needed or 30 days following the implementation of a new stormwater structural control.

2.6.5 Structural BMP Operation & Maintenance Waste Disposal Procedures

Waste materials generated from operation, maintenance, and cleaning activities associated with storm sewer systems has typically been discharged back into the storm sewer system. This type of discharge is unauthorized per Part 31, Water Resources Protection (Part 31) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) and is therefore illegal. The combined solid and liquid waste stream (solid/liquid waste) from cleaning storm sewer systems is legally defined as “Liquid Industrial Waste” pursuant to Part 121, Liquid Industrial Wastes (Part 121) of NREPA.

ROCS will ensure that all waste materials generated during operation and maintenance of structural stormwater controls are properly characterized, transported, and disposed as required under State of Michigan PA 451 Part 111 (hazardous wastes), Part 121 (liquid industrial wastes), and Part 115 (solid wastes). At a minimum, the following procedures will be implemented for wastes generated from cleaning or maintaining storm sewer structural controls.

Structural BMP Operation & Maintenance Waste Characterization

Prior to conducting cleaning or maintenance to storm sewer structural controls, a certified stormwater operator will complete a waste generation determination. This determination will include a visual inspection of the structure and identification of any waste materials to be generated during the cleaning or maintenance process. The certified operator will document a description of materials currently in the structure and other observations used to determine if potential contaminants are present.

Visual observations and physical characteristics to be examined and documented as part of the waste characterization protocols include identification or the presence of:

- Oil or petroleum sheens
- Sedimentation or solids
- Odors
- Color
- Staining
- Vegetation conditions
- Floatables
- Other damage to the structure or observations identifying potential contaminants

Visual observations will be recorded and an assessment completed determining if additional evaluation or testing will be required prior to removal of the wastes. Contaminated materials will be characterized using physical & chemical analysis as required to determine if the resulting wastes are hazardous wastes regulated under part 111 of PA 451 (NREPA). Non-hazardous contaminated materials will be removed and managed as "Liquid Industrial Waste" as required under part 121 of PA 451 (NREPA).

Waste Disposal Methods for Non-Contaminated Materials

Non-contaminated waste materials generated during cleaning or maintenance of storm sewer structures will be properly disposed using one of the following methods:

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

    - Conduct visual inspection to ensure the water in the sump has not been contaminated. If necessary, collect a grab sample of the water and look for signs of contamination such as visible sheen, discoloration, obvious odor, etc. If there is any doubt of the quality of the water, it should be collected into a vacuum truck and treated as waste under Part 121 or Part 115 of PA 451 (NREPA).

- Using a sump pump, or any other pumping mechanism, remove the majority of water in the sump of the basin without disturbing the solid material below. Do not use pumps connected to the vacuum truck's holding tank.
- The clear water may then be directly discharged to one of the following:
    - Sanitary system (with prior approval from local sewer authority).
    - Curb and gutter.
    - Back into the storm sewer system as long as it is contained within the system during dry weather condition to ensure no discharge into surface water.
    - Applied to the ground adjacent to the catch basin (evenly distributed at a maximum rate of 250 gallons/acre/year).
- The remaining liquid/solid in the sump should be collected with a vacuum truck and disposed of off-site in accordance with MI P.A. 451 Parts 115 or 121.

ROCS does not currently own or operate storm sewer cleaning or transportation equipment. If ROCS contracts with a private contractor to transport liquids generated from cleaning of catch basins or other structures, that contractor must be registered and permitted as a Uniform Liquid Industrial Waste Hauler under the provisions of HMTA.

Waste Disposal Methods for Contaminated Materials

Waste materials generated during operation and maintenance of storm sewer systems found or suspected to be contaminated with pollutants or hazardous substances will be characterized, packaged, marked, labeled, stored, transported, and disposed as a regulated waste under Part 121 or Part 115 of PA 451 (NREPA).

2.6.6 Pollution Prevention/Good Housekeeping – Municipal Operations & Maintenance Activities

ROCS recognizes the importance of reducing pollutant runoff from maintenance activities. The following procedure will include an assessment of the potential activities for the potential to discharge pollutants. The assessment shall identify the pollutants that could be discharged from the applicable operation and maintenance activity and the BMPs implemented or to be implemented to prevent or reduce pollutant runoff.

Procedure

Applicable operations and maintenance activities include parking lot and sidewalk maintenance, cold weather operations, vehicle washing, maintenance of vehicles, septic system, land disturbance and landscape. Bridge maintenance, right-of-way maintenance and unpaved road maintenance do not apply to ROCS.

Roadways/Parking Lots

Maintenance: Pothole, sidewalk, curb and gutter repair.
Possible Pollutants: Fuel, oil, sediment, concrete.
BMPs to address Pollutants:

1. Contractors and in-house staff contracted to complete for these jobs are informed of stormwater management practices to reduce pollution in stormwater.
2. Avoid mixing excess amounts of fresh concrete or cement.
3. Never dispose of washout into the street, storm drains, ditches or creeks.
4. Stencil storm drains to prevent disposal of wash water.
5. Schedule patching, resurfacing and surface sealing during dry weather.

6. If it rains unexpectedly, take appropriate action to prevent pollution of storm water runoff (e.g., divert runoff around work areas, cover materials).
7. Maintain pollution prevention/good housekeeping practices, which is to remove stockpiles (asphalt materials, sand, etc.) by the end of the day to a covered location. Alternatively, cover the piles if they cannot be moved.

Process for updating assessment: Contractor or project is assessed on an ongoing basis, and problems are addresses when found.

Cold Weather Operations

Maintenance: Plowing, sanding, deicing, snow pile disposal.

Possible Pollutants: Sodium, magnesium, calcium, potassium, chloride, turbidity.

BMPs to address Pollutants:

1. Keep all deicing material covered or in waterproof containers.
2. Prevent deicer drainage to storm sewers.
3. Mechanical removal of as much snow or ice as possible prior to applying deicing chemicals.
4. Proper salt storage management.
5. Maintain application equipment in good working condition.

Process for updating assessment: BMPs will be assessed for effectiveness within 30 days following their addition or removal.

Vehicle Washing

Maintenance: Washing of buses, staff vehicles and maintenance equipment.

Possible Pollutants: Petroleum based wastes, metals, and nutrients.

BMPs to address Pollutants:

1. All vehicle washing and maintenance is to be performed indoors where drains connecting to the sanitary system can receive all wastes.
2. Alternatively, vehicle washing can be performed at a commercial auto wash facility.
3. Alternatively, rinse grass from lawn care equipment on permeable (grassed) areas.
4. School car wash fundraising events will not be permitted on school grounds.

Process for updating assessment: BMPs will be assessed for effectiveness within 30 days following their addition or removal.

Vehicle Maintenance

Possible Pollutants: Petroleum based wastes, metals, and nutrients.

BMPs to address Pollutants:

1. Oil-water separators will be inspected routinely and serviced as necessary to maintain efficiency.
2. All vehicle or equipment maintenance will take place inside or away from storm drains where drains connecting to the sanitary system can receive all wastes.
3. All drains within maintenance garages will be dye tested to assure that no drains flow into the separate storm sewer system.
4. Recycle used motor oil, diesel oil, other vehicle fluids, and vehicle parts whenever possible.

Process for updating assessment: BMPs will be assessed for effectiveness within 30 days following their addition or removal.

Landscaping

Possible Pollutants: Wood chips, sediment, sand, and compost.

BMPs to address Pollutants:

1. Place temporary stockpiled material away from storm drains, and berm or cover stockpiles to prevent material releases into the storm drain. Alternatively, place stockpiles on permeable (grassed) areas.
2. Conduct annual stream back inspections.
3. Provide adequate buffer areas at stream banks.

Process for updating assessment: BMPs will be assessed for effectiveness within 30 days following their addition or removal.

Septic System (Hugger Elementary School)

Possible Pollutants: sewage & chlorine.

BMPs to address Pollutants:

1. Inspect system annually.
2. Pump out system annually.

Process for updating assessment: BMPs will be assessed for effectiveness within 30 days following their addition or removal.

Land Disturbance

Possible Pollutants: sediment runoff.

BMPs to address Pollutants:

1. Plan land clearing so soil is not exposed for long periods of time.
2. Place temporary stockpiled material away from storm drains, and berm or cover stockpiles to prevent material releases into the storm drain.
3. Protect against sediment flowing into drains.
4. Install sediment barriers.

Process for updating assessment: BMPs will be assessed for effectiveness within 30 days following their addition or removal.

Assessment

Any issues identified during the inspections will be reviewed and addressed by the Stormwater Manager.

2.6.7 Street Sweeping Procedure, Prioritization & Schedule

Prioritization

The EGLE NPDES Phase II Stormwater Discharge Permit requires a procedure for prioritizing owned streets, parking lots, and other impervious infrastructure for street sweeping based on the potential to discharge pollutants.

ROCS evaluated each facility for the presence of the following factors:

- Absence of any factors
- Potential for polluting activities to be conducted outside
- Proximity to water bodies
- Traffic volume

- Land use

Procedure

ROCS does not own or operate sweeping equipment. However, ROCS will be proactive and undertake the following activities to reduce the potential to discharge pollutants to surface waters of the state from parking lots and other impervious infrastructures.

1. Conduct seasonal efforts to remove leaves.
2. Inspect parking lot and street areas.
3. Conduct hand sweeping of debris to prevent accumulated wastes.
4. Waste disposal areas will be kept free of litter and debris.
5. Analyze sediment, removed from an inlet cleaning if it is suspected of being contaminated with a hazardous material, prior to disposal. Sediment or materials determined to be hazardous waste will be disposed of in accordance with Section 2.6.6.Structural BMP Operation & Maintenance Waste Disposal procedures.
6. Contract out street cleaning when appropriate.

This prioritization will be updated as facilities and structural stormwater controls are added, removed, or no longer owner or operated by the applicant following routine inspections, or as traffic volume, land use or sediment and trash accumulation increases.

Prioritization Levels & Schedule

All low, medium and high prioritized parking lots and streets are inspected on the same schedule in an effort to reduce pollutants.

Facility Name	Priority Level of Potential Discharge* (High, Med, Low)	Street Sweeping Schedule
Adams High School & Van Hoosen Middle School	Medium	Bimonthly Inspections, Hand Clean as Needed
Administration Building	Low	Bimonthly Inspections, Hand Clean as Needed
Baldwin Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
Brewster Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
Brooklands Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
Delta Kelly Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed

Facility Name	Priority Level of Potential Discharge* (High, Med, Low)	Street Sweeping Schedule
Facilities Operations Building		* Operated by National Express Corporation Storm Water General Permit (Permit No. 110000), Certificate of Coverage MIS111754.
Hamlin Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
Hampton Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
Hart Middle School	Low	Bimonthly Inspections, Hand Clean as Needed
Hugger Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
John M. Schultz Educational Center (Formerly Alternative Center for Education High School)	Low	Bimonthly Inspections, Hand Clean as Needed
Livernois Bus Facility		* Operated by National Express Corporation Storm Water General Permit (Permit No. 110000), Certificate of Coverage MIS111753
Long Meadow Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
McGregor Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
Meadow Brook Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
Musson Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
North Hill Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
Reuther Middle School	Low	Bimonthly Inspections, Hand Clean as Needed
Rochester High School	Medium	Bimonthly Inspections, Hand Clean as Needed
Stoney Creek High School	Medium	Bimonthly Inspections, Hand Clean as Needed

Facility Name	Priority Level of Potential Discharge* (High, Med, Low)	Street Sweeping Schedule
University Hills Elementary School	Low	Bimonthly Inspections, Hand Clean as Needed
West Middle School	Low	Bimonthly Inspections, Hand Clean as Needed

Disposal

If a commercial street sweeper is contracted to clean parking lot and street areas for ROCS, the street sweeping activities are subject to the solid waste requirements. Solid waste must be managed under Part 115 requirements. Dispose of the solid waste in a licensed landfill. The contractor hired to do the street sweeping is responsible for proper disposal of the waste material. The contracted sweeping will not be completed when streets are wet, so dewatering of the collected debris should not be required.

2.6.8 Managing Vegetated Properties

ROCS has established this policy to prevent or reduce pollutant runoff from vegetated land.

1. ROCS requires all contracted personnel who participate in the application of pesticides will be trained and licensed by the State of Michigan under the Commercial Pesticide Application Certification Program for relevant categories as applicable, to prevent or reduce pollutant runoff from vegetated land.
2. Whenever practicable, an integrated pest management techniques will be implemented.

2.6.9 Contractor Requirements & Oversight

Rochester Community Schools requires contractors to comply with pollution prevention and good housekeeping BMPs. ROCS will perform the following activities for applicable contractors and projects to comply with all pollution prevention and good housekeeping BMPs as appropriate and comply with pollution as well as provide oversight to ensure compliance. Prior to conducting work, contractors will be directed to conduct online "Contractor Training".

- Contractor Notification
- Contractor Training
- Pre-project Meeting/Review
- Periodic Inspections

2.6.10 Pollution Prevention/Good House Keeping Training

A training program is an important component to effective pollution prevention. Training is required for all employees whose job responsibilities involve municipal or maintenance activities. Training is discussed in detail in Section 3.0 of this SWMP.

2.6.11 Pollution Prevention/Good Housekeeping –BMP Table

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #1 Structural Control Inventory	Provide an up to date inventory of the number of stormwater structural controls for each facilities (i.e. catch basins, detention ponds). Update facilities potential to discharge pollutants (high, medium, low) following the update.	Initial Update Completed Further Updates as Needed Within 30 days following the completion a new facility or reconstruction/ redevelopment. 2016-2020	100% of stormwater structural controls inventoried.	Maintain list of inventory and potential to discharge priority level. Submit updated list with progress report, noting if priority levels have changed.	ROCS
BMP #2 SWPPP development & implementation (SOP)	Develop a "Stormwater Pollution Prevention Plan (SWPPP)" for maintenance, transportation, and storage facilities/Implement policies & procedures.	Developed & Implemented Ongoing 2016-2020	SWPPP completed and 100% of inspections implemented.	Copy of SWPPP.	ROCS
BMP #3 PIPP development & implementation	Develop and implement "Pollution Incident Prevention Plan" for the salt storage facility.	Developed & Implemented Ongoing 2016-2020	PIPP completed and implemented.	Copy of PIPP.	ROCS
BMP #4 Stormwater Structural Control Inspections	Visually inspect stormwater controls identified on facility maps.	Annually 2016-2020	Routine schedule implemented and inspections reviewed by stormwater manager.	Maintain inspections form/reports regarding inspections.	ROCS

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #5 Review for BMP's Implemented	While inspecting stormwater controls, review the site for BMPs currently implemented to prevent or reduce pollutant runoff at each facility; such as storm drain stencils, areas cleaned, areas repaired, SEMCOG poster placement, Illicit discharge education posters, and spill kits.	Annually 2016-2020	Annual inspections completed and reviewed by stormwater manager.	Documentation of inspection findings (number of posters, number of spill kits, pictures of stencils, pictures of spill kits).	ROCS
BMP #6 Prioritization of Storm Sewer Locations for Maintenance & Cleaning	Following the inspection, the stormwater controls should be prioritized for cleaning and maintenance. Prioritize locations based on (1) drainage structures that are designated as consistently generating the highest volumes of trash and/or debris, (2) areas with high amounts of build-up sediment, (3) areas of significant cracking or sinkholes.	Annually 2016-2020	Prioritization locations identified.	Copy of prioritization.	ROCS
BMP #7 Cleaning & Maintenance (Catch Basin/ Manhole Cleaning)	ROCS will ensure that all waste materials generated during operation and maintenance of structural stormwater controls are properly characterized, transported, and disposed as required under State of Michigan PA 451 part 111 (hazardous wastes), part 121 (liquid industrial wastes), and part 115 (solid wastes).	As needed or Once per Permit Cycle 2016-2020	Prioritized locations cleaned once per permit cycle. All waste disposed as required.	Copies of Waste Manifests.	ROCS

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #8 BMP Operation & Maintenance (O&M) Guidance Manuals	Maintain existing schedules, maps and inspection reports in current Operation & Maintenance Manuals. Develop Manuals for new facilities.	Annually 2016-2020	Manuals reviews and updated annually.	Manuals up to date an available for review.	ROCS
BMP #9 Roadways & Parking Lots	Storm drains stenciled to prevent disposal of wash water into storm drains.	As Needed 2016-2020	Storm drain stencils inspected and maintained as need.	Copy of work order. Photos of stenciling.	ROCS
BMP #10 Cold Weather Operations	Proper salt storage management. **See PIPP Development & Implementation, BMP #3).** Maintain equipment in good working condition.	Ongoing 2016-2020	Continue proper salt storage and management as previously implemented.	Copy of inspection report.	ROCS
BMP #11 Vehicle Washing	All vehicle washing and maintenance is to be performed indoors where drains connecting to the sanitary system can receive all wastes.	Ongoing 2016-2020	100 % of applicable staff trained on were to wash vehicles.	Copy of sign in sheets and Agenda (if available).	ROCS
	Alternatively, rinse grass from lawn care equipment on permeable (grassed) areas.		100 % of applicable staff trained on were to wash vehicles.	Copy of sign in sheets and Agenda (if available).	
	School car wash fundraising events will not be permitted on school grounds.		Notice sent to staff regarding policy.	Copy of email or policy.	

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #12 Vehicle Maintenance	All drains within maintenance garages will be dye tested to assure that no drains flow into the separate storm sewer system.	2016-2020	100% of floor drains inspected.	Copy of inspection report.	ROCS
	Oil-water separators will be inspected routinely and serviced as necessary to maintain efficiency.	Annually 2016-2020	Oil-water separators cleaned and functioning properly.	Copy of invoices or shipping papers.	
	Recycle used motor oil, diesel oil, other vehicle fluids, and vehicle parts whenever possible.	As Needed 2016-2020	Reduction in amount of disposed material and amount of material shipped for off-site disposal.	Copy of invoices or shipping papers.	
BMP #13 Stream Bank Inspection	Conduct stream bank inspections. Inspect banks along properties to identify erosion or potential erosion problems and check for water clarity conditions. Properly maintain buffer areas.	Annually 2016-2020	100% of bank inspections completed.	Copy of inspection sheets/reports.	ROCS
BMP #14 Land Disturbance	Place temporary stockpiled material away from storm drains, and berm or cover stockpiles to prevent material releases into the storm drain. Protect against sediment flowing into drains.	As Needed 2016-2020	100 % of applicable staff trained.	Copy of sign in sheets and Agenda (if available).	ROCS

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #15 Street Sweeping	Bimonthly inspections of streets and parking lots; clean as needed.	Bimonthly 2016-2020	Inspections completed.	Copy of work order or schedule.	ROCS
	Street sweeping conducted by a professional sweeping company.	As Needed 2016-2020		Copy of invoice or disposal documentation.	
BMP #16 Vegetated Properties (Pesticides)	ROCS requires all contracted personnel who participate in the application of pesticides will be trained and licensed by the State of Michigan under the Commercial Pesticide Application Certification Program for relevant categories as applicable, to prevent or reduce pollutant runoff from vegetated land.	Ongoing 2016-2020	Application of pesticides will only be completed by trained and licensed applicators.	Documentation of in-house staff license or copy of contractor receipt.	ROCS
BMP #17 Contractor Oversight	ROCS requires contractors to comply with pollution prevention and good housekeeping BMPs. ROCS will complete contractor notification, pre-project meeting and periodic inspections to provide oversight to ensure compliance.	As Needed 2016-2020	Contractors training and informed of pollution prevention and good housekeeping techniques.	Copy of sign in sheets, pre-project meeting notes or inspections.	ROCS
	Direct contractors to online "Contractor Training" prior to conducting work.				
BMP #18 Training	Pollution prevention and good housekeeping training.	Once per permit cycle or during the 1st year of employment 2016-2020	Goal of providing training to maintenance staff who work for ROCS. **[All Stormwater Training is outlined in in Section 3.0 Training]**	Copy of sign in sheets and Agenda (if available).	ROCS

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #19 Pollution Prevention & Good Housekeeping Activities Review	Summary of annual activities for the "Pollution Prevention and Good Housekeeping" component.	Annually 2016-2020	Annual review of SWMP performed. Maintain copy of SWMP annual review. Determine the level of district involvement and identify areas of improvement.	Maintain copy of SWMP annual review and evaluation information for progress reporting.	ROCS
BMP #20 Septic System Maintenance	Inspect and clean septic system annually.	Annually 2016-2020	100% of septic system inspected and cleaned, preventing potential for backups.	Copy of cleaning documentation.	ROCS

3.0 Training

ROCS will provide education and training for applicable employees and contractors using a variety of methods depending on their specific job function. At a minimum, all applicable ROCS employees will be required to have general awareness training on the topics included in the PEP. All applicable ROCS employees will be required to attend or otherwise obtain general awareness training at least once per permit cycle or during the 1st year of employment.

ROCS has implemented a comprehensive staff training program based on each employee's participation and responsibilities under this program. The employee training program is categorized in three (3) separate levels summarized as follows:

LEVEL I TRAINING-General Awareness Training

Level I training is required for all district employees at least once every 5 years for current employees and during the 1st year of employment for new employees. General Awareness training is provided in the form of an 11-minute video produced by the Arch Environmental Group titled **"When it Rains, It Drains…The Stormwater Question"**. This video is also used in various classrooms as part of ongoing science curriculum as requested by specific faculty members.

LEVEL II TRAINING-General Awareness, Pollution Prevention & Good Housekeeping, and Illicit Discharge Reporting

Level II training is required for all employees whose job responsibilities involve illicit discharge related activities, or indicate a potential to cause, witness, or report and illicit discharge or connection. This training includes the previously described video as well as a review of the districts Stormwater Management Program Plan and instruction on identification and notification of illicit discharges or connections. This training is provided to applicable transportation, maintenance, custodial, and food service employees.

LEVEL III TRAINING-Maintenance and Storage Facility Stormwater Pollution Prevention Plans, Lawn Maintenance, and Structural Control Inspection, Maintenance, and Repair Training

Level III training is provided in the form of videos, PowerPoint presentations, and hands-on training. This training will is provided to district supervisors, maintenance, and lawn service staff. Applicable employees with specific responsibilities under this program will be provided training at least once every three (3) years for current applicable employees or prior to conducting activities outlined in the SWMP.

LEVEL IV TRAINING (CONTRACTORS) – Contractor Training

Contractors employed by ROCS to conduct activities with a potential to impact water quality. Contractors training is provided in the form of an online video produced by the Arch Environmental Group titled **"Stormwater Awareness & Pollution Prevention Training for Contracted Public School District Vendors & Employees"**.

3.1 Training Table

BMP	Description	Measurable Goal	Target Audience	Timeframe
Level I Training	General Awareness Training	Record attendance with sign off sheets for each training session. ROCS will retain records of trainings for future review with regard to SWMP.	All district employees.	Once per permit cycle for current employees and during the 1st year of employment for new employees. 2014-2019
Level II Training	General Awareness, Pollution Prevention & Good Housekeeping, and Illicit Discharge Reporting	Record attendance with sign off sheets for each training session. ROCS will retain records of trainings for future review with regard to SWMP.	In-house custodial, maintenance, transportation and food service employees.	Once during permit cycle current employees and during the 1st year of employment for new employees. 2014-2019
Level III Training	General Awareness, Pollution Prevention & Good Housekeeping, Illicit Discharge Reporting, Maintenance and Storage Facility Stormwater Pollution Prevention Plans, Lawn Maintenance, and Structural Control Inspection, Maintenance, and Repair Training	Record attendance with sign off sheets for each training session. ROCS will retain records of trainings for future review with regard to SWMP.	District supervisors, in-house maintenance, and lawn service staff.	Once every three (3) years within permit cycle for current applicable employees if conducting activities outlined in the SWMP. 2014-2019
Contractor Training	Stormwater specific training for on-site contractors.	Require stormwater-specific Require stormwater-specific training for on-site contractors. ROCS will provide referral information for contractors to obtain stormwater education through private or state training resources. Additionally, the referral will notify contractors of the location of the current ROCS SWMP for review. Obtain records of training for future review of the SWMP.	Contractors employed by ROCS to conduct activities with a potential to impact water quality.	At the time of employment. 2014-2019

4.0 Total Maximum Daily Load (TMDL) Restrictions

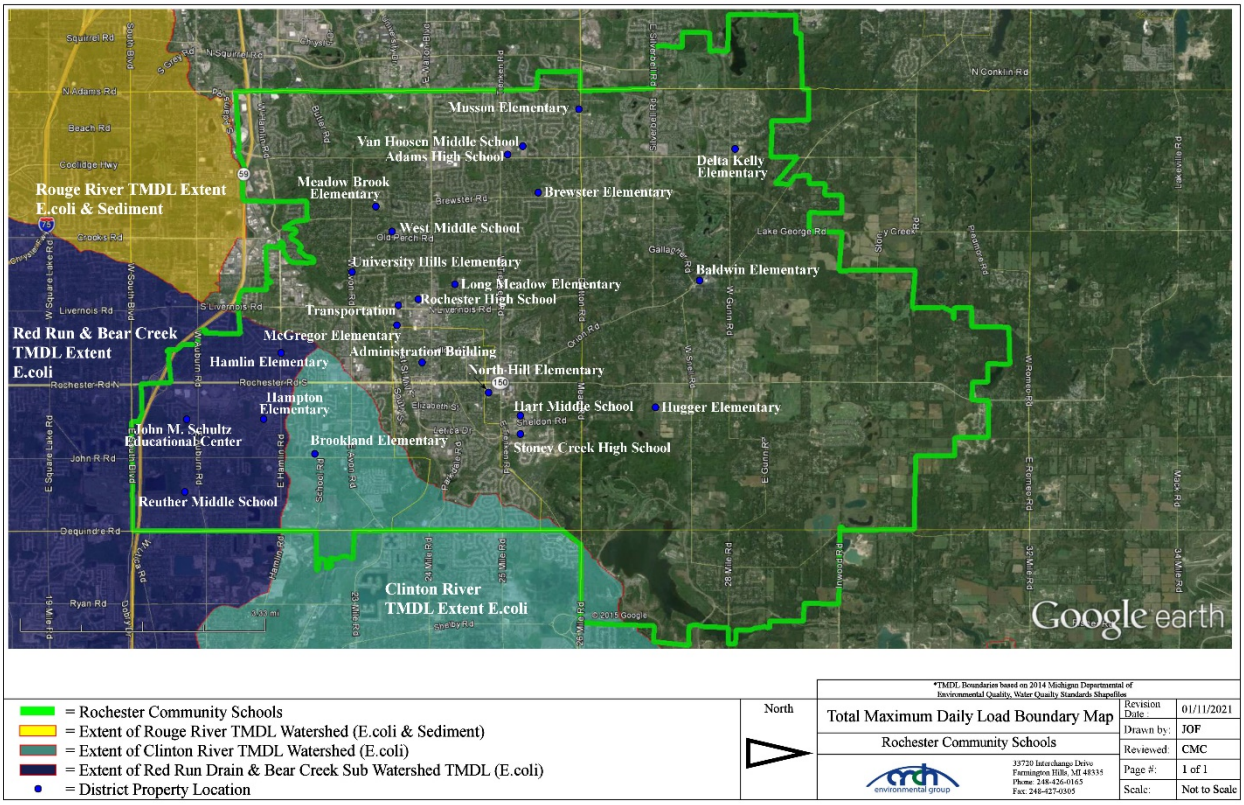
4.1 What are TMDLs

When a lake or stream fails to meet federal water quality standards, the Clean Water Act requires that a "Total Maximum Daily Load (TMDL)" limit be developed. Studies are completed to determine the sources impacting the water body and to develop goals so that the water body can meet the applicable standards.

A TMDL describes the process used to determine how much of a particular pollutant a lake or stream can assimilate and sets pollution reduction targets for the water body.

ROCS will review and prioritize BMPs currently implemented or to be implemented during the permit cycle to make progress toward achieving the pollutant load reduction requirement in each TMDL identified. TMDLs assigned the discharges for ROCS are described below.

Map 3 – Total Maximum Daily Load Map[3]



4.2 Clinton River TMDL

[3] Total maximum daily load boundaries based on Michigan Department of Environment, Great Lakes & Energy Water Quality Standards Shapefiles.

Rochester Community School facilities discharge stormwater either directly or indirectly to surface waters that discharge to the Clinton River watershed. Discharges to the Clinton River are covered under the Total Maximum Daily Load (TMDL) for **E. coli.**

ROCS Facilities located within the boundaries of Clinton River TMDL boundaries are as follows:

1. Brooklands Elementary School

4.3 Red Run TMDL

Rochester Community School facilities discharge stormwater either directly or indirectly to surface waters that discharge to the Red Run watershed. Discharges to the Red Run are covered under the Total Maximum Daily Load (TMDL) for **E. coli.**

ROCS Facilities located within the boundaries of Clinton River TMDL boundaries are as follows:

1. John M. Schultz Educational Center (Formerly Alternative Center for Education High School)
2. Reuther Middle School
3. Hampton Elementary School
4. Hamlin Elementary School

4.4 TMDL Implementation

4.4.1 Prioritized TMDL Best Management Practices

The below lists stormwater BMPs that are targeted to improve water quality impairments associated by the TMDL.

E. COLI

1. ROCS will use its website to provide the public with information regarding pet waste (SEMCOG links). Additionally, SEMCOG pet waste posters are placed at various school buildings.
2. ROCS will prohibit illicit discharges, inspect and monitor suspected illicit discharges, and enforce elimination of the illicit discharges and connections.
3. ROCS will conduct bimonthly inspections of parking lot and curb areas and hand clean as needed.
4. ROCS has established programs for soil erosion and sediment control from new or redevelopment construction. Such developments require permits and inspections for practices to keep exposed soils on site or controlled from runoff.
5. ROCS will implement routine visual inspections of stormwater structural controls.
6. ROCS will remove excessive sediments from structural sediment removal systems to maintain the maximum designed performance. Sediments will be disposed of offsite in accordance with Parts 115 or 121.

ALL TMDLs

1. ROCS will continue to use its website to provide the public information regarding local TMDL issues (phosphorous, E.coli, biota and dissolved oxygen TMDL Best Management Practice).
2. ROCS will continue to educate staff, faculty, and students using various venues including the **"Seven Simple Steps to Clean Water"** program educational materials developed by the various watershed groups specifically related to these issues on the stormwater management webpage.

3. The district passed post-construction stormwater a board resolution to require implementation of the stormwater standards for construction.
4. Adequately maintains vegetation around stormwater facilities, ditches, and ponds.
5. Provide training to applicable staff and confirm training from contractors including restrictions on the use of phosphorous containing fertilizers, soaps, cleaners and other chemicals that could impact the separate storm drain system.

Procedure

Prioritization of BMPs is based on ROCS targeted TMDL pollutants. Priority is given to BMPs that reduce E. coli loads.

Assessment

The EGLE Phase II Stormwater Discharge Permit Application requires a monitoring plan for assessing the effectiveness of the BMPs currently being implemented, or to be implemented, in making progress toward achieving the TMDL pollutant load reduction requirement. Monitoring shall be specifically for the pollutant identified in the TMDL. Monitoring may include wet weather outfall/discharge point monitoring and dry-weather screening. A summary of the monitoring results and conclusions related to TMDLs will be provided during progress reporting.

ROCS will conduct the following for applicable TMDLs:

1. Samples will be collected at least twice during the permit cycle; including previous monitoring. The goal is to collect samples from at least 50% of the outfall/discharge points at facilities associated with the TMDL. An effort will be made to sample water quality parameters during a representative (i.e. >0.25” and <1.5”) wet weather event.
2. The results of the sampling will be assessed and summarized in a brief report to be shared with the public via the stormwater webpage at least once during the permit cycle.
3. Based on a review of the sampling results, BMP implementation will be reviewed and BMPs may be updated or revised to ensure progress toward achieving TMDL pollutant load reductions.

4.4.2 TMDL BMP TABLE

BMP	Description of BMP	Timeframe	Measurable Goal	Measure of Assessment	Responsible Party
BMP #1 Webpage	ROCS will use its website to provide the public with information regarding pet waste (SEMCOG links). Additionally, SEMCOG pet waste posters are placed at various school buildings.	Ongoing 2016-2020	Posters placed throughout ROCS facilities.	Maintain links on webpage. Maintain copies of webpage review.	ROCS
	ROCS will continue to use its website to provide the public information regarding local TMDL issues (phosphorous, E.coli, biota and dissolved oxygen TMDL Best Management Practice).		Material available on webpages.		
BMP #2 Sampling	Samples will be collected outfall/discharge points at facilities associated with the TMDL. An effort will be made to sample water quality parameters during a representative (i.e. >0.25" and <1.5") wet weather event.	Twice Per Permit Cycle 2016-2020	The goal is to collect samples from at least 50% of the outfall/discharge points at facilities associated with the TMDL.	Copy of inspection paperwork and sample results.	ROCS
BMP #3 Sample Summary	The results of the sampling will be assessed and summarized in a brief report to be shared with the public via the stormwater webpage at least once during the permit cycle.	Once per Permit Cycle 2016-2020	Report available for public review.	Report completed and available on webpage.	ROCS

Attachment "A"

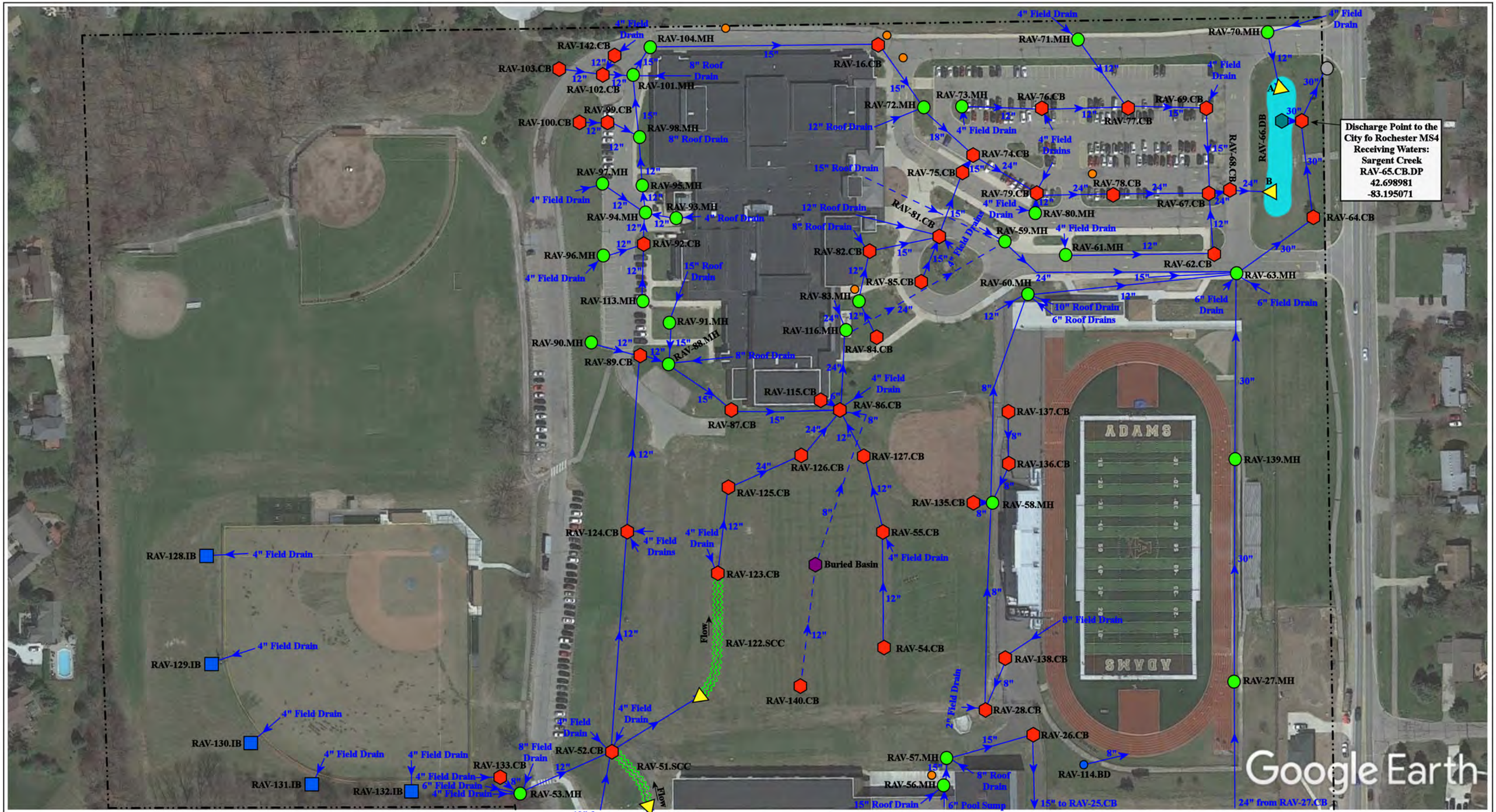
Outfall/Discharge Point Receiving Water Table & Site Stormwater Structure Maps

April 1, 2015
Revision Date: October 25, 2015
October 8, 2019

Rochester Community Schools

Facility	Outfall/Point of Discharge	Receiving Waters	Watershed
Adams High School & Van Hoosen Middle School	RAV-65.CB.DP	Sargent Creek	Clinton River
Administration Building	RAB-12.MH.DP	Clinton River	Clinton River
	RAB-15.MH.DP	Clinton River	Clinton River
Baldwin Elementary School	BDN-04.CB.DP	Paint Creek	Clinton River
	BDN-05.CB.DP	Paint Creek	Clinton River
Brewster Elementary School	BRW-02.DR.DP	Sargent Creek	Clinton River
	BRW-21.OP.OF	Sargent Creek	Clinton River
	BRW-22.SCC.OF	Sargent Creek	Clinton River
Brookland Elementary School	BLK-18.MH.DP	Gibson Drain	Clinton River
	BLK-22.SCC.DP	Gibson Drain	Clinton River
Delta Kelly Elementary School	DLK-15.OP.OF	Paint Creek	Clinton River
	DLK-16.OP.OF	Paint Creek	Clinton River
Facilities Operation Center	Under Stormwater General Permit [Permit No. 1100000] COC MIS111754, Operated By National Express Corp	Clinton River	Clinton River
Hamlin Elementary School	HML-09.OP.OF	Gibson Drain	Clinton River
	HML-24.OP.OF	Gibson Drain	Clinton River
Hampton Elementary School	HPT-13.MH.DP	Gibson Drain	Clinton River
Hart Middle School	HRT-21.OP.OF	Stoney Creek	Clinton River
	HRT-52.OP.OF	Stoney Creek	Clinton River
	HRT-56.OP.OF	Stoney Creek	Clinton River
	HRT-58.OP.OF	Stoney Creek	Clinton River
	HRT-59.CB.DP	Stoney Creek	Clinton River
Hugger Elementary School	None	N/A	Clinton River
John M. Schultz Educational Center (Formerly Alternative Center for Education High School)	ACE-14.SCC.DP	Cranberry Marsh Drain	Clinton River
	ACE-27.MH.DP	Cranberry Marsh Drain	Clinton River
Livernois Transportation Facility	Under Stormwater General Permit [Permit No. 1100000] COC MIS111753, Operated By National Express Corp		Clinton River
Long Meadow Elementary School	LMW-01.OP.OF	Sargent Creek	Clinton River
	LMW-14.SCC.DP	Sargent Creek	Clinton River
	LMW-15.CB.DP	Sargent Creek	Clinton River
	LMW-16.MH.DP	Sargent Creek	Clinton River
	LMW-37.CB.DP	Sargent Creek	Clinton River
McGregor Elementary School	MCG-03.MH.DP	Clinton River	Clinton River
	MCG-10.CB.DP	Clinton River	Clinton River
Meadow Brook Elementary School	MBE-05.MH.DP	Galloway Creek	Clinton River
	MBE-26.MH.DP	Galloway Creek	Clinton River
Musson Elementary School	MSN-13.OP.DP	Paint Creek	Clinton River
	MSN-18.SO.DP	Paint Creek	Clinton River

Facility	Outfall/Point of Discharge	Receiving Waters	Watershed
North Hill Elementary School	NHE-07.MH.DP	Paint Creek	Clinton River
	NHE-34.OP.DP	Paint Creek	Clinton River
Reuther Middle School	RTR-22.MH.DP	Plumbrook Creek	Clinton River
Rochester High School	RHS-10.CB.DP	Sargent Creek	Clinton River
	RHS-14.MH.DP	Sargent Creek	Clinton River
	RHS-26.CB.DP	Sargent Creek	Clinton River
	RHS-30.CB.DP	Sargent Creek	Clinton River
	RHS-32.MH.DP	Sargent Creek	Clinton River
	RHS-36.MH.DP	Sargent Creek	Clinton River
	RHS-63.MH.DP	Sargent Creek	Clinton River
	RHS-68.SCC.DP	Sargent Creek	Clinton River
	RHS-70.SO.DP	Sargent Creek	Clinton River
	RHS-93.MH.DP	Sargent Creek	Clinton River
Stoney Creek High School	SCR-02.OP.OF	Stoney Creek	Clinton River
	SCR-24.OP.OF	Stoney Creek	Clinton River
	SCR-80.OP.OF	Stoney Creek	Clinton River
University Hills Elementary School	UVL-02.MH.DP	Clinton River	Clinton River
West Middle School	WET-13.SO.DP	Clinton River	Clinton River
	WET-37.OP.DP	Clinton River	Clinton River
	WET-38.OP.DP	Clinton River	Clinton River



= Catch basin
= Manhole
= Infiltration Basin
= Basin Drain
= Sanitary
= Open Pipe Outlet
= Stabilized Outlet
= Detention Pond
= Stormwater Conveyance Channel
= Offsite MS4

North

3200 W Tienken Rd, Rochester Hills, MI 48306

Adams High School & VanHoosen Middle School

Rochester Community Schools

37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	11/11/2020
Drawn by:	AS
Reviewed:	SR
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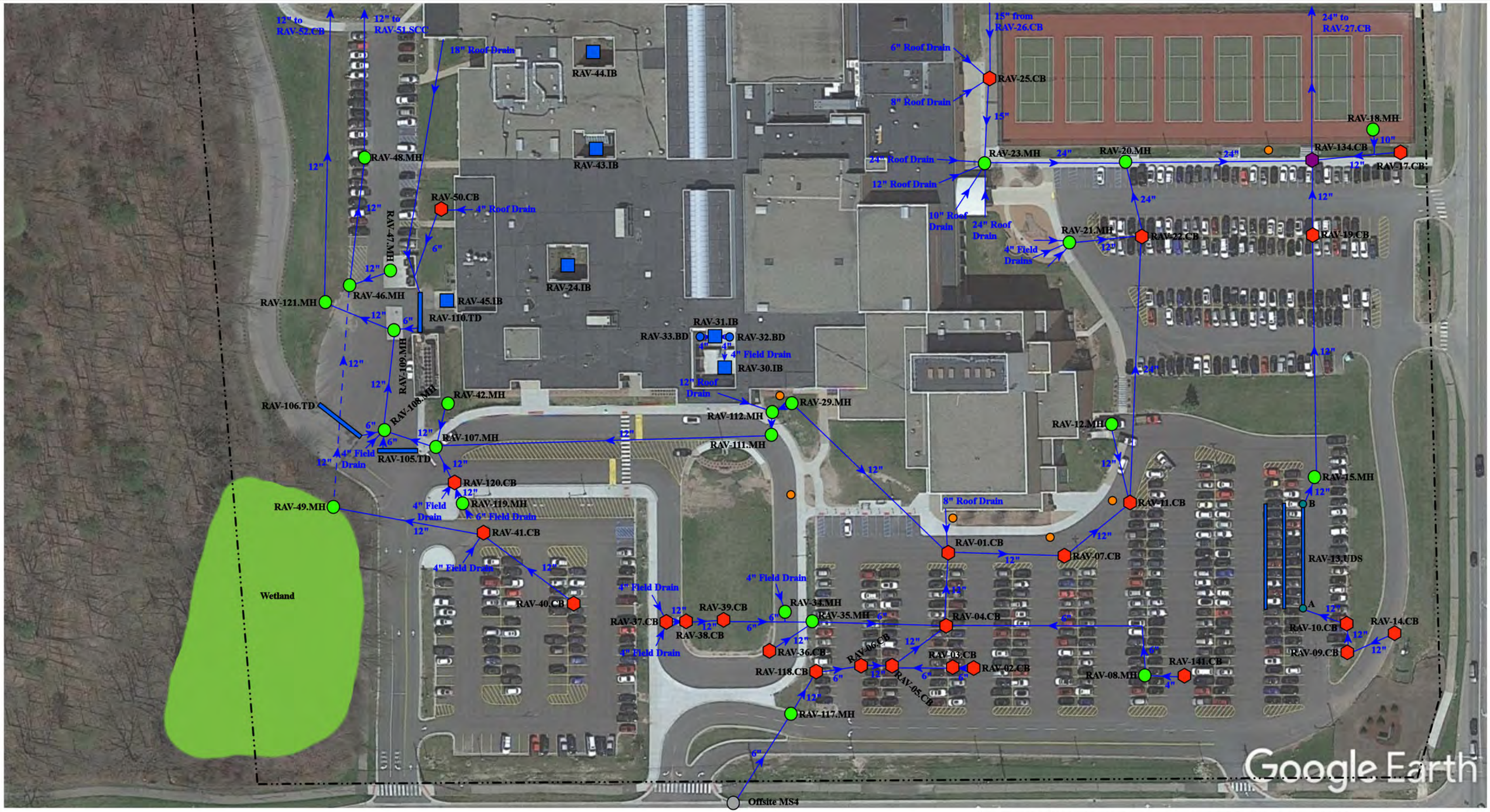

= Catch Basin
= Manhole
= Buried Basin
= Access Port
= Sanitary Sewer
= Infiltration Basin
= Basin Drain
= Trench Drain
= Underground Detention System

North

3200 W Tienken Rd, Rochester Hills, MI 48306

Adams High School & VanHoosen Middle School

Rochester Community Schools

37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	10/17/2019
Drawn by:	AS
Reviewed:	SR
Page #:	2 of 2
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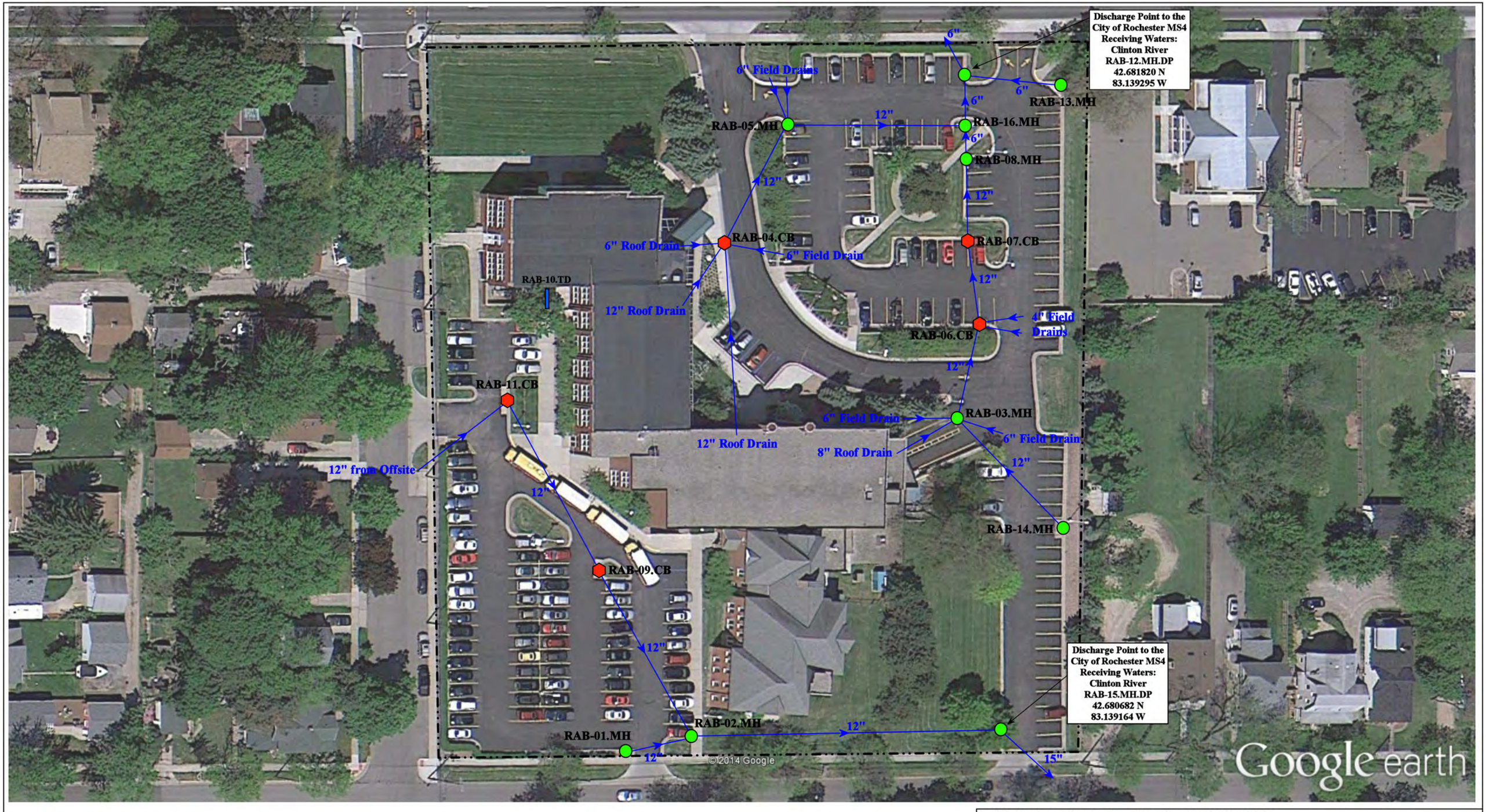

= Catch Basin

= Manhole

= Trench Drain

North

501 University Drive, Rochester MI 48307

Rochester Adminstration Building

Rochester Community School District

37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	09/05/2019
Drawn by:	JOF
Reviewed:	CMC
Page #:	1 of 1
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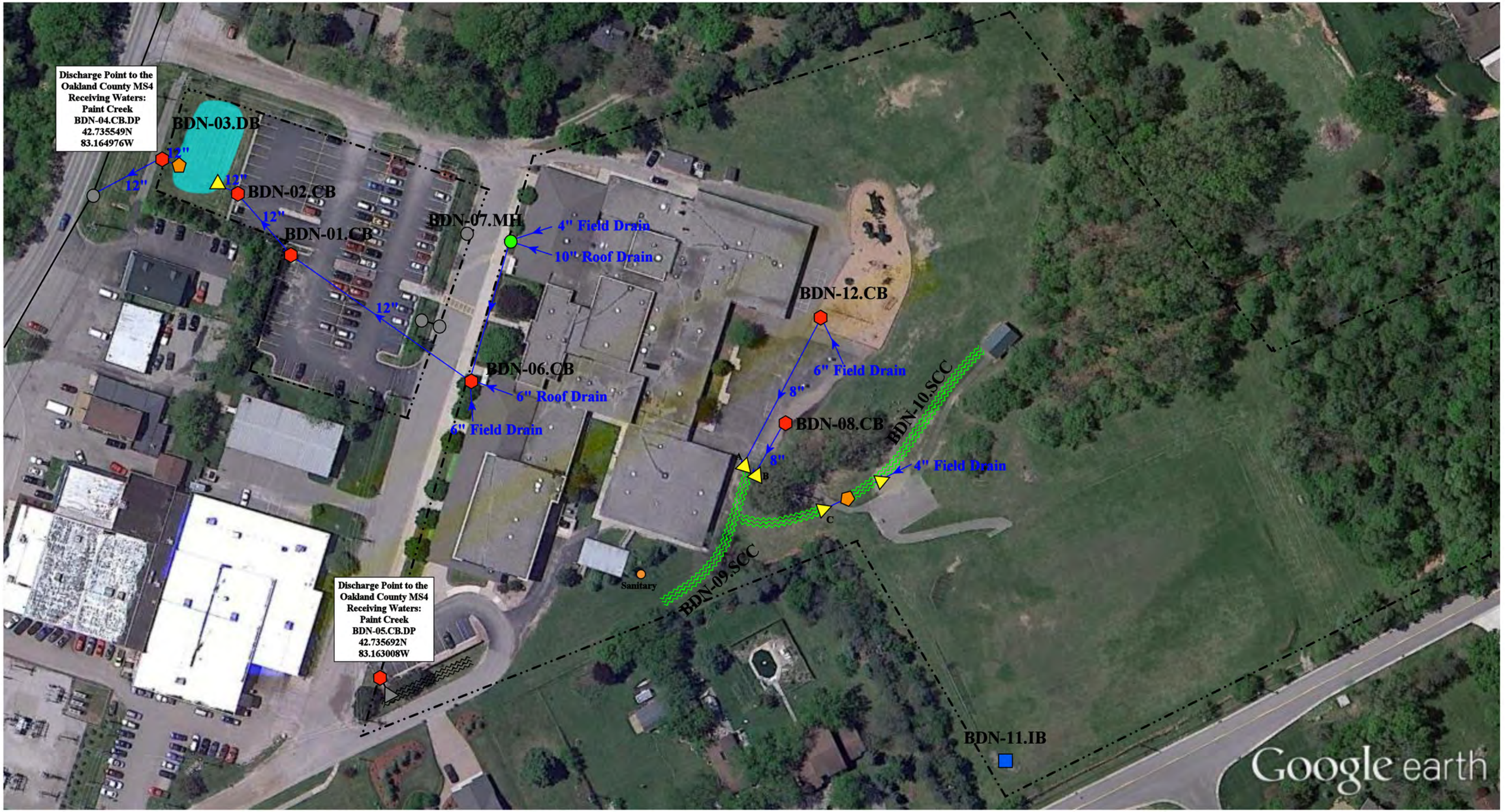

= Catch Basin

= Manhole

= Infiltration Basin

= Open Pipe Outlet

= Drainage Receptor

= City of Rochester MS4

= Stormwater Conveyance Channel

= Detention Basin

= Property Boundaries

North

4325 Bannister Road. Rochester, MI 48306

Baldwin Elementary School

Rochester Community Schools

environmental group

Revision Date :	07/21/2020
Drawn by:	CMC
Reviewed:	BJZ
Page #:	1 of 1
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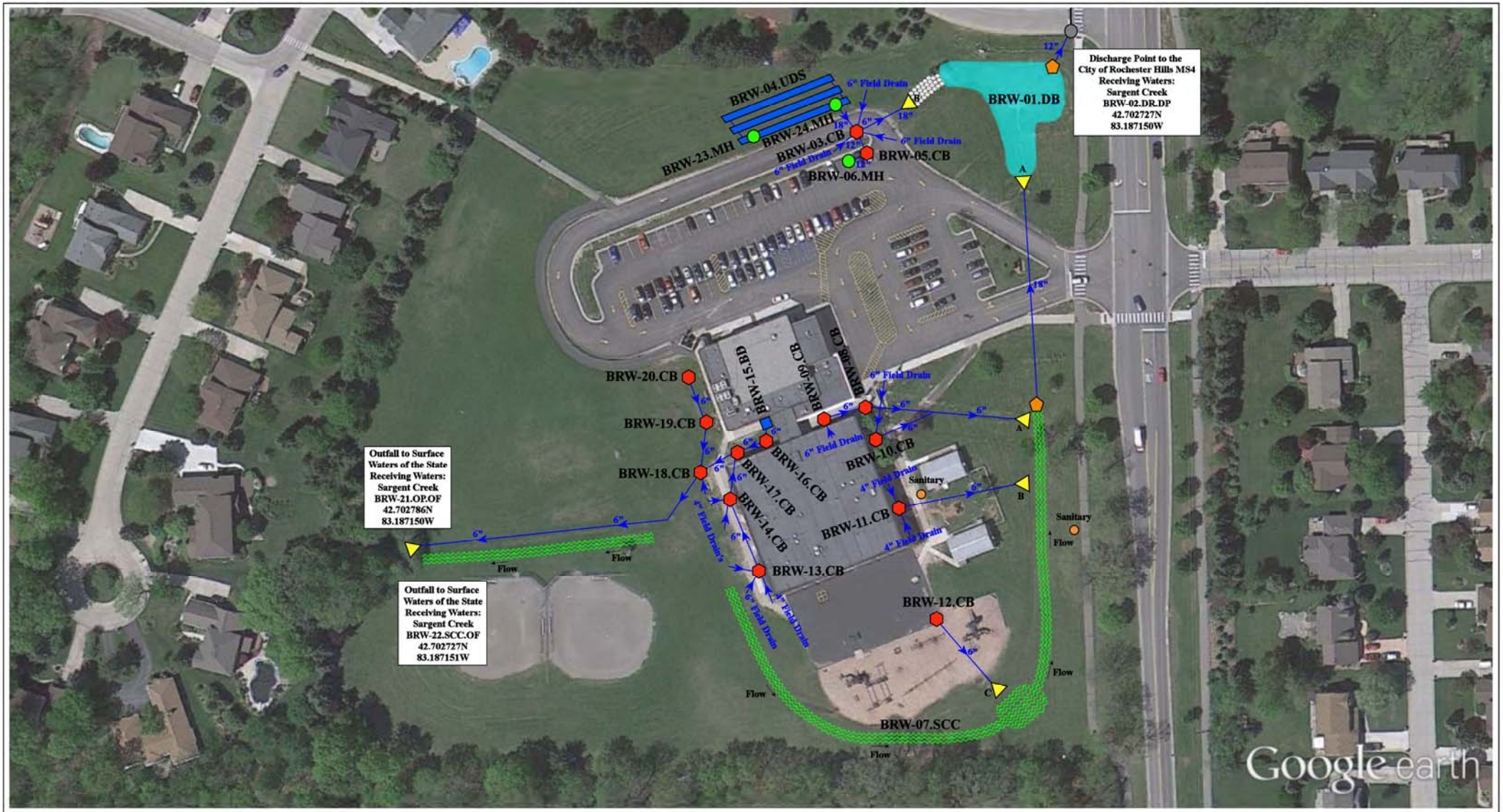


= Catch Basin
= Manhole
= Basin Drain
= Open Pipe Outlet
= Drainage Receptor
= Underground Detention System
= Rochester Hills MS4
= Stormwater Conveyance Channel
= Detention Basin

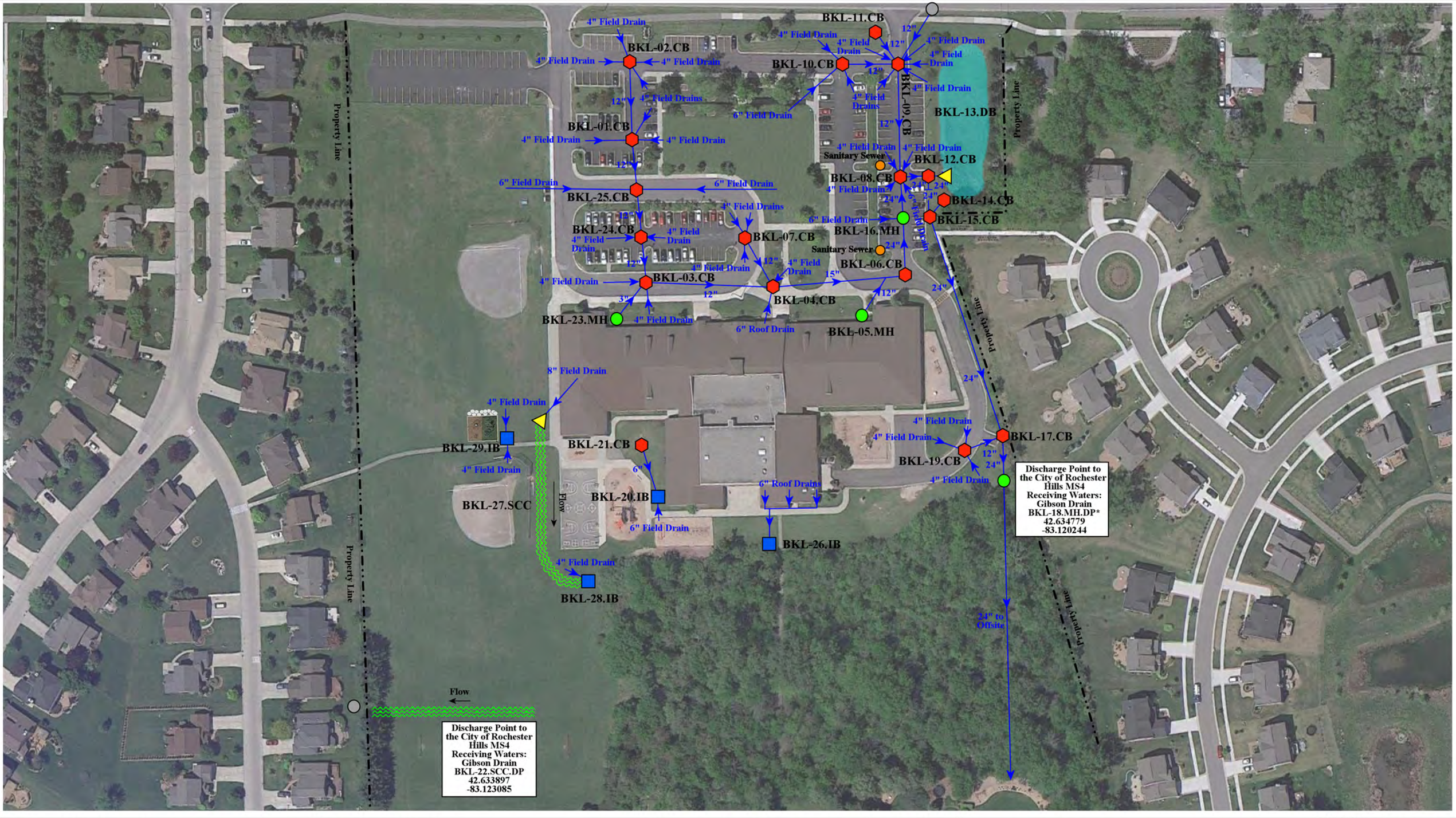
North

135 Brewster Road, Rochester Hills, MI 48306

Brewster Elementary School

Rochester Community Schools

Revision Date	1/20/2017
Drawn by:	CMC
Reviewed:	BJZ
Page #:	1 of 1
Scale:	Not to Scale



= Catch Basin

= Manhole

= Infiltration Basin

= Open Pipe Outlet

= Detention Basin

= City of Rochester Hills MS4

= Stormwater Conveyance Channel

* = TMDL Sampling Location

= Property Lines

North

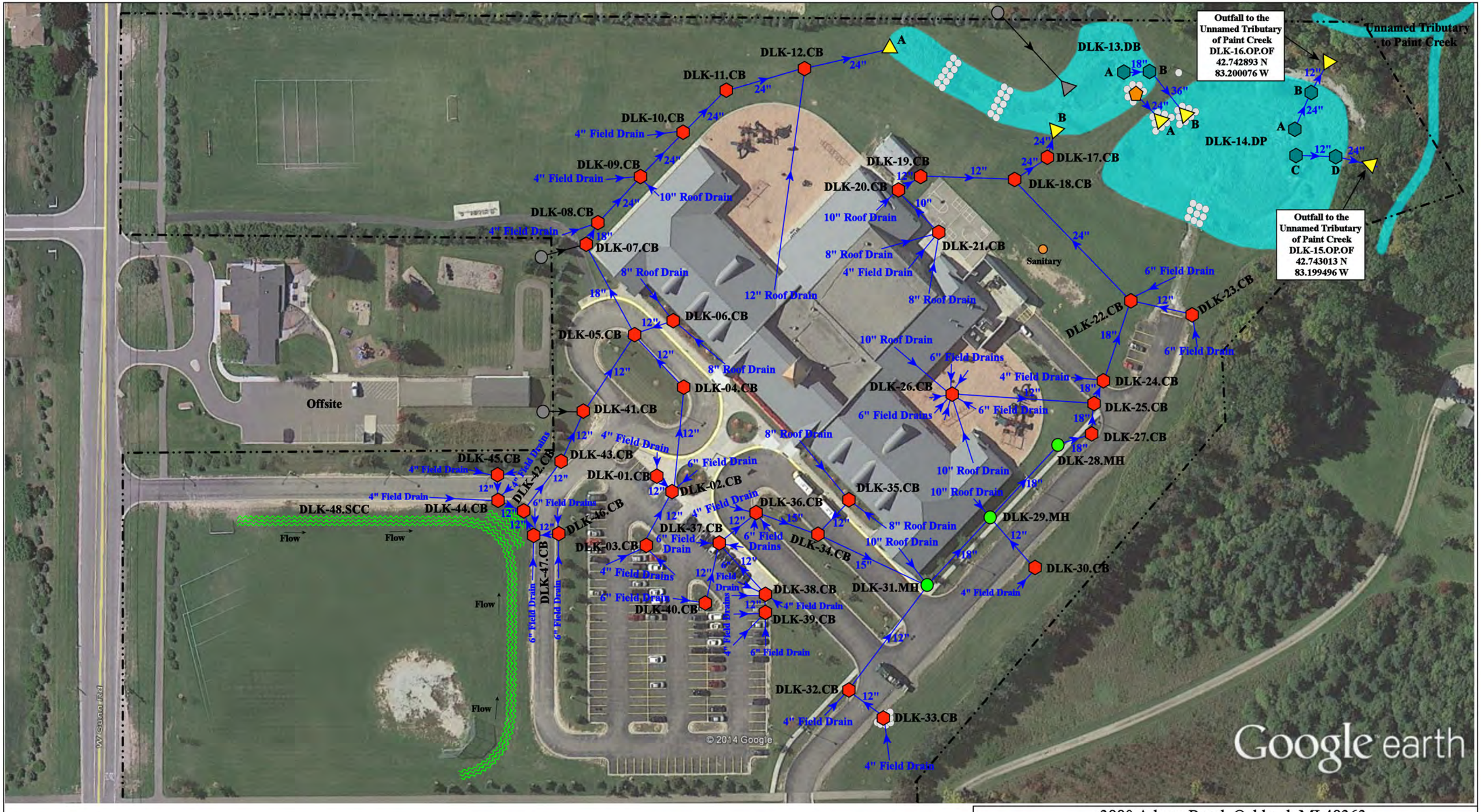
Brookland Elementary School

Rochester Community Schools

environmental group

490 E. Auburn Road
Rochester Hills, MI 48307

Revision Date :	11/13/2020
Drawn by:	AS
Reviewed:	LK
Page #:	1 of 1
Scale:	Not to Scale



= Catch Basin
= Manhole
= Open Pipe Outlet
= Property Lines
= Drainage Receptor
= Stabilized Outlet
= Offsite MS4
= Stormwater Conveyance Channel
= Detention Basin/Pond
= Creek

North

3880 Adams Road, Oakland, MI 48363

Delta Kelly Elementary School

Rochester Community Schools

37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	08/06/2020
Drawn by:	CMC
Reviewed:	BJZ
Page #:	1 of 1
Scale:	Not to Scale

Diagram 3: Storm Sewer System Map

△ = Open Pipe Outlet
● = Manhole
⬢ = Catch Basin
● = Sanitary
○ = Roof Drain Cleanout
◎ = Hydrodynamic Separator
= Underground Detention System
● = Access Port for UDS

North

1402 W. Hamlin Road, Rochester Hills, MI 48309

Facility and Operations Center

Rochester Community Schools

37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	12/17/2019
Drawn by:	KD
Reviewed:	AS
Page #:	1 of 2
Scale:	Not to Scale

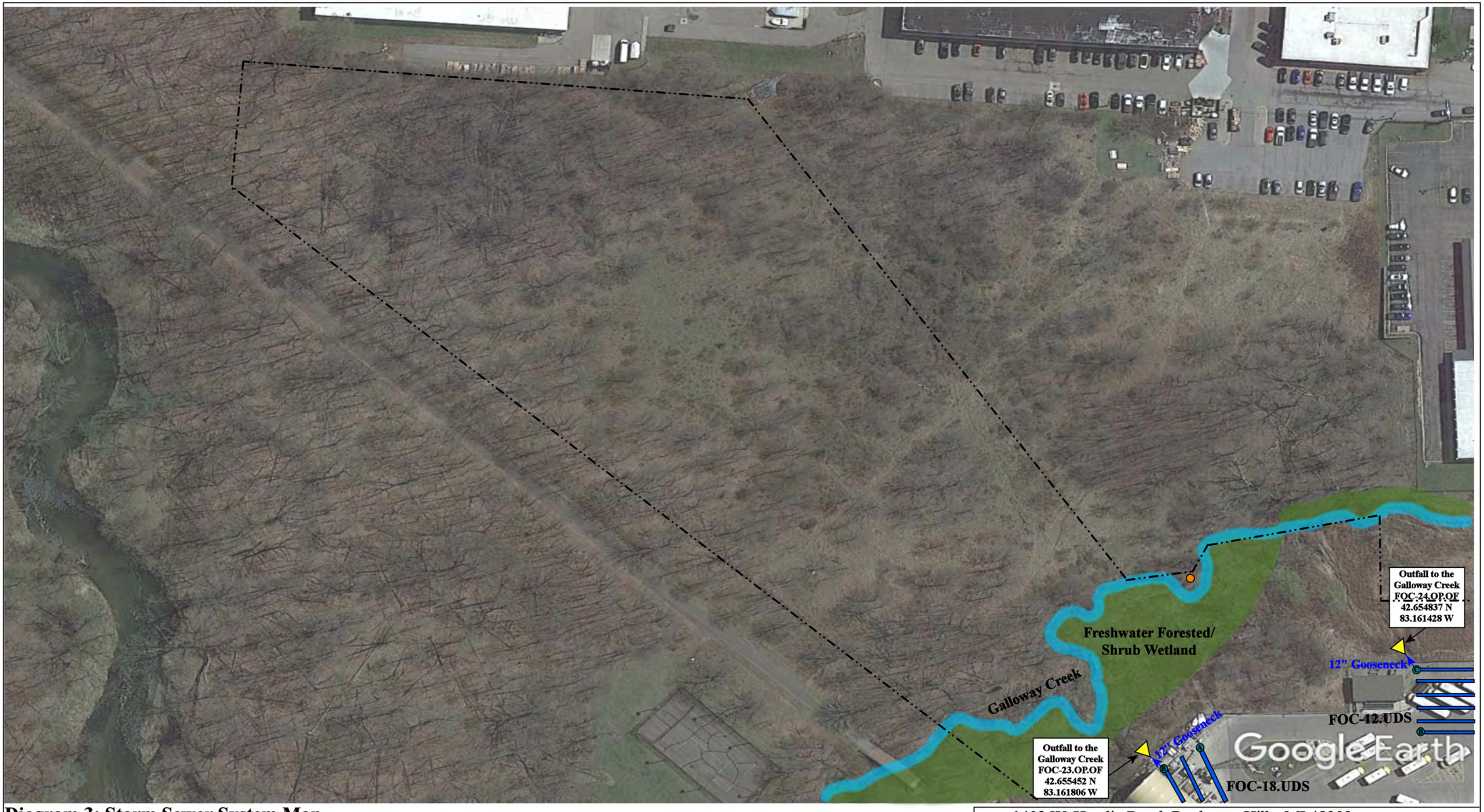


Diagram 3: Storm Sewer System Map

1402 W. Hamlin Road, Rochester Hills, MI 48309

△ = Open Pipe Outlet

● = Access Port to UDS

⬭ = Stream (Galloway Creek)

● = Sanitary

▬ = Underground Detention System (UDS)

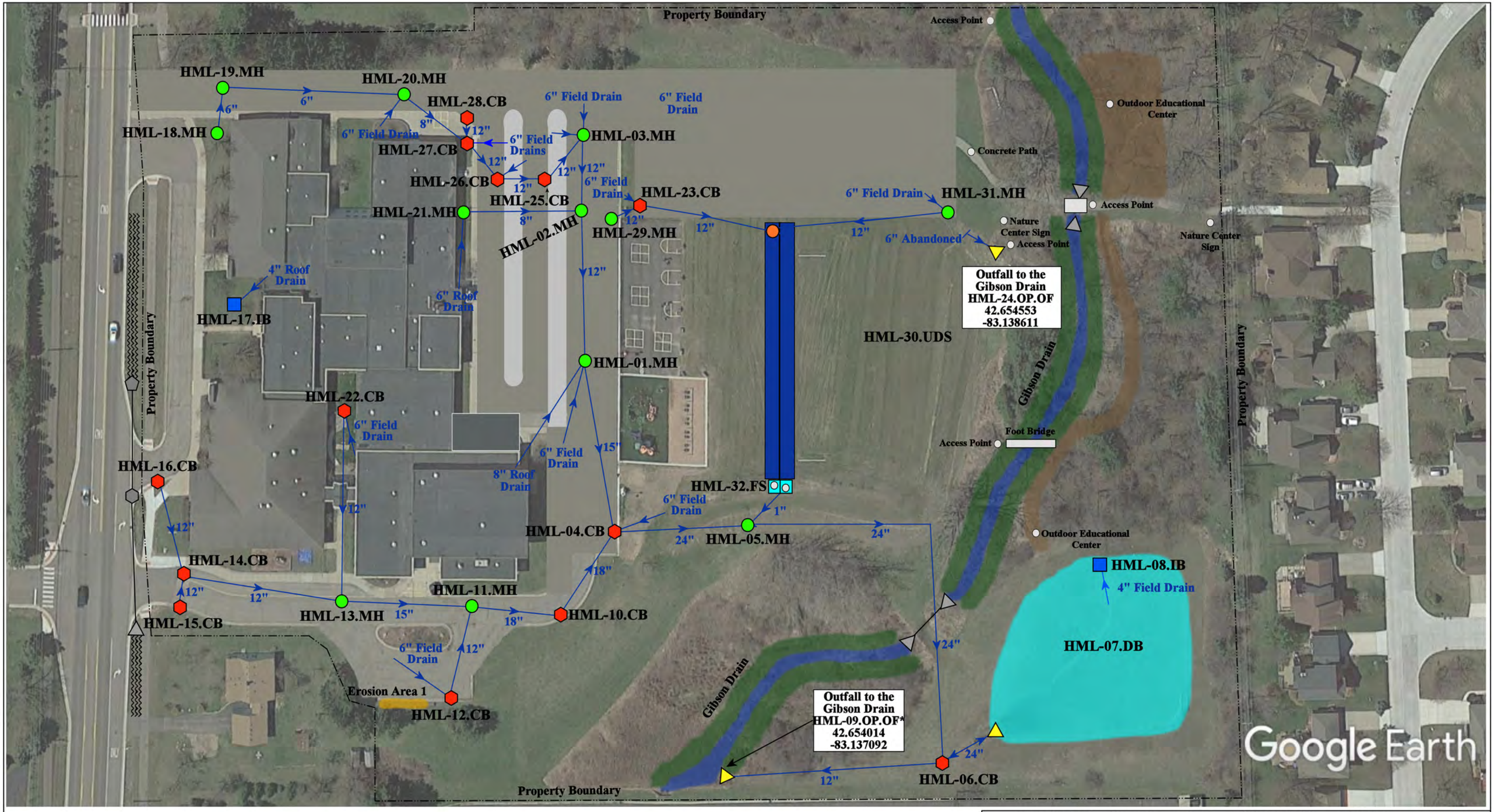
North

Facility and Operations Center

Rochester Community Schools

environmental group
37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	12/17/19
Drawn by:	KD
Reviewed:	AS
Page #:	2 of 2
Scale:	Not to Scale



270 W. Hamlin Rd. Rochester Hills, Michigan 48307

= Catch Basin
= Manhole
= Infiltration Basin
= Open Pipe Outlet
= Detention Basin
= Flow Splitter
= Offsite MS4
= Underground Detention System
= Buffer Zone
= Nature Trail
= Point of Interest
* = TMDL Sampling Location

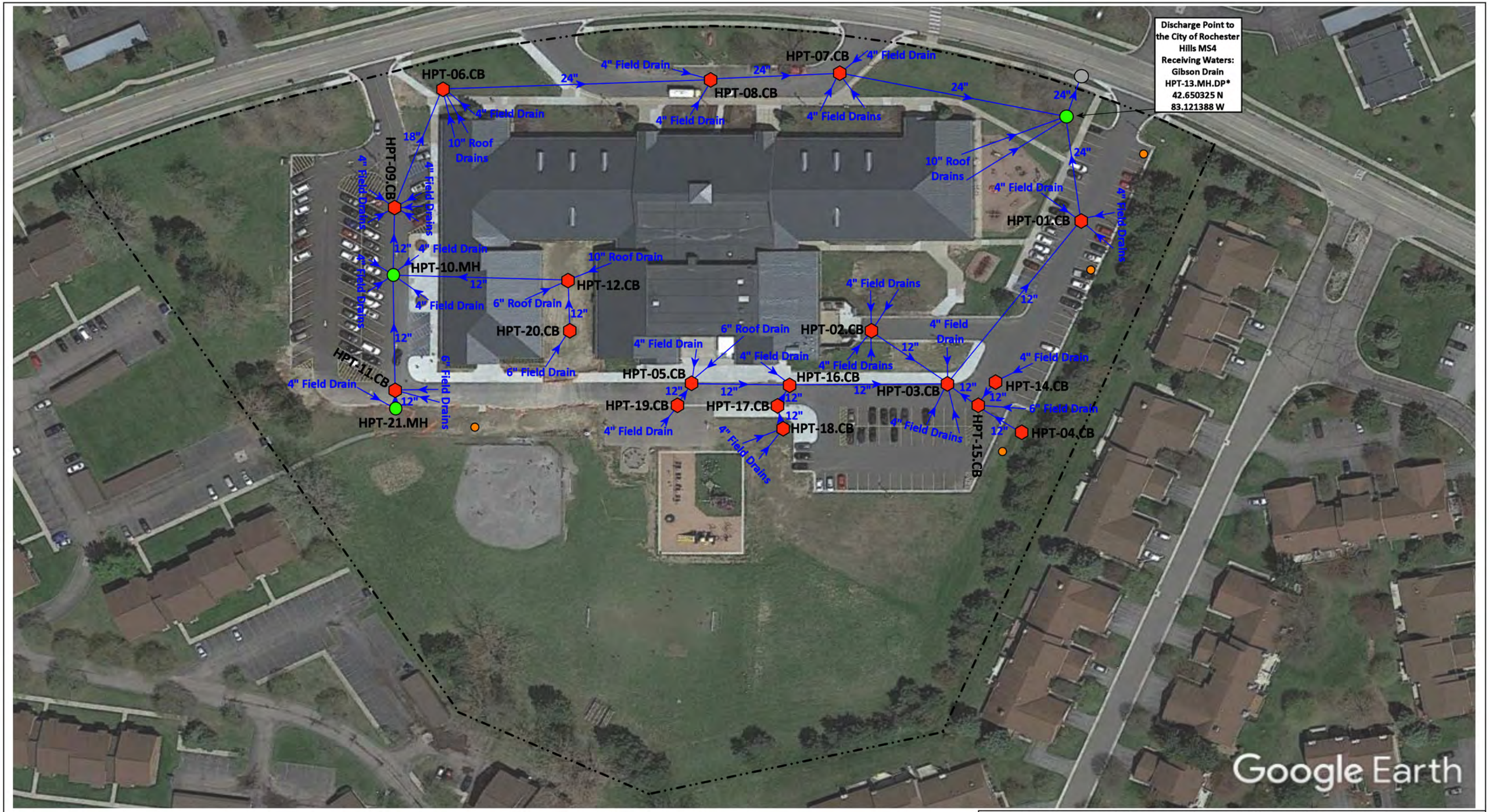
North

Hamlin Elementary School

Rochester Community Schools

37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	10/23/2020
Drawn by:	BJZ
Reviewed:	JP
Page #:	1 of 1
Scale:	Not to Scale



= Property Line
= Catch Basin
= Manhole
= Offsite MS4
= TMDL Sampling Location
= Sanitary

North

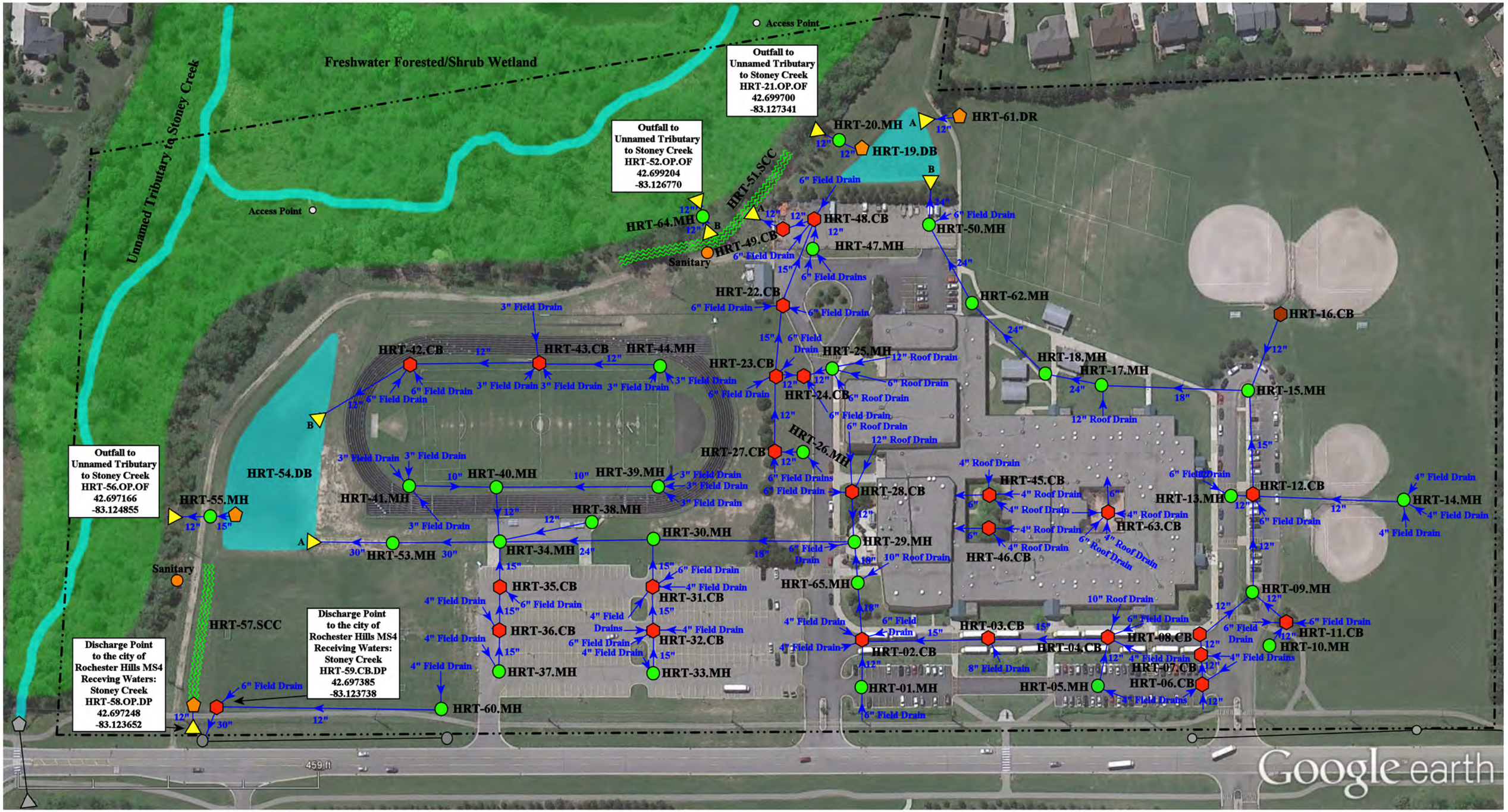
530 Hampton Circle, Rochester Hills, Michigan 48307

Hampton Elementary School

Rochester Community Schools

37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	06/23/2020
Drawn by:	KD
Reviewed:	LE
Page #:	1 of 1
Scale:	Not to Scale



= Catch Basin
= Drainage Receptor
= Offsite MS4
= Manhole
= Stormwater Conveyance Channel
= Buried Structure
= Open Pipe Outlet
= Detention Basin
= Property Lines

North

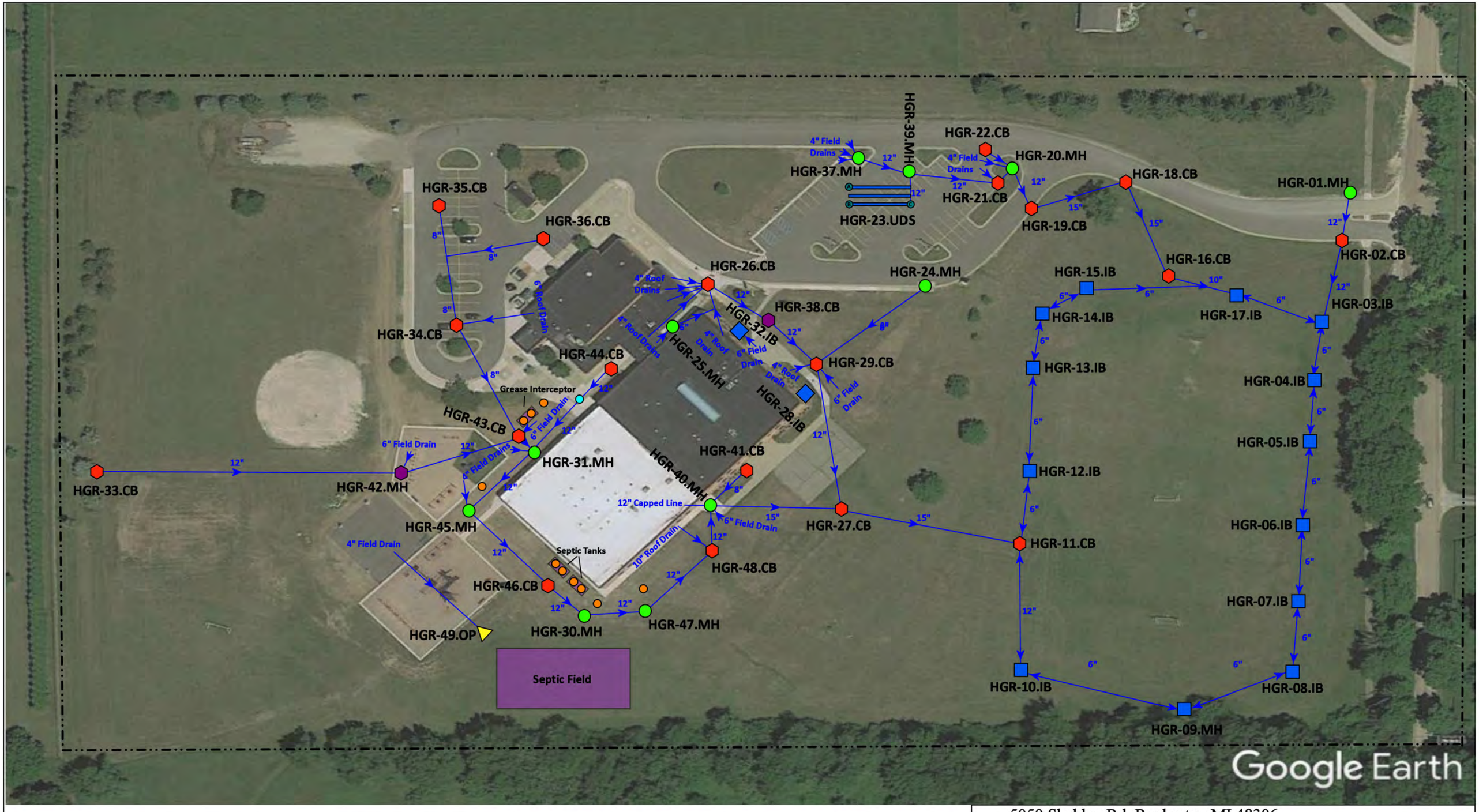
6500 Sheldon Rd, Rochester Hills, MI 48306

Hart Middle School

Rochester Community Schools

environmental group
33720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	09/16/2020
Drawn by:	AS
Reviewed:	AP
Page #:	1 of 1
Scale:	Not to scale



= Catch Basin
= Manhole
= Infiltration Basin
= Open Pipe Outlet
= Buried Structure
= Landscape Drain
= Septic Access
= Underground Detention System (with access lids)
= Property Lines

North

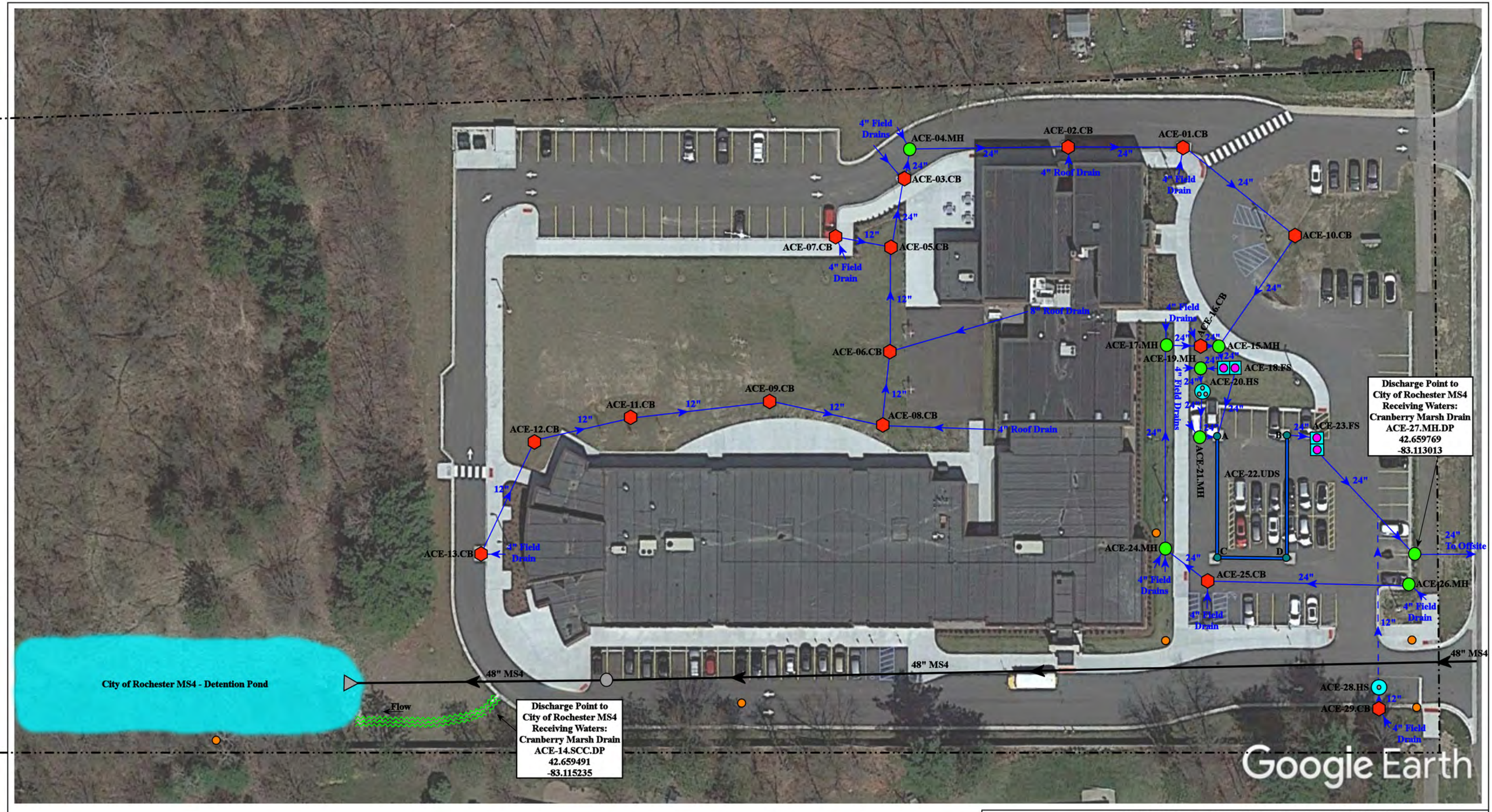
5050 Sheldon Rd, Rochester, MI 48306

Hugger Elementary School

Rochester Community Schools

environmental group
37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	09/02/2020
Drawn by:	SMR
Reviewed:	ANP
Page #:	1 of 1
Scale:	Not to Scale



= Catch Basin
= Manhole
= MS4 Catch Basin
= MS4 Open PipeOutlet
= Sanitary

= Stormwater Conveyance Channel
= Underground Detention System
= Hydrodynamic Separator (1 Lid)
= Hydrodynamic Separator (3 Lids)
= Flow Splitter

North

1440 John R Road, Rochester, MI 48307

John M. Schultz Educational Center
(Formerly Alternative Center for Education High School)

Rochester Community Schools

37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	01/11/2021
Drawn by:	AS
Reviewed:	SR
Page #:	1 of 2
Scale:	Not to Scale

= Stormwater Conveyance Channel

= MS4 Stormwater Conveyance Channel

= MS4 Open Pipe Outlet

= Riverine Wetland

= Detention Pond

= Sanitary

North

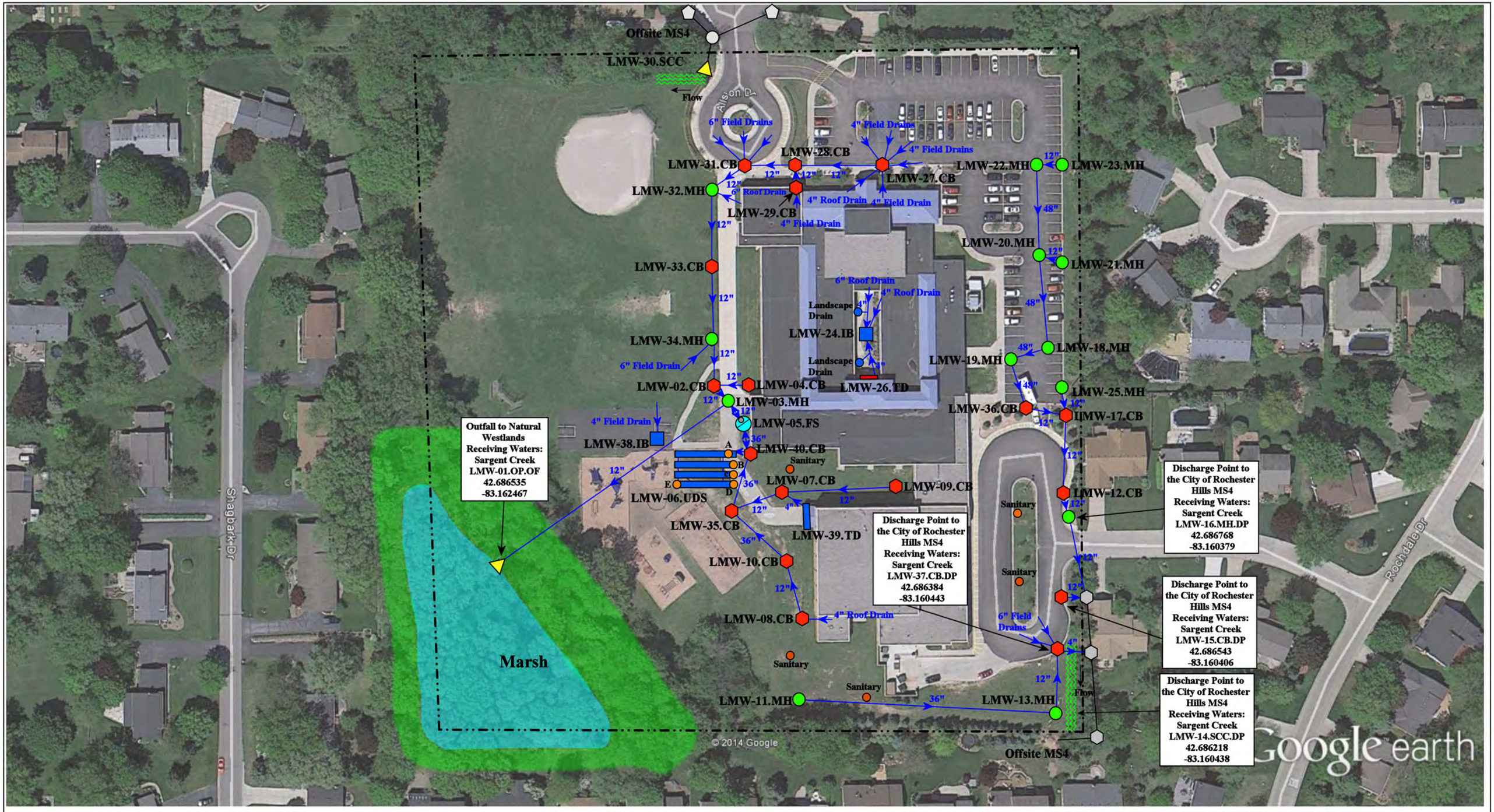
1440 John R Road, Rochester, MI 48307

John M. Schultz Educational Center
(Formerly Alternative Center for Education High School)

Rochester Community Schools

environmental group
37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	01/11/2021
Drawn by:	AS
Reviewed:	SR
Page #:	2 of 2
Scale:	Not to Scale



= Catch Basin
= Manhole
= Open Pipe Outlet
= Trench Drain
= Flow Splitter
= Underground Detention System
= Underground Detention System Access
= Infiltration Basin
= Offsite MS4
= Stormwater Conveyance Channel
= Property Lines
= Trench Drain

North

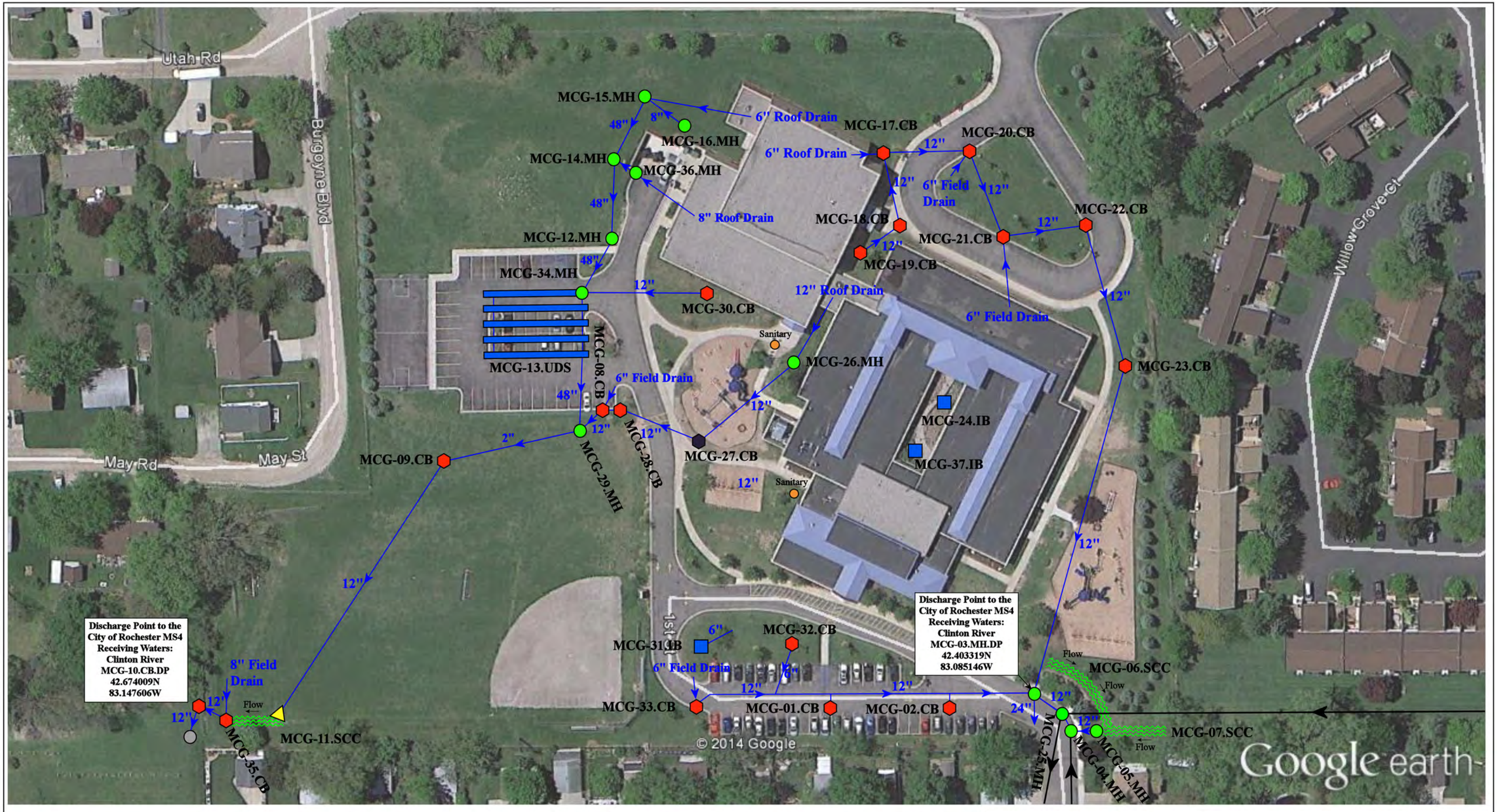
450 Allston Drive, Rochester Hills MI 48309

Long Meadow Elementary School

Rochester Community School District

Revision Date :	09/11/2020
Drawn by:	JOF
Reviewed:	CMC
Page #:	1 of 1
Scale:	Not to Scale

environmental group



= Catch Basin

= Manhole

= Infiltration Basin

= Open Pipe Outlet

= Underground Detention System

= Buried Basin

= City of Rochester MS4

= Stormwater Conveyance Channel

North

1101 First Rochester Street, Rochester, MI 48307

McGregor Elementary School

Rochester Community Schools

37720 Interchange Drive,
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	07/25/2019
Drawn by:	SB
Reviewed:	LK
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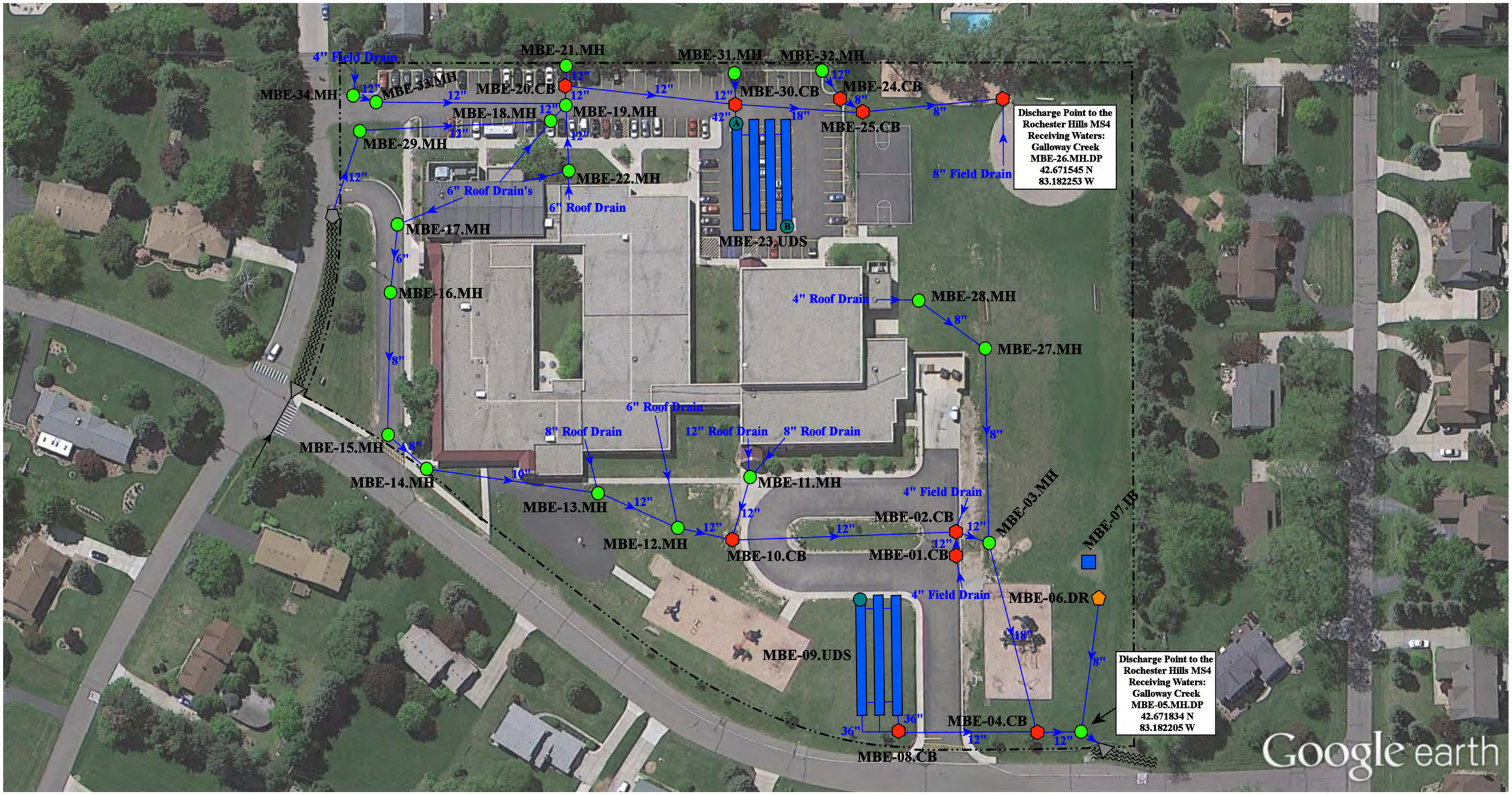


= Catch Basin

= Manhole

= Infiltration Basin

= Drainage Receptor

= Underground Detention System

= Underground Detention System Access Point

= Offsite MS4

= Property Lines

North

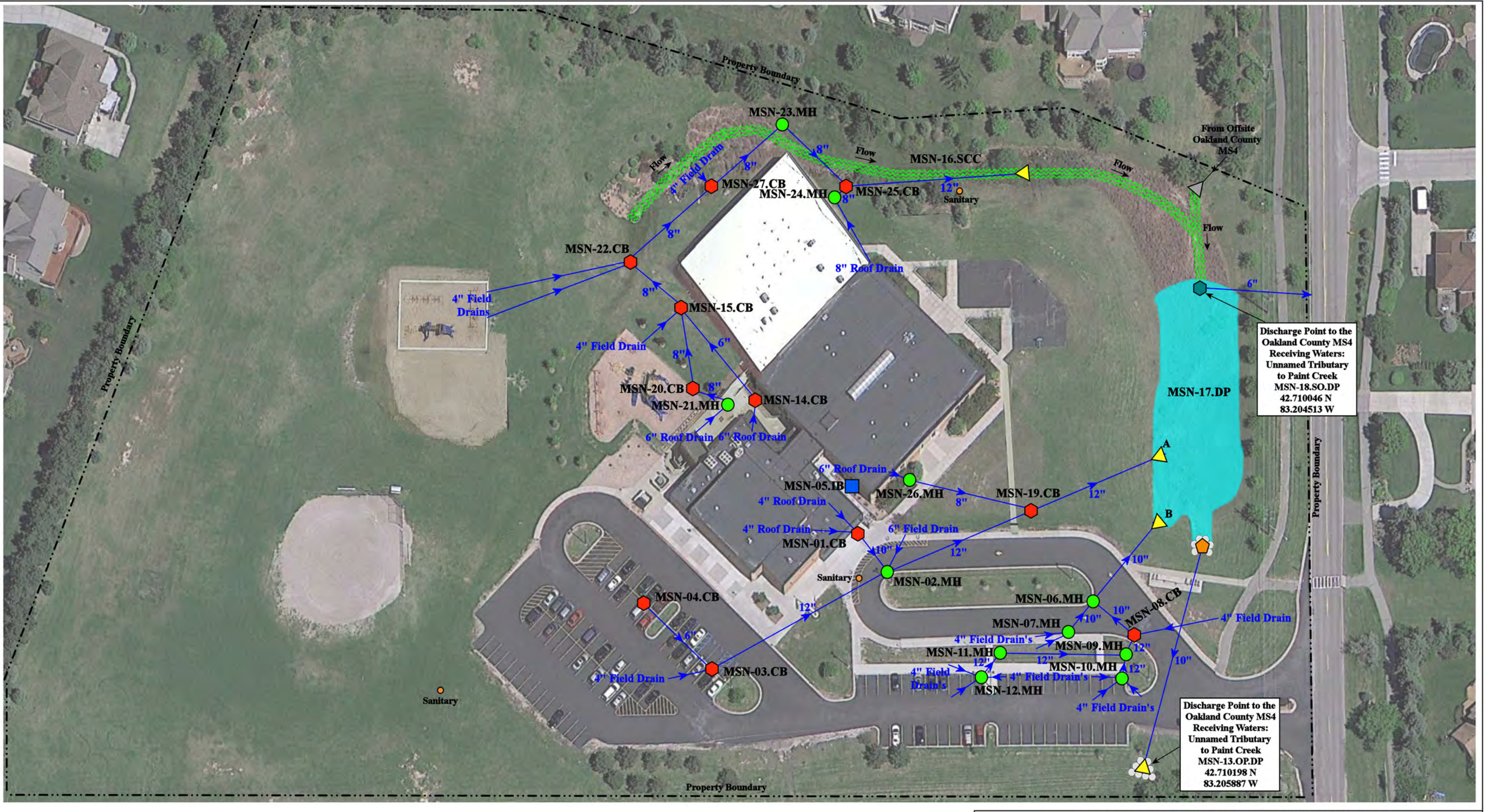
2350 Munster Road, Rochester Hills, MI 48309

Meadow Brook Elementary School

Rochester Community Schools

33720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	12/10/2019
Drawn by:	CMC
Reviewed:	BJZ
Page #:	1 of 1
Scale:	Not to Scale



= Catch Basin
= Manhole
= Infiltration Basin
= Open Pipe Outlet
= Drainage Receptor
= RipRap
= Detention Pond/Basin
= Stormwater Conveyance Channel
= Stabilized Outlet

North

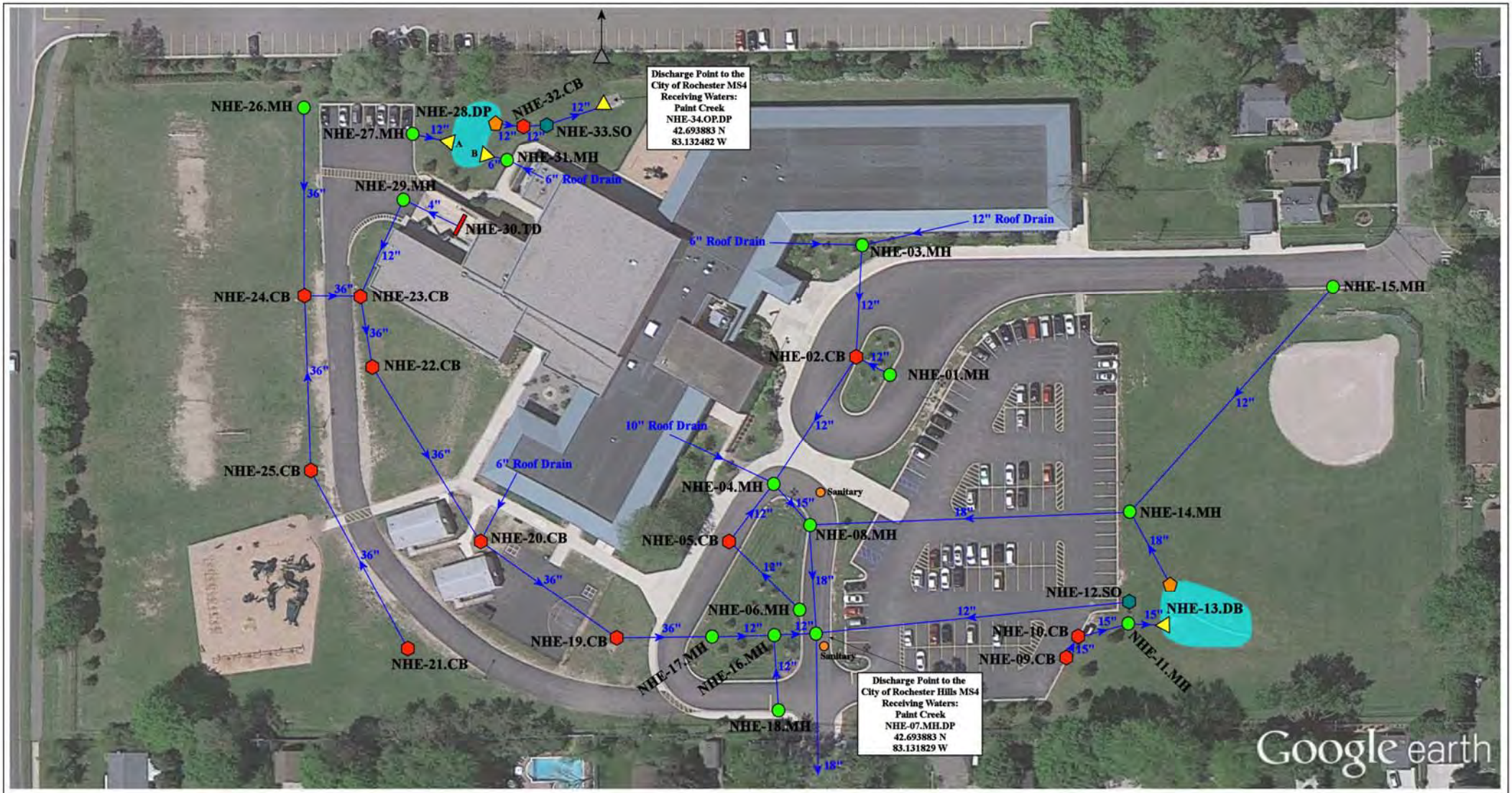
3500 Dutton Road, Rochester Hills, MI 48306

Musson Elementary School

Rochester Community Schools

environmental group
33720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	12/10/2019
Drawn by:	CMC
Reviewed:	BJZ
Page #:	1 of 1
Scale:	Not to Scale



= Catch Basin
= Manhole
= Trench Drain
= Open Pipe Outlet
= Drainage Receptor
= Stabilized Outlet
= Detention Pond/Basin
= Offsite MS4

North

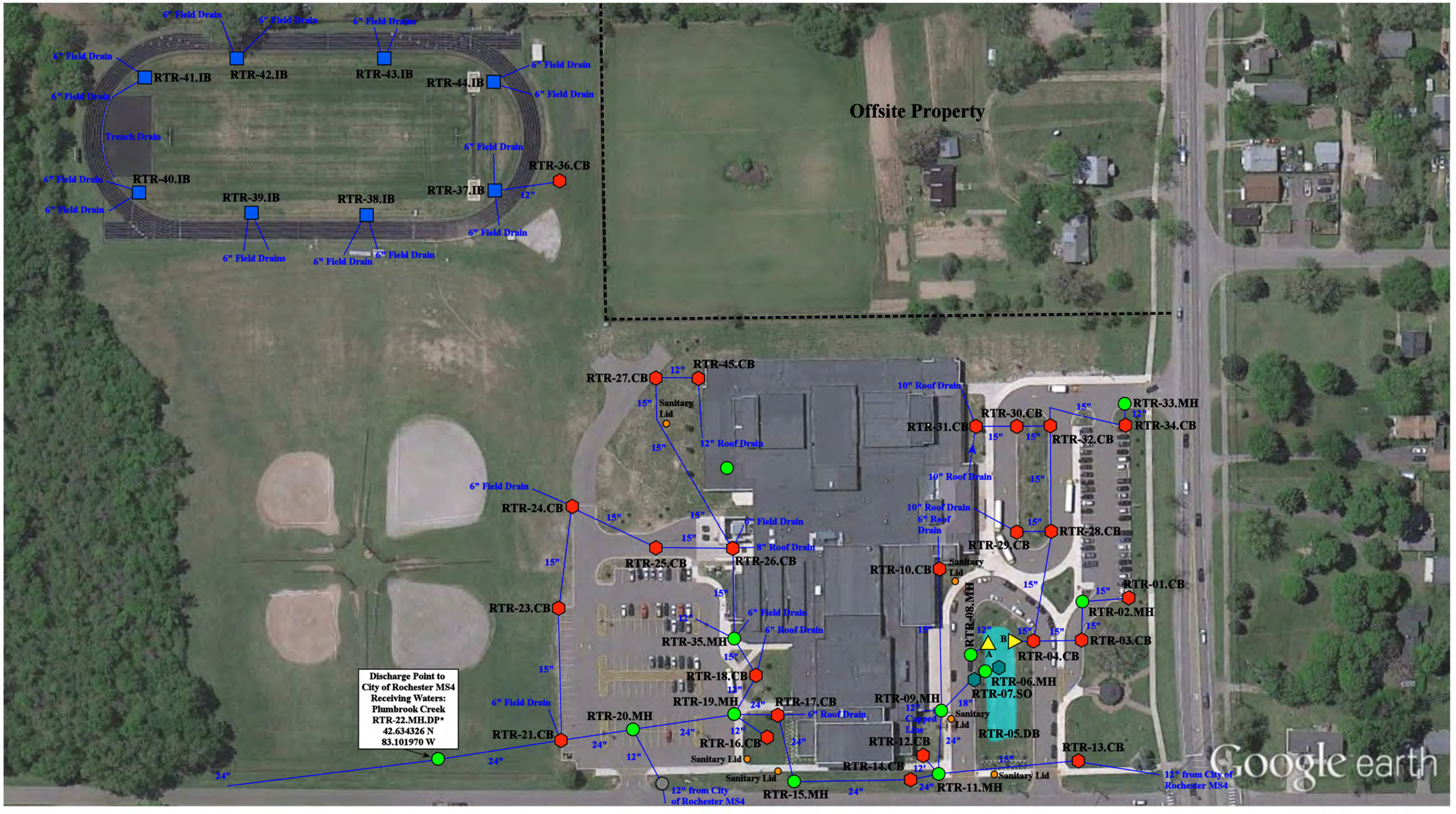
1385 Mahaffy Avenue, Rochester, MI 48307

North Hill Elementary School

Rochester Community Schools

33720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date:	9/10/2014
Drawn by:	CMC
Reviewed:	BJZ
Page #:	1 of 1
Scale:	Not to Scale



= Catch Basin

= Manhole

= Infiltration Basin

= Open Pipe Outlet

= Stabilized Outlet

= City of Rochester MS4

= Detention Basin

* = TMDL Sampling Location

North

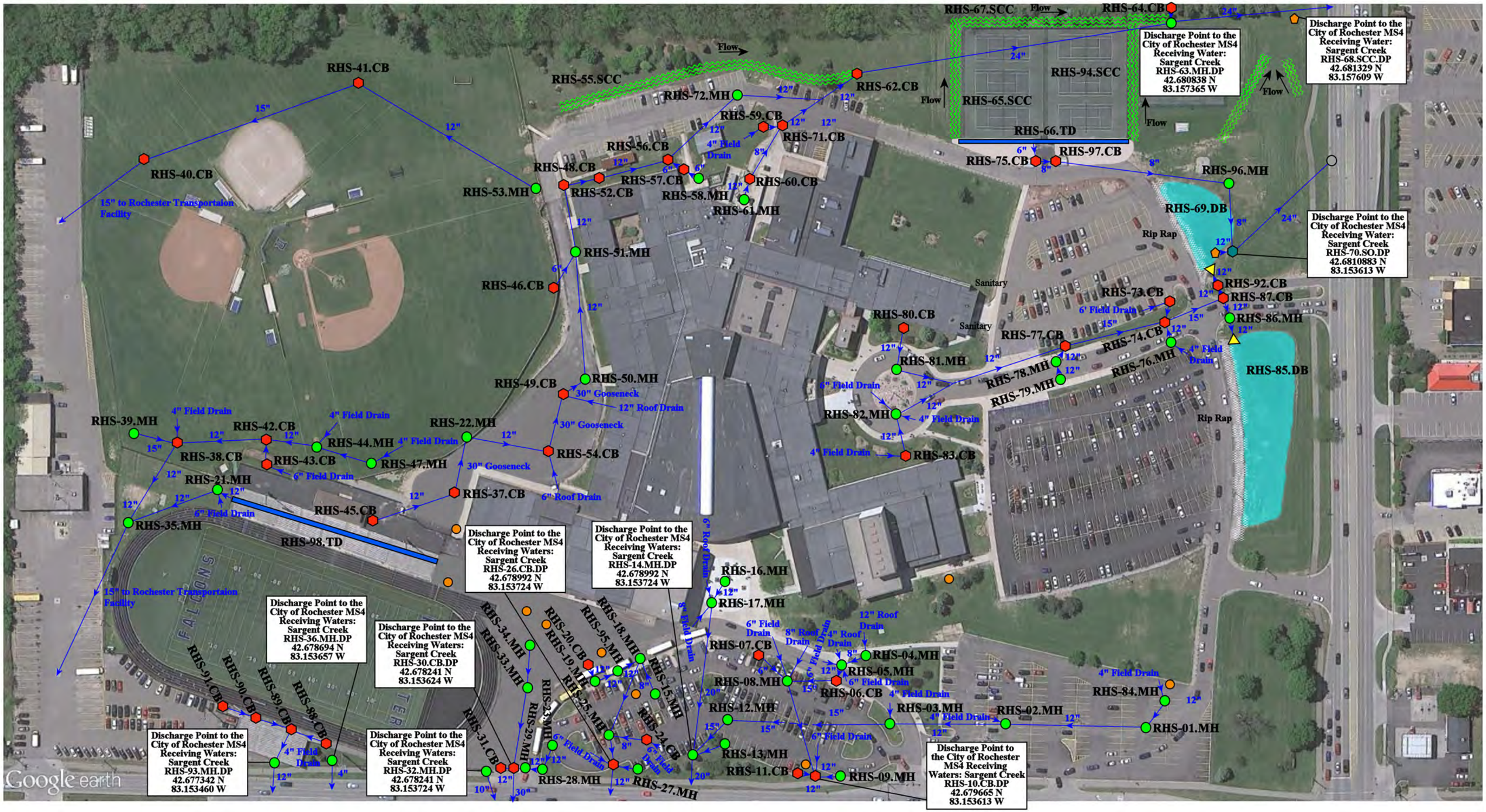
Reuther Middle School

Rochester Community Schools

1430 East Auburn Rd
Rochester Hills, Michigan 48307

environmental group

Date:	8/30/2019
Drawn by:	JOF
Reviewed:	CMC
Page #:	1 of 1
Scale:	Not to Scale



= Catch Basin
= Manhole
= Sanitary Sewer
= Trench Drain
= Drainage Receptor
= Open Pipe Outlet
= Detention Basin
= Stabilized Outlet
= Off Site MS4
= Stormwater Conveyance Channel

North

Rochester High School

Rochester Community School

1361 Walton Blvd,
Rochester Hills, MI 48307

environmental group

Date:	01/11/2021
Drawn by:	JOF
Reviewed:	CMC
Page #:	1 of 1
Scale:	Not to Scale

Access Point

Outfall to the Unanmed Tributary of the Stoney Creek
SCR-80.OP.OF
42.702517
-83.123769

12"
SCR-79.CB
12"
SCR-78.DB
12"
SCR-77.MH
12"
SCR-76.CB
12"
SCR-75.CB
SCR-74.CB
12"
4" Field Drain
12"
SCR-72.CB
SCR-73.CB

Unnamed Tributary to Stoney Creek

Access Point

Bridge

Freshwater Forested/Shrub Wetland

4" Field Drain

SCR-99.SCC
8"
4" Field Drain
SCR-65.CB
12"
6"
SCR-95.CB
SCR-94.CB
12" to SCR-60.CB

Google earth

400 ft

= Catch Basin
= Manhole
= Stabilized Outlet
= Open Pipe Outlet
= Detention Basin
= Buffer Filter Strip
= Offsite MS4
= Stormwater Conveyence Channel
= Drainage Receptor

North

Stoney Creek High School

Rochester Community Schools

environmental group
6755 Sheldon Rd
Rochester Hills, MI 48306

Date:	09/24/2020
Drawn by:	JOF
Reviewed:	JGS
Page #:	1 of 3
Scale:	Not to Scale

= Catch Basin
= Drainage Receptor
= Underground Detention System
= Manhole
= Open Pipe Outlet
= Stormwater Conveyance Channel
= Basin Drain
= Landscape Drain

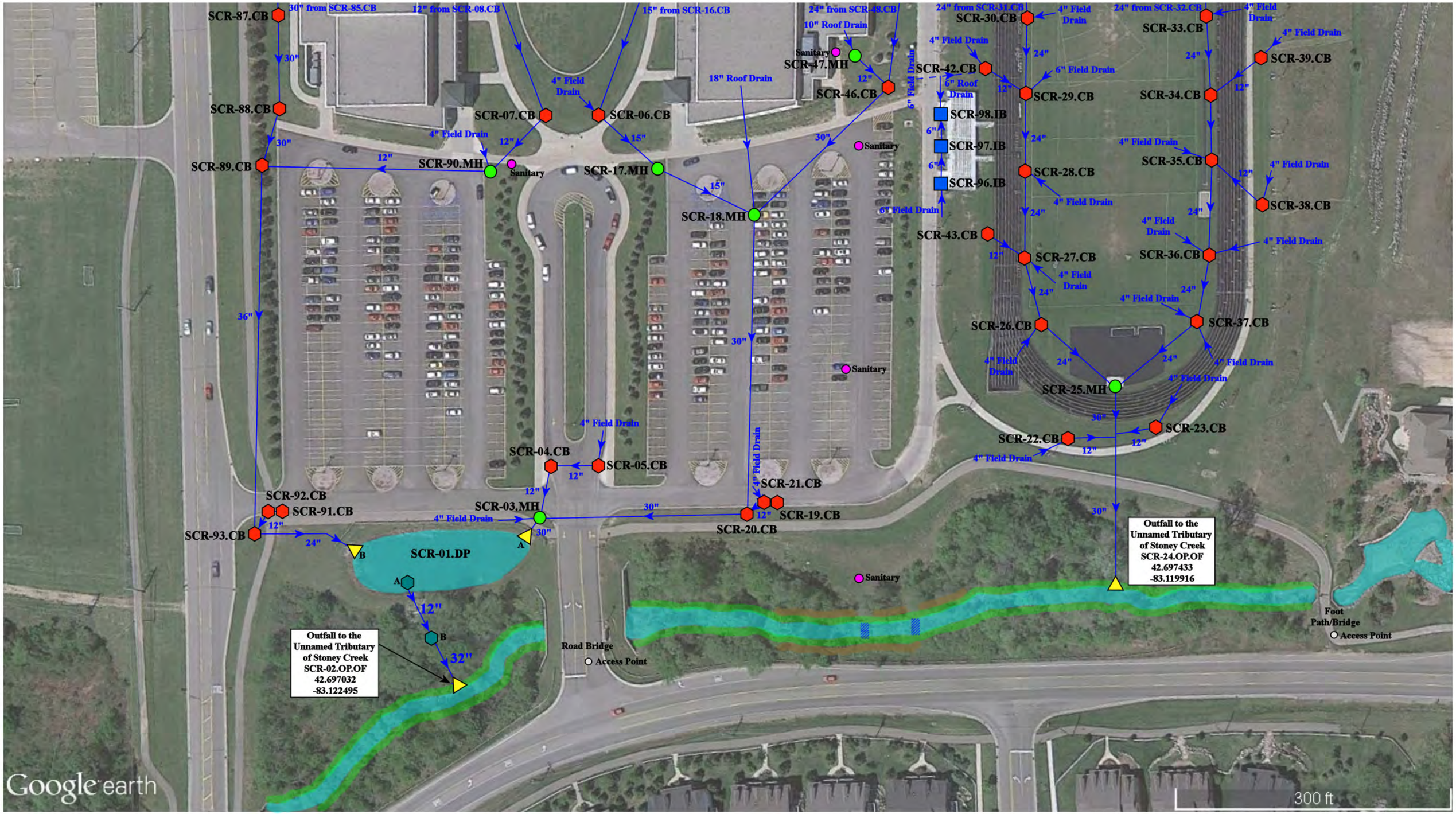
North

Stoney Creek High School

Rochester Community Schools

6755 Sheldon Rd
Rochester Hills, MI 48306

Date:	09/24/2020
Drawn by:	JOF
Reviewed:	JGS
Page #:	2 of 3
Scale:	Not to Scale



= Catch Basin
= Manhole
= Stabilized Outlet
= Drainage Receptor
= Open Pipe Outlet
= Detention Pond
= Buffer Filter Strip
= Erosion Area
= Waterfall
= Infiltration Basin

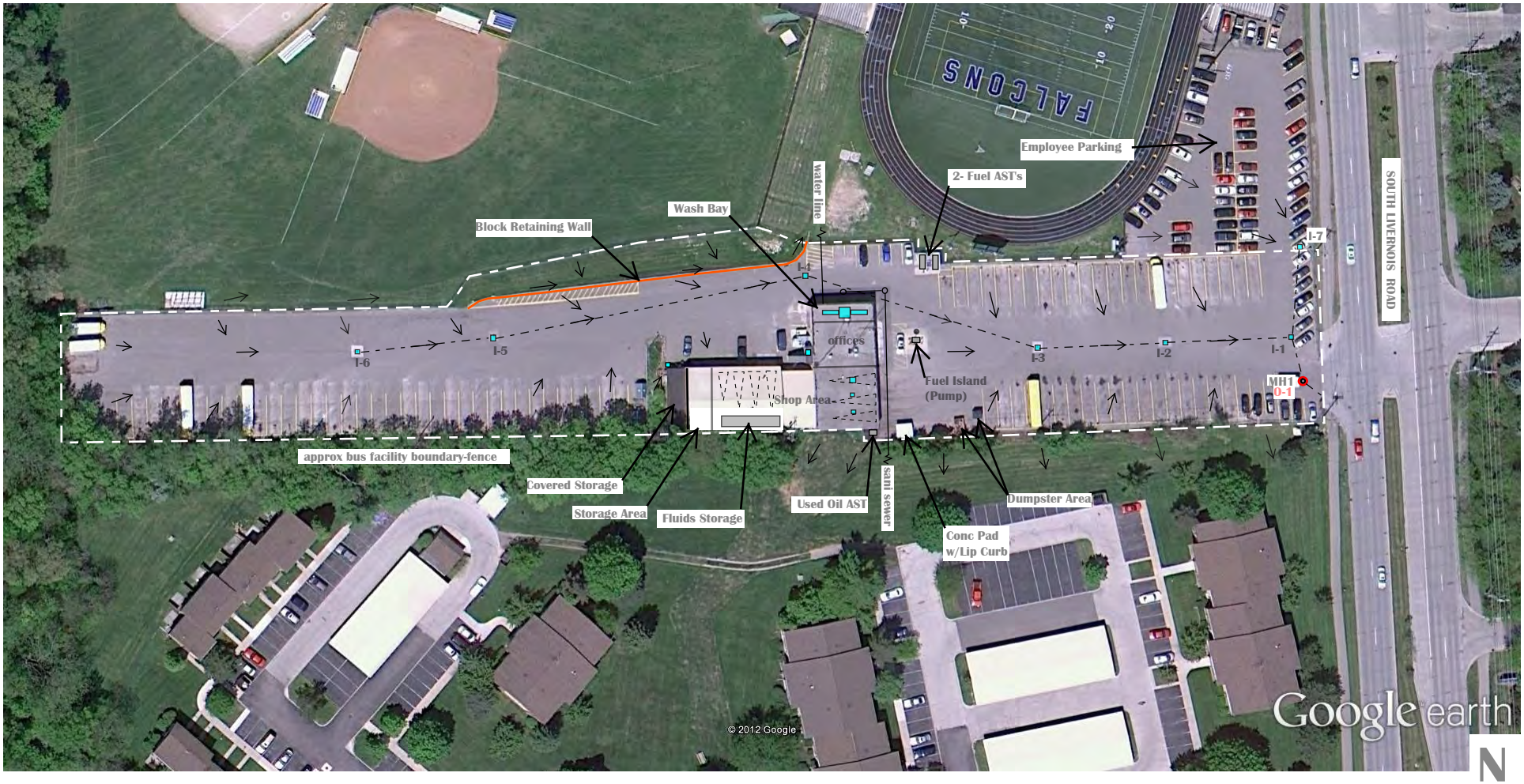
North

Stoney Creek High School

Rochester Community Schools

6755 Sheldon Rd
Rochester Hills, MI 48306

Date:	09/28/2020
Drawn by:	JOF
Reviewed:	CMC
Page #:	3 of 3
Scale:	Not to Scale

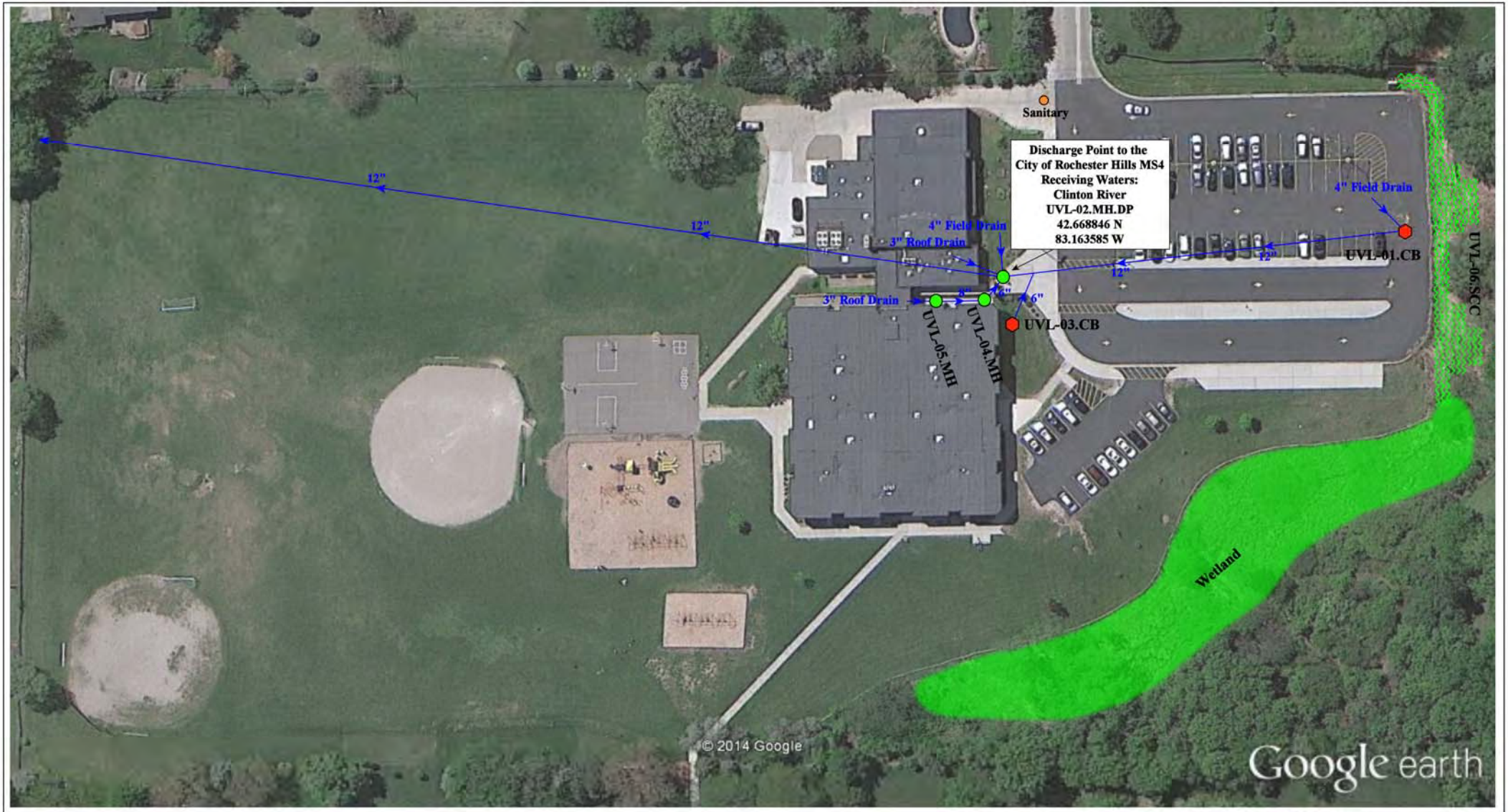


Google earth
5-9-2010 Image Prepared by SCS Engineers

feet 700

LEGEND
- Storm Sewer Pipe & Manhole
- Grate Inlet
- Sanitary Sewer & Manhole
- Stormwater Outfall Location

Fig. 1- Facility Site Map
South Livernois Road School Bus Facility
Rochester Hills



= Catch Basin

= Manhole

= Stormwater Conveyance Channel

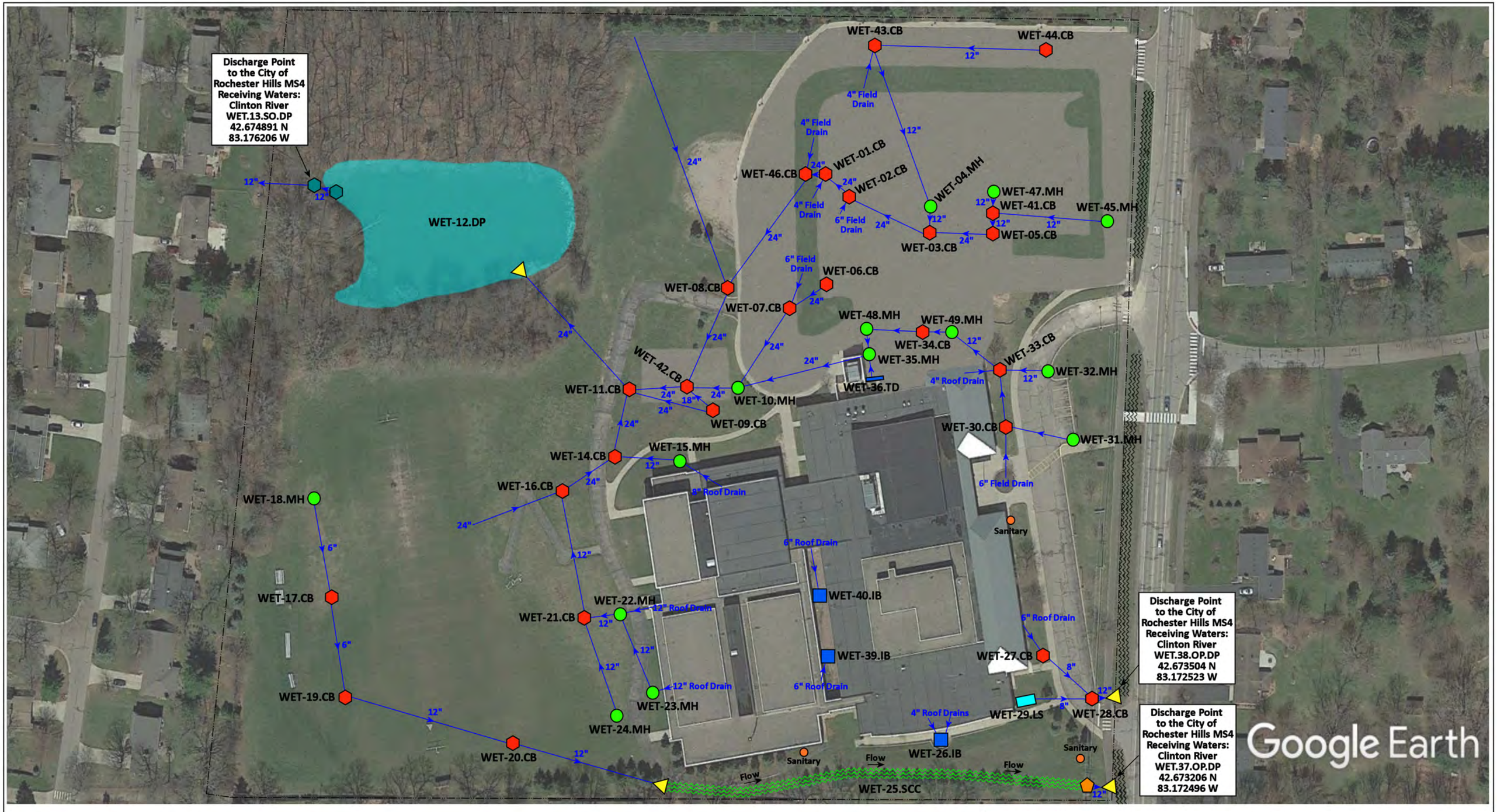
North

600 Croydon Road, Rochester Hills, MI 48309

University Hills Elementary School

Rochester Community Schools

Revision Date :	7/16/2014
Drawn by:	CMC
Reviewed:	JOF
Page #:	1 of 1
Scale:	Not to Scale



= Catch Basin
= Manhole
= Infiltration Basin
= Lift Station
= Stabilized Outlet
= Drainage Receptor
= Open Pipe Outlet
= Detention Pond
= Stormwater Conveyance Channel
= Offsite MS4
= Property Boundary

North

500 Old Perch Rd, Rochester Hills, MI 48309

West Middle School

Rochester Community Schools

37720 Interchange Drive
Farmington Hills, MI 48335
Phone: 248-426-0165
Fax: 248-427-0305

Revision Date :	12/17/2019
Drawn by:	BJZ
Reviewed:	LK
Page #:	1 of 1
Scale:	Not to Scale

Attachment "B"

School Board Policy Resolution(s), Post-Construction Stormwater Runoff Program, Policies & Procedures & Municipal Separate Storm Sewer System Noncompliance Enforcement Tracking Sheet

April 1, 2015
Revision Date: October 25, 2015
October 8, 2019

Post-Construction Stormwater Runoff Program Policy & Procedures

Rochester Community Schools

Rochester Hills, Michigan

Revision Date: April 1, 2015

environmental group

Table of Contents

1.0 PURPOSE AND OVERVIEW

Prevention of pollution from storm water runoff and the protection of the quality of the waters of the State of Michigan are of utmost importance to the Rochester Community Schools (ROCS). ROCS currently owns and operates separate storm sewer systems that discharge to surface waters or other municipal storm sewer systems (MS4) and is covered under certificate of coverage (COC) issued to ROCS by the Michigan Department of Environmental Quality (MDEQ).

The post-construction stormwater run-off controls are necessary to maintain or restore stable hydrology in receiving waters by limiting surface runoff rates and volumes and reducing pollutant loadings from sites that undergo development or significant redevelopment.

This policy is to establish the post construction stormwater runoff control standards. The objects of this program and associated procedures are to:

a. Develop and implement regulatory mechanisms to address post-construction stormwater runoff for new development and redevelopment projects, including preventing or minimizing water quality impacts.
b. Develop and implement regulatory mechanisms for projects that disturb one or more acre, including projects less than an acre that are part of a larger common plan of development or sale and discharge into the applicants MS4.
c. Ensure post construction controls to minimize water quality impacts by following water quality treatment standards.
d. Require that BMP's be designed on a site-specific basis to reduce post-development total suspended solids loading.
e. Procedure for the use of Infiltration BMP's to meet water quality treatment and channel protection standards of new development or redevelopment projects.
f. Address "hot spots".
g. Submit site development plans for review and approval.
h. Require adequate long-term O&M of BMPs by ordinance or other regulatory mean

Rochester Community Schools (ROCS) has developed and passed a board policy resolution on August 12, 2013, to direct compliance with these requirements. In addition to the board policy resolution, the following sections identify specific actions to be taken by ROCS to ensure compliance with the applicable standards. The board resolution is provided in Section 9.0.

2.0 WATER QUALITY TREATMENT PERFORMANCE STANDARD

This policy is to establish ROCS goal to include water quality treatment volume standards for each new construction or redevelopment of projects where the area of disturbance exceeds one (1) acre as required by the MDEQ NPDES Phase II Stormwater Discharge Permit. One or more of the following treatment standards should be included as part:

1. Treat the first one inch of runoff from the area of new construction or redevelopment, or
2. Treat the runoff generated ninety percent (90%) of all runoff-producing storms for the project site.

The source of the rainfall data for the water quality treatment standard of requiring the treatment of the runoff generated from the ninety percent (90%) of all runoff-producing storms is:

- The MDEQ memo dated March 24, 2006, which is available via the internet at www.michigan.gov/documents/deq/lwm-hsu-nps-ninety-percent_198401_7.pdf.

Treatment methods shall be designed on a site-specific basis to achieve the following:

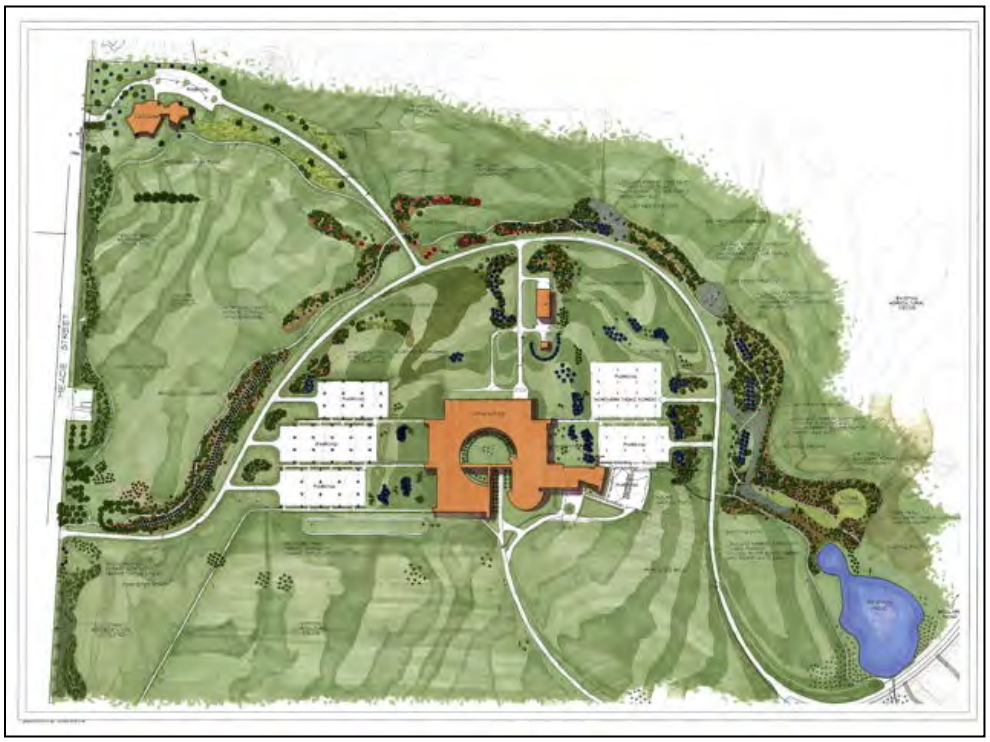
1. A minimum of eighty percent (80%) removal of total suspended solids (TSS), as compared with uncontrolled runoff, or
2. Discharge concentrations of TSS not to exceed 80 milligrams per liter (80mg/L).

A minimum treatment volume standard is not required where site conditions are such that TSS concentrations in storm water discharges will not exceed 80mg/L.

Treatment methods shall be designed on a site specific basis to reduce the discharge of sedimentation or TSS from the site. Such methods may include:

1. Stand pipe filters in storm water detention basins
2. Sediment filter tanks
3. Catch basin sumps
4. Aqua-Swirls®
5. Treatment trains
6. Rain Gardens
7. Pervious pavement systems

See the following graphic examples of treatment options.



Sample school site showing green space and infiltration are

3.0 CHANNEL PROTECTION PERFORMANCE STANDARD

This policy is to establish ROCS goal to address runoff rate and volume of discharges as required by the MDEQ NPDES Phase II Stormwater Discharge Permit.

Rochester Community Schools understands that channel protection criteria is necessary to maintain post-development stormwater runoff volumes and peak flow rates at or below existing levels for all storms up to the 2-year, 24-hour event. "Existing Levels" means the runoff volume and peak flow rate for the last land use prior to the planned new development or redevelopment.

Where more restrictive channel protection criteria already exists, or is needed to meet the goals of reducing runoff volume and peak flows to less than existing levels on lands being developed or redeveloped, Rochester Community Schools will consider use of the more restrictive criteria rather than the standard permit requirements.

A post-construction stormwater runoff program compliance assistance document is available via the internet at www.michigan.gov/documents/deq/wb-storm-ms4-runoffvolume_331235_7.xls.

Before channel protection

With channel protection

4.0 SITE SPECIFIC CRITERIA

This policy is to establish ROCS goal to address establish site specific requirements as required by the MDEQ NPDES Phase II Stormwater Discharge Permit. Because each site has its' own special circumstances and conditions the following BMPs will be used as appropriate according to site conditions.

- Reduce runoff from the site to greatest extent possible (provide holding basins, divert water through grassed swales).
- Prevent spills and discharges.
- Control waste such as building materials, concrete washout, chemicals, litter, and sanitary waste.
- Phasing will be 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 will be trained in the proper maintenance and operation of Soil Erosion and Silt Prevention measures.

ROCS will review construction plans for sites with known soil and/or groundwater contamination, including potential "hot spots" and evaluate the use of infiltration BMPs to meet water quality treatment and channel protection criteria. Hot spots include areas with the potential for significant pollutant loading such as vehicle service and maintenance facilities, vehicle equipment cleaning facilities, fleet storage areas for buses, and outdoor liquid container storage.

Additional water quality standards or pretreatment measures may be required in addition to those included in the water quality criteria in order to remove potential pollutant loadings from entering either groundwater of surface water systems.

Pretreatment measures include:

Stormwater Hot Spots	Minimum Pre-Treatment Options
Vehicle service and maintenance facilities	1. Oil/Water Separators/Hydrodynamic Devices. 2. Use of Drip Pans and/or Dry Sweep Material under Vehicles/Equipment 3. Use of Absorbent Devices to Reduce Liquid Releases 4. Spill Prevention Response Program
Fleet storage areas for buses	BMPs that are part of a Stormwater Pollution Prevention Plan (SWPPP)
Vehicle Fueling Stations	1. Oil/Water Separators/Hydrodynamic Devices 2. Water Quality Inserts for Inlets 3. Spill Prevention Response Program
Vehicle equipment cleaning facilities	BMPs that are part of a Stormwater Pollution Prevention Plan (SWPPP)
Outdoor liquid container storage	Spill Prevention Response Program

5.0 SITE PLAN REVIEW

This policy is to establish requirement to submit a site plan for review as required by the MDEQ NPDES Phase II Stormwater Discharge Permit. ROCS 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 a form and manner as prescribed by the 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. The review of the stormwater site plan will provide ROCS with the ability to ensure that water quality objectives, erosion and sediment control requirements, and BMP maintenance are adequately considered.

The goal of the site plan review is to:

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

6.0 OPERATION AND MAINTENANCE OF STORMWATER CONTROLS

Rochester Community Schools 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. ROCS will develop *"BMP Operation and Maintenance"* guidance manuals for each property, including:

- Develop a map of each facility identifying the location and type of structural controls, if any exist.
- 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.
- Storm water runoff facilities, after construction and approval, shall be maintained in good condition, in accordance with the approved storm water 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 Director of Operations will ensure that local work instructions are developed based on BMP and O&M Guidance Manuals. ROCS trained staff or certified contractors will conduct routine inspection of all identified structural controls and complete maintenance, repair, or replacement as necessary.

Example of a rain garden utilizing natural vegetation and eliminates the cost of lawn maintenance.

7.0 SUMMARY

The Rochester Community Schools is committed to practicing sound storm water management practices and to observance and adherence to all local, state and federal storm water policies to the greatest extent possible. ROCS strives to be a good steward of the lands and waterways located within its jurisdiction. The goal of this ***"Post-Construction Stormwater Runoff Program, Policy & Procedures"*** resolution is to implement and enforce a program to minimize storm water discharges and to improve the water quality into the drainage system from new and redevelopment projects.

8.0 BOARD RESOLUTION

Rochester Community Schools
Board of Education
Resolution in Support of Storm Water Pollution Prevention Initiatives

WHEREAS, Rochester Community Schools (RCS) owns and operates facilities within the boundaries of the "Detroit" urbanized area which discharges storm water though a municipal separate storm sewer system (MS4) to surface waters of the State of Michigan; and

WHEREAS, The Michigan Department of Environmental Quality – Water Bureau maintains oversight and regulatory authority for compliance with the terms and conditions of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System discharge permit; and

WHEREAS, Rochester Community Schools has applied for and received permit coverage to discharge storm water from Rochester Community Schools facilities to the MS4; and

WHEREAS, Rochester Community Schools agrees to comply with the NPDES Municipal Separate Storm Sewer System discharge permit requirements, and

WHEREAS, Rochester Community Schools has developed a Storm Water Pollution Prevention Initiative (SWPPI) outlining the policies, procedures, and best management practices to be employed by the district to comply with the general watershed permit requirements, and

WHEREAS, the conditions of the NPDES Municipal Separate Storm Sewer System discharge permit require Rochester Community Schools to develop and implement policies and procedures to ensure compliance with post-construction storm water discharges for new development and redevelopment projects containing an area of disturbance exceeding one acre, and

WHEREAS, Rochester Community Schools agrees to obtain a construction site permit from the local municipality or other governing unit for new development and redevelopment projects that disturb an area exceeding one acre, and

WHEREAS, Rochester Community Schools agrees to inspect, operate, and maintain structural controls for the purpose of reducing pollutant contribution, control runoff, and decrease or eliminate stream bank erosion due to storm water runoff.

THEREFORE, be it resolved that the Rochester Community Schools Board of Education is highly committed to practicing sound environmental principals including the reduction of pollutants to surface waters though discharges of storm water. The Board hereby approves and instructs the district Superintendent to enforce the above listed policies and procedures for control of storm water runoff and long-term operation and maintenance of structural controls as part of the overall Rochester Community Schools' Storm Water Management Program.

Duly passed and approved by the Rochester Community Schools Board of Education, Oakland County, Michigan this 12th day of August, 2013.

Approved:

President

Attest:

Secretary

Municipal Separate Storm Sewer System Noncompliance Enforcement Tracking
Rochester Community Schools

Report Number	Name	Date	Location of Violation	Business/ Organization	Description of Violation	Description of Enforcement Response	Compliance Schedule Date	Date Violation Resolved
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								

Attachment "C"

CRWC Clinton Main and Stoney-Paint Creek Prioritization Procedure
&
Clinton River Watershed Councils Clinton Main and Stoney-Paint Priority Table (Table 2)

April 1, 2015
Revision Date: October 25, 2015
October 8, 2019

Prioritization Procedure for Communities within Clinton Main 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 Clinton Main (CM) 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 Clinton Main 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
Avondale Schools	High priority	High priority	Medium priority	Medium priority	Medium priority	Medium priority	Medium priority	Low priority	Medium priority	Medium priority	High priority
KEEGO HARBOR	High priority	High priority	High priority	High priority	High priority	High priority	Medium priority	High priority	High priority	High priority	High priority
OAKLAND UNIVERSITY	High priority	High priority	High priority	Low priority	High priority	Medium priority	Low priority	Low priority	High priority	High priority	High priority
ORCHARD LAKE	High priority	High priority	High priority	High priority	High priority	High priority	High priority	Low priority	Medium priority	High priority	Medium priority
ORION TWP.	High priority	High priority	High priority	Medium priority	Medium priority	Medium priority	Medium priority	Medium priority	High priority	High priority	Medium priority
PONTIAC	Medium priority	High priority	High priority	Medium priority	Low priority	Medium priority	Low priority	Low priority	Medium priority	Medium priority	High priority
ROCHESTER	High priority	High priority	High priority	High priority	High priority	High priority	High priority	Low priority	High priority	High priority	High 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
SYLVAN LAKE	Medium priority	Medium priority	Medium priority	Medium priority	Medium priority	High priority	Low priority	Low priority	Low priority	High priority	Low priority
Rochester Community Schools	Medium priority	High priority	High priority	Medium priority	High priority	High priority	Medium priority	Medium priority	Medium priority	High priority	Medium priority
Majority	High priority	High priority	High priority	Medium priority	Medium priority	Medium priority	Medium priority	Low priority	High priority	High priority	High 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

- Information will still be made available on the Clinton River Watershed Council website (http://www.crwc.org/stormwater-protection/)
- Workshops facilitated by County Extension will be promoted
- Included as a topic in the Macomb County Annual Environmental Calendar.

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.

Prioritization Procedure for Communities within Stony/Paint 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 Stony/Paint (SP) 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 Stony/Paint 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
INDEPENDENCE TWP.	High priority	High priority	Medium priority	Low priority	High priority	High priority	High priority	Medium priority	Medium priority	High priority	Low priority
LAKE ORION	High priority	High priority	High priority	Medium priority	High priority	Medium priority	High priority	Low priority	High priority	High priority	Medium priority
ORION TWP.	High priority	High priority	High priority	Medium priority	Medium priority	Medium priority	Medium priority	Medium priority	High priority	High priority	Medium priority
OXFORD TWP.	Medium priority	High priority	Medium priority	High priority	High priority	High priority	Medium priority	Medium priority	Low priority	Medium priority	Low priority
OXFORD VILLAGE	High priority	High priority	High priority	Medium priority	Medium priority	Medium priority	Medium priority	Medium priority	Medium priority	Low priority	Low priority
ROCHESTER	High priority	High priority	High priority	High priority	High priority	High priority	High priority	Low priority	High priority	High priority	High 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
WASHINGTON TWP.	High priority	Medium priority	High priority	Medium priority	High priority	Medium priority	Medium priority	Medium priority	Medium priority	Medium priority	Medium priority
Majority	High priority	High priority	High priority	Medium priority	High priority	Medium priority	Medium priority	Medium priority	Medium priority	Medium 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- there are no low priorities in the Stony paint subwatershed

~~On Site Disposal System Education~~

- ~~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.~~

~~Car Washing~~

- ~~Covered in Stormwater Presentations (minimum 2 per year within the SP) facilitated by the Clinton River Watershed Council.~~
- ~~One news article (if applicable) over the course of the permit cycle.~~

~~Commercial Industrial, Institutional Education~~

- ~~Clinton River Watershed Council to facilitate a minimum 3 Clean Ups with Commercial Industrial, Institutional partners over the course of the permit cycle.~~

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.

Clinton Main 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.

Clinton Main 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-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.	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
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.
	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 related information is posted and/or materials are placed on the front desk of the Public Works Building main lobby for the public/county employees to take.	YES	General public, CVTs, county employees within Oakland County	x	x	x	x	x	x	x	x	x	x		Monthly	Oakland	Topics posted are tracked in an excel spreadsheet available upon request. Topics posted will be reported annually

Clinton Main 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 E-G, I	Dirt Doctors Program	The Dirt Doctors Program is an interactive program facilitated by WRC staff geared towards 4th and 5th grade students and teaches youth about how individual actions affect our waterways. The program focuses on the importance of soil erosion prevention and watershed stewardship.	YES	Oakland County 4th-12th grade students, teachers and chaperones	x	x	x		x	x	x		x			Annually	Oakland	Minimum of 25 programs annually
A-C, H	Drain Detectives Program	The Drain Detectives Program is an interactive program facilitated by WRC staff geared towards 4th through 12th grade students. It teaches students how pollution can get into our waterways, what to look for, how to detect it and how to trace the source of the pollution. Students learn how they can help prevent pollution and how to report pollution incidents through Oakland County's 24-Hour Pollution Hotline. Students also learn how water and pollution travel through the watershed.	YES	Oakland County 4th-12th grade students, teachers and chaperones	x	x	x					x				Annually	Oakland	Minimum of 5 programs over the permit cycle
A-J	Enviroscape 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.	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. WRC also provides an ad on household hazardous waste disposal in the Oakland Lakefront magazine and has information in its Waterfront Wisdom publication and on their Web site at www.oakgov.com/riparian.	YES	Residents	x						x					Annually	Oakland	Maintain working links to Web sites Hold a minimum of four collection events per year Collect and properly dispose of a minimum of 200,000 pounds of household hazardous waste per year
A-K	Kids' Clean Water Calendar Contest	The Kids' Clean Water Calendar contest is open to all 4th and 5th grade students in all schools within Oakland County. Themes for drawing entries surround the Seven Simple Steps to Clean Water campaign topics developed by SEMCOG. The contest promotes the students to learn about watershed stewardship and how our daily actions impact our waterways.	YES	General public, Oakland County 4th and 5th grade students	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland	Achieve participation of a minimum of 600 students per year Distribute a minimum of 5,000 calendars per year throughout Oakland County

Clinton Main 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 locations in Southeast Michigan. Stewardship opportunities are posted on OCPRC's Web site at: www.destinationoakland.com	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: www.oakgov.com/es, www.oakgov.com/riparian, www.destinationoakland.com, http://www.rcocweb.org/Environmental/Environmental.aspx , and http://www.oakgov.com/msu/. Information will also be provided via the Be Phosphorus Smart! Web site, which is a portal to information on phosphorus and its role in and impacts on crops, turf and lawn care, and stormwater (http://www.bephosphorussmart.msu.edu/)	YES	General public, CVTs, county employees	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland MSUE Oakland	Provide working links to Web sites
A	Oakland Lakefront Magazine Advertisements	Public education messages are placed in the Oakland Lakefront magazine. The messages include pet care, fertilizers, household hazardous waste disposal, earth-friendly landscaping, car care and storm drain awareness. Oakland Lakefront is published monthly and reaches approximately 17,000 homeowners on the waterways of Oakland County.	YES	General public, riparian landowners	x	x	x	x	x	x	x	x	x	x	x	April through September	Oakland	Place six (6) ads per year Reach a minimum of 13,000 lakefront residents per ad per year
A-K	Publicize Environmental-Related Events	Publicize environmental stewardship and other relevant environmental activities to WRC staff and the general public through in-house bulletin boards in WRC lobby. Oakland County also has a Web portal where this information is available at: 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 and provide a link to Michigan RV dump sites (www.rvdumps.com/mi.htm) on Oakland County Waste Resource Management Division's Web site at: www.oakgov.com/waste/.	YES	Residents, visitors to the area							x					Annually	Oakland	Provide working links to Web sites

Clinton Main 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	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 (www.oakgov.com/riparian)	YES	General Public, Riparian Landowners	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland	Maintain working links to Web sites Distribute a minimum of 100 Waterfront Wisdom booklets per year
A, G	Solid Waste Plan	Continue to implement Oakland County's Solid Waste Plan which establishes an enforceable program and processes that when implemented will minimize future adverse impacts upon public health, the environment and the landscape as a result of the generation, handling, processing and disposal of Act 451, Part 115 non-hazardous solid wastes.	YES	Residents	x						x					Annually	Oakland	Provide working link to Web site
	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 awareness		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 publications. MS4 permittees will distribute these article to		Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Annually	MS4 Permittees	Publish via print or digital media 4 articles per year.
A,C,G	Household Hazardous Waste Information	Continue to publicize information on the NO HAZ, Resource Recovery and Recycling Authority of Southwest Oakland County (RRRASOC) and Southeastern Oakland County Resource Recovery Authority (SOCRRA) programs to citizens and employees of Oakland County on WRMD's Web site (www.oakgov.com/waste/pohaz). NO		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 or provide a link to Michigan RV dump sites.		Residents, visitors to the area	x						x					Continuous	MS4 Permittees	Provide working links to Web sites

Clinton Main 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-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

Stony Paint 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.

Stony Paint 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-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
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.

Stony Paint 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,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
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 related	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 for presentations	YES	General public, Oakland County students	x	x	x	x	x	x	x	x	x	x		Annually	Oakland	Minimum of 10 programs annually

Stony Paint 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, 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 [illegible] Southeast Michigan	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
A, I, J	Natural Resources Education Program	Special programs are offered by Oakland County Parks and Recreation Commission (OCPRC) staff throughout the year which provide opportunities for the community to participate in ongoing stewardship efforts. Programs take place at the Oakland County Parks as well as other locations in Southeast Michigan	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: www.oakgov.com/es, www.oakgov.com/riparian	YES	General public, CVTs, county employees	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland MSUE Oakland	Provide working links to Web sites
A	Oakland Lakefront Magazine Advertisements	Public education messages are placed in the Oakland Lakefront magazine. The messages include pet care, fertilizers, household hazardous waste disposal, earth-friendly landscaping, car care and storm drain awareness. Oakland Lakefront is published monthly and reaches approximately 17,000 homeowners on the waterways of	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 and provide a link to Michigan RV dump sites	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 (www.oakgov.com/riparian)	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

Stony Paint Table 2

PEP TOPIC	BMP IDENTIFIER	BMP DESCRIPTOR	PARTNER COLLABORATION	Target Audience	PEP Element A - Personal Watershed Stewardship	PEP Element B - Ultimate Storm Water Discharge Locations and Potential Impacts	PEP Element C - Public Reporting of Illicit Discharges	PEP Element D - Car, Pavement PowerWashing	PEP Element E- Pesticides, Herbicides, Fertilizer Education	PEP Element F-Grass Clippings, Leaf Litter, Animal Waste Disposal	PEP Element G - Waste Management Assistance	PEP Element H- Septic System Maintenance	PEP Element I - Benefits of Green Infrastructure LID	PEP Element J - Mgt. of Riparian Lands	PEP Element K - Commercial, Industrial, Institutional Education	FREQUENCY	RESPONSIBLE PARTY	MEASURABLE GOAL
A, G	Solid Waste Plan	Continue to implement Oakland County's Solid Waste Plan which establishes an enforceable program and processes that when implemented will minimize future adverse impacts upon public health, the environment and the landscape as a result of the generation, handling, processing and disposal of Act 451, Part 115 non-	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 awareness		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 publications. MS4 permittees will distribute these article to		Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Annually	MS4 Permittees	Publish via print or digital media 4 articles per year.
A,C,G	Household Hazardous Waste Information	Continue to publicize information on the NO HAZ, Resource Recovery and Recycling Authority of Southwest Oakland County (RRRASOC) and Southeastern Oakland County Resource Recovery Authority (SOCRRA) programs to citizens and employees of Oakland County on WRMD's Web site (www.oakgov.com/waste/pohaz), NO HAZ		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 or provide a link to Michigan RV dump sites		Residents, visitors to the area	x						x					Continuous	MS4 Permittees	Provide working links to Web sites
A-J	Riparian Information Distribution	Distribute riparian landowner educational material (i.e. Waterfront Wisdom brochure) make available to their public via mailings or through their website. events, meetings, and through mailings. MS4 may add this to thier SWMP Maintain WRC's riparian education Web site		General Public, Riparian Landowners	x	x	x	x	x	x	x	x	x	x		Continuous	MS4 Permittees	Provide working link to Web site

Attachment "D"

Clinton River Watershed Councils Collaborative Public Education Plan

April 1, 2015
Revision Date: October 25, 2015
October 8, 2019

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 is identified.

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

A. Promote public responsibility and stewardship in the applicant’s watershed(s).

B. Inform and educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have on surface waters of the state.

C. Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4.

D. Promote preferred cleaning materials and procedures for car, pavement, and power washing. ☐

E. Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers.

F. Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter into the MS4.

G. Identify and promote the availability, location, and requirements of facilities for collection or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, and motor vehicle fluids.

H. Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure.☐

I. Educate the public on, and promote the benefits of, green infrastructure and Low Impact Development.

J. Promote methods for managing riparian lands to protect water quality.
☐
K. Identify and educate commercial, industrial, and institutional entities likely to contribute pollutants to stormwater runoff.

V. REQUIRED ELEMENTS –EDUCATION ACTIVITIES

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

VI. EVALUATION PLAN

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

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

Through CRWC's Adopt-A-Stream monitoring program, it is possible to evaluate long-term changes in water quality. The results are compiled in an annual scorecard, which allows a simple mechanism for measuring improvements or declines in water quality across the various subwatersheds. Improvements in water quality cannot be attributed solely to a successful

public education effort, but indicate the overall effectiveness of the stormwater management efforts in the community, subwatershed, and watershed-wide.

VII. REPORTING

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

VIII. APPENDIX A: 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

Attachment "E"

Clinton River Water Councils Permittee PEP Action Table

April 1, 2015
Revision Date: October 25, 2015
October 8, 2019

Clinton River Watershed and Lake St. Clair Direct Drainage Public Education Plan

Permittee Specific Activity Action Table (Appendix A)

The watershed wide PEP is submitted on behalf of Macomb County, Oakland County and the

MS4 permit holders that participate in the Storm Water Education Program facilitated by the

Clinton River Watershed Council (CRWC).

The table below lists the PEP activities that are to be facilitated by the permittees themselves and reported on by the permittee in their SWPPI. Please refer to table #2 for the individual action descriptions.

Permittee	**Specific Actions**
Avondale Schools	1, 2, 3, 5
Center Line	1, 2, 3, 4, 5, 6
City of Village of Clarkston	1, 2, 3, 5, 6, 7
Clinton Township	1, 2, 3, 4, 5, 6, 7
Eastpointe	1, 2, 3, 4, 5, 6
Fraser	1, 2, 3, 4, 5, 6, 7
Grosse Pointe	1, 2, 3, 4, 5, 6, 7
Grosse Pointe Farms	1, 2, 3, 4, 5, 7
Grosse Pointe Park	1, 2, 3, 4, 5, 6, 7
Harper Woods	2,3,4
Harrison Township	1, 2, 3, 4, 5, 6, 7
Hazel Park	1, 2, 3, 4, 5, 6
Independence Township	1, 2, 3, 4, 5, 6, 7
Keego Harbor	1, 2, 3, 4, 5, 6, 7
Macomb Township	1, 2, 3, 4, 5, 6, 7
Madison Heights	1, 2, 3, 4, 5, 6
Mount Clemens	1, 2, 3, 4, 5, 6, 7
Oakland University	1, 2, 3, 5, 6
Orchard Lake Village	1, 2, 3, 4, 5, 6, 7
Orion Township	1, 2, 3, 4, 5, 6,7
Oxford Area Community Schools	1, 2, 3, 5,
Oxford Township	1, 2, 3, 4, 5, 6, 7
Pontiac	3, 4, 5, 6,
Rochester	1, 2, 3, 4, 5, 6, 7
Rochester Hills	1, 2, 3, 4, 5, 6, 7
Rochester Schools	1, 2, 3, 5, 7,
Romeo Village	1, 2, 3, 5, 6
Roseville	1,2, 3, 4, 5,6
Shelby Township	1, 2, 3, 4, 5, 6, 7
St. Clair Shores	1, 2, 3, 4, 5, 6, 7
Sterling Heights	1, 2, 3, 4, 5, 6, 7
Sylvan Lake	1, 2,3, 4, 5, 6,7
Troy	1, 2, 3, 4, 5, 6, 7
Utica	1, 2, 3, 4, 5, 6, 7
Village of Grosse Pointe Shores	1, 2, 3, 5, 6, 7
Village of Lake Orion	1, 2, 3, 4, 5, 6, 7
Village of Oxford	1, 2,3, 4, 5,6, 7
Warren	1, 3, 4, 5, 6, 7
Washington Township	1, 2, 3, 4, 5, 6, 7

	Table 2													
	Action/Activity	Description/Method of Implementation	Target Audience	Timeline	Key Message(s) Addressed									Evaluation Method
					PEP Element #1 - Personal Watershed Stewardship	PEP Element #2 - Ultimate Storm Water Discharge Locations and Potential Impacts	PEP Element #3 - Public Reporting of Illicit Discharges	PEP Element #4 - Personal Actions that can Impact the Watershed	PEP Element #5 - Waste Management Assistance	PEP Element #6 - Septic System Maintenenance	PEP Element #7 - Benefits of Native Vegetation	PEP Element #8 - Management of Riparian Lands	PEP Element #9 - Entity-specific Pollutants	
1	Presentations and Displays	Provide displays at permittee building(s) or events to the public at least once in the next 5 years. Provide presentations for water quality-related events upon request and availability of staff time.	Citizens including the general public and county and municipal employees	Annually	x	x	x	x	x	x	x	x		Date, time location and name of event attended
2	Regional Public Education Efforts	Continue to participate in the Southeast Michigan Partners for Clean Water group facilitated by SEMCOG and support/share the resources available from this group, including: Seven Simple Steps to Clean Water brochures, tip cards and kids activity sheets. Topics include: fertilizer, car care, pet care, household hazardous waste disposal, earth-friendly landscaping, water conservation and storm drain awareness. Materials from the "Our Water. Our Future. Ours to Protect" campaign materials will be distributed to MS4 permittees on an ongoing basis via mailings, website, and events or at permittee facilities.	Citizens including the general public and county and municipal employees	Annually	x	x	x	x	x	x	x	x		Track the number and type of materials distributed
3	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 on their own websites.	Citizens including the general public and county and municipal employees	The website is in place and is continuous	x	x	x	x	x	x	x	x		Report annually: Provide working links to Web sites
4	Newsletter Articles	Write articles about watersheds, storm water pollution personal action for publication into existing municipal newsletters and websites; Four articles per year will be given to MS4 permittees from CRWC for publication in newsletters and other publications. MS4 permittees will distribute these articles to the public each year via print or digital media such as cable tv, e newsletters or email blasts.	Citizens including the general public and county and municipal employees	4 articles per year one for each season	x	x	x	x	x	x	x	x		MS4 will report where and when these are published in their SWPPI.
5	Household Hazardous Waste Information	Continue to publicize information on the Household Hazardous Waste Disposal via web links or brochures. For Oakland County Communities http://www.advantageoakland.com/CPHA/CPHAWaste/Pages/CPHAHHW.aspx , Macomb County Communities http://macombcountymi.gov/PUBLICHEALTH/eh/HouseholdWaste.htm and Wayne County http://www.waynecounty.com/doe_lrm_prog_swplanning_hhwp.htm	Residents	Annually	x		x		x					Report annually: Provide working links to Web sites Number of brochures distributed
6	Recreational Vehicle Waste Dumpsites	Post links and/or locations to recreational vehicle (RV) waste dumpsites in the region and the State of Mi. http://www.rvdumps.com/dumpstations/michigan http://www.sanidumps.com/maps/index.php?id=36 .	Residents, visitors to the area	Annually					x					Provide working links to Web sites
7	Riparian Information Distribution	Distribute riparian landowner educational material such as the Waterfront Wisdom brochure, or other information. Make available to their public via mailings or through web links, events, meetings, and through mailings.	General Public, Riparian Landowners	Annually	x	x	x	x	x	x	x	x		Number of brochures/other materials distributed Provide working links to Web site

Attachment "F"

Inspection Field Worksheets & Stormwater Sampling
&
Analysis Protocol for School District MS4 Clients (SOP-101)

April 1, 2015
Revision Date: October 25, 2015
October 8, 2019

Storm Sewer Structure Operation Maintenance
Waste Characterization Disposal Record

Building:

Client:

Address:

Inspectors:

Visual Observations

ID #	Type	Date	Conditions?	Industrial area	Outfall flow rate	Sediment / Solids	Odor:	Color:	Turbidity:	Floatables:	Deposits / Stains:	Vegetation:	Damage	Initials

Structural BMP Table

Building:			**Client:**		
Inspectors:			**Start Date:**		
			Inspection Type:		

ID #	Type	Inspected	Standing Water	Color	Odor	Structure Staining	Suds	Oil Sheen	Bacterial Sheen	Sewage	Algae	Slimes	Abnormal Vegetation	Flow Observed	Velocity of Flow	Color of Flow	Blockages	Erosion	Needs Cleaning?	Structural Issues	Structural Trend	Stenciled

environmental group

Screening Inspection Log

Building:		Client:	
Inspectors:		Date	
		Inspection Type:	

Structure Information:

ID Number:		Structure Type		Lat:	Long:
Type:		Location:			
Outfall Dimensions					

Observations:

Standing Water Characteristics

Standing Water:	
Color:	
Odor:	
Suds:	
Staining:	
Oil Sheen:	
Sewage:	
Bacterial Sheen:	
Algae:	
Slimes:	
Abnormal Growth:	

Flow Characteristics

Flow Observed:	
Source of Flow:	
Velocity of Flow:	
Color of Flow:	
Flow Odor:	

Maintenance

Cleaning:	
Blockages:	
Structural Issues:	
Structural Trend:	
Stenciling:	

Additional Comments:

Sample ID And Information

Sample Collected?	
Round:	
Last Rain Event:	
Current Weather:	
Screening Location Type:	
Other Screening Activities Conducted:	
Outfall Characterization:	
Sample sent to Lab:	

Field Analysis:	Results:	Units:	Initials:
pH:		pH units	
Temperature:		Celsius	
Surfactants:		mg/L	
Ammonia:		mg/L	
Chlorine:		mg/L	
Turbidity:		NTU	
Conductivity:		uohm/cm	

Equipment Calibration:

Date:	Cal. By:

Photo ID:

Arch Environmental Group
37720 Interchange Drive,
Farmington Hills MI 48370

Phone: (248) 426-0135
Fax: (248) 426-0136
www.archenvgroup.com

Illicit Discharge Investigation Checklist

Buliding _____
Client _____
Date _____

Illicit Connection On Site? _____

Locations Inspected

Boiler Room
- Floor Drains _____
- Sump Pump _____
- Slop Sinks _____
- Toilets _____
- Sinks _____
- Laundry _____
- Pool Discharge _____
- Other Drains _____
- Comments _____

Bathrooms
- Floor Drains _____
- Sump Pump _____
- Slop Sinks _____
- Toilets _____
- Sinks _____
- Laundry _____
- Pool Discharge _____
- Other Drains _____
- Comments _____

Custodial Area
- Floor Drains _____
- Sump Pump _____
- Slop Sinks _____
- Toilets _____
- Sinks _____
- Laundry _____
- Pool Discharge _____
- Other Drains _____
- Comments _____

Pool Room
- Floor Drains _____
- Sump Pump _____
- Slop Sinks _____
- Toilets _____
- Sinks _____
- Laundry _____
- Pool Discharge _____
- Other Drains _____
- Comments _____

Other
- Floor Drains _____
- Sump Pump _____
- Slop Sinks _____
- Toilets _____
- Sinks _____
- Laundry _____
- Pool Discharge _____
- Other Drains _____
- Comments _____

Other
- Floor Drains _____
- Sump Pump _____
- Slop Sinks _____
- Toilets _____
- Sinks _____
- Laundry _____
- Pool Discharge _____
- Other Drains _____
- Comments _____

Stream Habitat Walk - General Site Information

Site			
Stream Name			
County			
State			
Investigators			
Date			
Site Description			
Number of Regions	Text		
Weather in the past 24 Hours?			
Current Weather			

In Stream Characteristics

Region ID					
Check which Stream Habitats are present (you can select more than one):					
	Pool(s)		Riffle(s)		Run(s)
Nature of particles in the stream bottom at site:					
	None/Little	Some	Most		
Silt/Clay/Mud					
Sand (<0.1")					
Gravel (0.1-2")					
Cobbles (2-10")					
Boulders (>10")					
Bedrock (solid)					
Pick the category that best describes the extent to which gravel, cobbles, and boulders on the stream bottom are embedded (sunk) in silt, sand, or mud					
Presence of logs or large woody debris in stream:					
Presence of naturally occuring organic material (leaves and twigs) in s					
Water Appearance					

Water Odor:

Streambank and Channel Characteristics

Approximate Depth of Run(s):		

Approximate Depth of Pool(s):		

Approximate Width of Stream Channel:		
0	Feet	Estimated

Stream Velocity		
0	Feet/Second	Estimated

Looking upstream (100 yds), pick the description that best fits the shape of the stream bank and the channel:	
Left Stream Bank	**Right Stream Bank**
Left Extent of Artificial Bank Modifications	**Right Extent of Artificial Bank Modifications**

Shape of the Channel		

Looking upstream, describe the stream side cover.		
Left	**Water's Edge**	**Right**
	Trees	
	Bushes, shrubs	
	Tall Grasses, Ferns, etc	

	Lawn	
	Boulders/Rocks	
	Gravel/Sand	
	Bare Soil	
	Pavement/Structures	
Left	**Top of bank out 25 yds**	**Right**
	Trees	
	Bushes, shrubs	
	Tall Grasses, Ferns, etc	
	Lawn	
	Boulders/Rocks	
	Gravel/Sand	
	Bare Soil	
	Pavement/Structures	
Pick the category that best describes the extent to which vegetation shades the stream at your site		
Looking upstream, note the general conditions. Note if condition is present or significant.		
Left	**Stream Banks**	**Right**
	Natural stream side plant cover	
	Banks collapsed / eroded	
	Garbage/junk adjacent to stream	
	Foam or sheen on bank	
Left	**Channel**	**Left**
	Mud, silt or sand in or entering stream	

	Garbage/Junk in the stream	
Left	**Other**	**Right**
	Yard Waste on bank	
	Livestock in or with unrestricted access to stream	
	Actively Discharging Pipes	
	Other Pipes entering the stream	
	Diches entering the stream	
Land uses in the local watershed can potentially have an impact on a stream. Check if present or if having an impact on the stream.		
Residential		
	Single-Family Housing	
	Multifamily Housing	
	Lawns	
	Commercial/Institutional	
Roads / Access		
	Paved Roads or Bridges	
	Unpaved Roads	
Construction Underway		
	Housing Development	
	Commercial Development	
	Road Bridge Construction/Repair	
Agricultural		
	Grazing Land	
	Feeding Lots or Animal Holding Areas	
	Cropland	
	Inactive Agricultural Land/Fields	

Recreation	
	Power Boating
	Golfing
	Camping
	Swimming/Fishing/Canoeing
	Hiking/Paths
Other	
	Mining or gravel pits
	Logging
	Industry
	Oil and gas drilling
	Trash Dump
	Landfill

Wildlife in or around the stream? (Mark all that apply)			
	Amphibians		Waterfowl
	Reptiles		Mammals

Fish in the Stream?

Are there any barriers to fish movement?			
	Beaver Dams		Waterfalls >1 ft
	None		Dams
	Road Barriers		Other

Aquatic Plants in the Stream? (mark all that apply)			
	None		Occasional
	Plentiful		Attached
	Free Floating		Stream Margin
	Pools		Near Riffle

Extent of Algae in Stream? (Mark all that apply)			
	None		Occasional
	Plentiful		Light Coating
	Heavy Coating		Brownish
	Greenish		Other
Are there any filamentous (string-like) algae?			
	None		Occasional
	Plentiful		Brownish
	Greenish		Other
Are there any detached "clumps" or "mats" of algae floating on the water's surface?			
	None		Occasional
	Plentiful		Brownish
	Greenish		Other
General comments:			

ARCH ENVIRONMENTAL GROUP, INC.

STORMWATER SAMPLING AND ANALYSIS PROTOCOL FOR SCHOOL DISTRICT MS4 CLIENTS (SOP-101)

Updated By:

Ms. Christine Caddick,
cleanWATER Division
Certified Industrial Site Stormwater Operator No. I-11934
Arch Environmental Group, Inc.
37720 Interchange Drive
Farmington Hills, Michigan 48335

Table of Contents

1.0 Summary Statement

Arch Environmental Group, Inc. (AEG) has developed and implemented this protocol (i.e., Standard Operating Procedure – "SOP-101") which includes quality provisions for completing stormwater sampling for School District Municipal Separate Storm Sewer System (MS4) clients in Michigan.

2.0 Background

Public school districts in urbanized areas are required under the federal National Pollution Discharge Elimination System (NPDES) "Phase II" regulations, implemented in Michigan by the Michigan Department of Environmental Quality (MDEQ), to obtain permit coverage for storm water discharges. The permit coverage is based on the individual district client circumstances. In some cases, permit coverage for a school district may be authorized or "nested" under a local government (city, village, township or county) MS4. In either case, specific requirements must be followed. The requirements are based on the specific NPDES MS4 permits and the associated Certificate of Coverage (COC) issued to the school district by the MDEQ. The school district may be covered under a NPDES permit which includes a Stormwater Management Program plan (SWMP) or a Stormwater Pollution Prevention Initiative plan (SWPPI). The plan defines the method and programs the permitee shall follow to ensure permit compliance, including storm water sampling requirements. The specific COC may also define additional requirements (i.e., Total Maximum Daily Loads – "TMDL's") for the school district based on the geographic location of the school district's facilities and the receiving surface waters of the State.

The NPDES MS4 permit and COC conditions covered in the SWMP or the SWPPI plans may require sampling during dry weather screening (DWS) and wet weather monitoring (WWM) activities at applicable discharge points/outfalls at individual school district properties. Dry weather sampling as defined by the MDEQ is sampling at least 48 hours after a precipitation event, including snow melt. Typically, no water flow would be present at a discharge point/outfall after this period of time following a precipitation event. Water flow in dry weather may indicate that a substance other than stormwater is present in the stormwater system. DWS activities include sampling of any observed dry weather flows at every discharge point/outfall throughout the school district, primarily in effort to identify potential illicit discharges. Depending on the results of the DWS sampling, AEG and the school district may be required to perform additional and follow up illicit discharge investigations. Wet weather monitoring (WWM) sampling is required to demonstrate compliance with district assigned TMDL's and post-construction run-off requirements for total suspended solids (TSS). The specific sampling and analytical test methods utilized for DWS and WWM are described in Sections 5.0 and 6.0 respectively.

3.0 Objectives and Needs

AEG developed and implemented the standardized protocol (SOP-101) for completing the required DWS and WWM stormwater sampling for school district MS4 clients in Michigan. AEG utilizes similar

protocols for other stormwater clients, with minor modifications based on applicable permit requirements, TMDL's and sampling parameters. The principal objective of this protocol is to provide quality data to demonstrate stormwater permit compliance as outlined in the SWMP or SWPPI for the school district MS4 clients in a timely and cost-effective manner. Sampling methods and target indicator parameters for this protocol have been optimized for school district clients. The results of the sampling are used by the client for: 1) identifying and remediating illicit discharges and connections (part of the permit's Illicit Discharge Elimination Program – "IDEP"); 2) demonstrating compliance with TMDL's, post-construction TSS limit, and other surface water quality standards; and 3) for developing improvements in facility operations and stormwater structural controls (BMP's).

This AEG protocol is based on the specific NPDES MS4 permit requirements, MDEQ recommendations, and industry-accepted stormwater sampling and analytical procedures. This protocol also incorporates key elements of quality systems for environmental monitoring projects utilized by the United States Environmental Protection Agency (EPA), MDEQ, and other governmental and non-governmental organizations. This protocol was developed to ensure that the sample collected and analyzed, the management of the data, and the report provided to the clients, are of sufficient quality to meet the identified current project objective and needs.

4.0 Quality Considerations

In order to ensure the data is of sufficient quality for the project objective and needs, AEG first investigated the requirements for the National Pollutant Discharge Elimination System Permit. The following requirements were identified:

1) Samples and measurements shall be representative of the volume and nature of the monitored discharge or water body.
2) Analytical procedures shall conform to 40 CFR 136, unless otherwise specified in the permit, or an alternate test procedure (ATP) is approved by the MDEQ.
3) The laboratory analyzing the samples shall periodically calibrate and perform maintenance on instrumentation at regular intervals to ensure accuracy of measurements. The calibration and maintenance shall be performed as part of the laboratory's quality assurance (QA) / quality control (QC) program.
4) Use of commercially available field test kits and similar equipment (portable electronic sensors) is allowed for screening and analysis of dry-weather flow, provided the calibration and maintenance provisions in 3) are followed.

The MDEQ has provided limited recommendations regarding qualitative considerations when performing MS4 stormwater sampling and analysis. Refer to the DWS and WWM sampling and analysis sections for further discussion of MDEQ recommendations.

Next, AEG investigated the quality systems required for environmental monitoring projects performed for and funded by the EPA and the MDEQ. The EPA requires that recipients of EPA funding for work involving environmental data shall comply with American National Standards Institute (ANSI) ASQC E4-1994 "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs".[1] To demonstrate conformance to the standard, the EPA requires two forms of documentation:

1) Documentation of the organization's quality system (referred to as a Quality Management Plan "QMP"), and
2) Documentation of the application of QA/QC activities to a project-specific effort (referred to as a Quality Assurance Project Plan "QAPP").[2]

For small grants and contracts, the EPA may allow the QMP & QAPP to be combined into a single document. Further, the EPA allows a "graded approach", which means the level of effort and detail expended to develop and document quality measures shall be based on the nature of the work being performed and the intended use of the data.

In recognizing the value that volunteer organizations can offer in collecting environmental data, as well as potential problems involving data credibility from these organizations, the EPA published "The Volunteer Monitor's Guide to Quality Assurance Project Plans", EPA 841-B-96-003, September 1996.[3] This document recommends that volunteer organizations performing environmental monitoring develop a QAPP, especially if the data might be used by state, federal, or local resource managers.

Similar to the EPA program, the MDEQ requires that MDEQ staff and recipients of MDEQ funding for work involving environmental data shall comply with Water Bureau Policy and Procedures # WB-008, "Quality Assurance Planning for Environmental Data Collection", May 2007. This policy, which essentially duplicates the EPA quality requirements identified above, requires the formation and approval of a QAPP prior to the start of environmental data collection for MDEQ funded projects.

In June, 2010, the MDEQ published "Wet Weather Pollution in Michigan", Report No. MI/DNRE/WB-10/020, that includes in *Appendix A*, TMDL sampling guidance for MS4's and which states that, although not required, preparation of a QAPP "…is always a good idea prior to sample collection…"[4] However, the MDEQ also states that "this guidance may present logistic and budgetary challenges if fully implemented", and "it is recognized that a final monitoring program will have to balance the need for accurate and representative data with available resources, and that reduced efforts may be necessary."

[1] http://www.epa.gov/QUALITY/faq9.html
[2] http:/www.epa.gov/QUALITY/faq6.html
[3] http://water.epa.gov/type/rsl/monitoring/qappcovr.cfm
[4] http://michigan.gov/documents/deq/wb-spotlight-wetweather_323733_7.pdf

At a minimum, this MDEQ guidance recommends that MS4's develop and follow QA/QC procedures to ensure stormwater samples are collected, preserved, and analyzed properly.
AEG believes that this protocol (SOP-100) developed for stormwater sampling and analysis for school district MS4 clients, while not required to comply with the EPA and MDEQ quality provisions identified above, is consistent with the EPA and MDEQ approach. This protocol incorporates key elements and recommendations of the EPA and MDEQ programs to ensure that the storm water monitoring data is representative of the discharges and of sufficient quality to meet the identified current project objective and needs. Additional QA/QC steps included in this protocol are listed in a later section.

5.0 Dry Weather Screening (DWS) Sampling and Analytical Methods

In accordance with the IDEP requirements of the NPDES MS4 permits, MS4's shall conduct DWS at a minimum of once every five years activities at each discharge point/outfall. Additional sampling may be necessary to investigate potential illicit discharges up to and including upstream of the discharge point/outfall, and confirming or investigating suspect results. AEG collects and maintains records and sample data of all discharge points/outfalls for each school district MS4 client for individual school buildings located on a common district property. Each discharge point and outfall is assigned a unique identifying description (ex: MES-02.OP.OF) based on the site map of the stormwater drainage system completed for each specific school district facility. DWS screening and sampling will only be conducted at upstream locations if dry weather flow is identified at the district property discharge point/outfall. Use of tracer dyes and other aspects of the IDEP investigations are not addressed in this sampling and analysis protocol.

The methods developed to conduct the DWS sampling and analysis of observed flows are based on the NPDES MS4 general permit requirements, and incorporate industry-accepted procedures from the following external reference sources. Field staff shall refer to these cited reference documents for questions related to: where samples should be collected; how to collect representative samples; avoiding stagnant water and touching the sides/bottom of structures, and unique methods such as constructing temporary weirs for sampling shallow flows.

1) "Michigan Municipal Separate Storm Sewer System (MS4) Permit – Illicit Discharge Elimination Plan/Program", Water Bureau Compliance Assistance document, MDNRE, rev. August 2010.
2) Brown, E., Caraco, D., and Pitt, R. 2004. *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment*, Center for Watershed Protection and University of Alabama. EPA X-82907801-0. EPA Office of Wastewater Management, Washington, D.C.
3) "NPDES Stormwater Sampling Guidance Document", EPA 833-B-92-001, July 1992;
4) "Industrial Stormwater Monitoring and Sampling Guide – Final Draft", EPA 832-B-09-003, March 2009;

5) "How to do Stormwater Sampling – A guide for industrial facilities", Washington State Department of Ecology, Publication #02-10-071, rev. March 2010;
6) "Guidance Manual: Stormwater Quality Monitoring Protocols", CTSW-RT-03-109.51.42, California Department of Transportation, July 2000;
7) "Illicit Discharge Elimination Program (IDEP) Compliance Assistance Document", Michigan Department of Environmental Quality, Water Resources Division, September 2014.

AEG field staff use local weather reports or data from internet weather websites (i.e., NOAA, etc.) to confirm that no precipitation event (including snow melt and other similar factors) has occurred within a minimum of 48 hours prior to starting any DWS investigations or collecting any DWS samples. Weather data is recorded on the standardized field inspection forms. Unless otherwise approved by management, DWS and sampling is conducted with two field personnel for safety, logistical, and quality reasons. Field staff shall follow the company Health and Safety Plan (HASP) for all activities. For sampling, staff is required to use standard Level D protective wear, powder-free nitrile gloves, and safety glasses.

All sampling equipment is prepared and/or assembled in the shop. Portable electronic sensors (probes for field screening analyses) are calibrated according to internal QA/QC procedures. In accordance with published guidelines and manufactures recommendation, at a minimum, pH, turbidity, and conductivity probes are calibrated monthly during periods of use to ensure accurate and consistent results.[5] For special investigations requiring additionally documentation of meter accuracy, AEG may confirm calibration of the pH probes in the shop twice each sampling day (once in the morning prior to use and once in the evening at the end of sampling). Refer to section 7.0 Additional QA/QC Methods for additional information. A checklist is utilized to make sure all necessary items are ready for each sampling event, including sampling equipment, sample bottles, safety equipment, and test kit components. The use of a checklist minimizes unproductive return trips to the shop.

Based on the test procedures selected, AEG receives pre-assembled kits in plastic zip-lock bags of the required sample bottles, complete with preservatives, from an external third party laboratory. For quality purposes, pre-assembled kits are ordered on a just-in-time basis. In no case are sample bottles with preservatives stored for greater than six (6) months. All sample bottles are new and clean for each event. Sample bottles for bacteria (total coliform and E. coli) analyses are provided by the laboratory in a sterilized and sealed condition. A cooler with ice and thermometer ensures that samples are preserved in the prescribed manner for delivery to the external laboratory.

Appendix A contains a table which identifies the test method, container, preservative, hold time, and minimum reporting limits for each test procedure utilized. Sample information and requested analytical tests are recorded on a standardized chain of custody form, which ensures samples are delivered to and

[5] http://stormwaterbook.safl.umn.edu/content/situ-site-and-grab-and-automatic-sampling

received by the laboratory within required specifications. Where required and/or safe to do so, sample bottles are completely filled (i.e., convex meniscus) leaving no head space to minimize potential degradation of the sample prior to testing. Where required, and as a general rule, sample containers are kept on ice in the cooler at ~4^{o}C for delivery to the laboratory. Appendix B contains instructions for field staff in filling the sample bottles and completing the Chain of Custody form. Appendix C contains the laboratory acceptance criteria to ensure that the stormwater samples are received in a manner consistent with the specified test methods and as part of the laboratory's internal QA/QC program. Samples are either qualified or rejected by the laboratory if they do not meet the identified acceptance criteria.

For observed dry weather flows at stormwater outfalls or discharge points, Protocol SOP-101 includes field screening in addition to visual inspection. Refer to Figure 1 for the DWS decision-making flowchart.

In accordance with the NPDES MS4 permit conditions, discharge points/outfalls are visually inspected for: presence or absence of water flow, unusual vegetative growth, staining, undocumented connections, and structural integrity. If standing or flowing water is present, the flow is inspected for: water clarity, color, and odor; the presence of suds, oil sheens, sewage, floatable materials, bacterial sheens, algae, and slimes; staining and unusual vegetative growth. All field observations are recorded on a standardized inspection form, and a photograph is taken of the outfall/discharge point as well as the observed flow (if present).

If water flow is observed, an onsite source investigation shall be conducted to determine the origin of the flow. The initial source investigation includes visual and olfactory observations upstream from the outfall/discharge point. If necessary, relevant indicator field screening, video camera inspection and/or dye tracing will be conducted.

If dry weather flow is observed and the source is not identified during the source investigation; a grab sample is collected for indicator field screening analysis. The grab sample is collected for analysis in accordance with permit requirements. All grab samples are collected using industry-standard equipment and using the methods and techniques described in the cited reference documents (see pages 4-5). Samples are collected only from the center of flow discharges and not from stagnant water. Careful attention is placed on not contacting or disturbing the sides and/or bottoms of structures while collecting the sample. The field staff uses a clean-hands/dirty-hands approach, such as the person handling the sample containers maintains clean hands, while the other team member performs operations such as opening manhole lids.

Next a field screening process is performed to assess the dry weather flow. The field screening includes seven (7) indicator parameters. The selected indicator parameters are:

1) temperature;

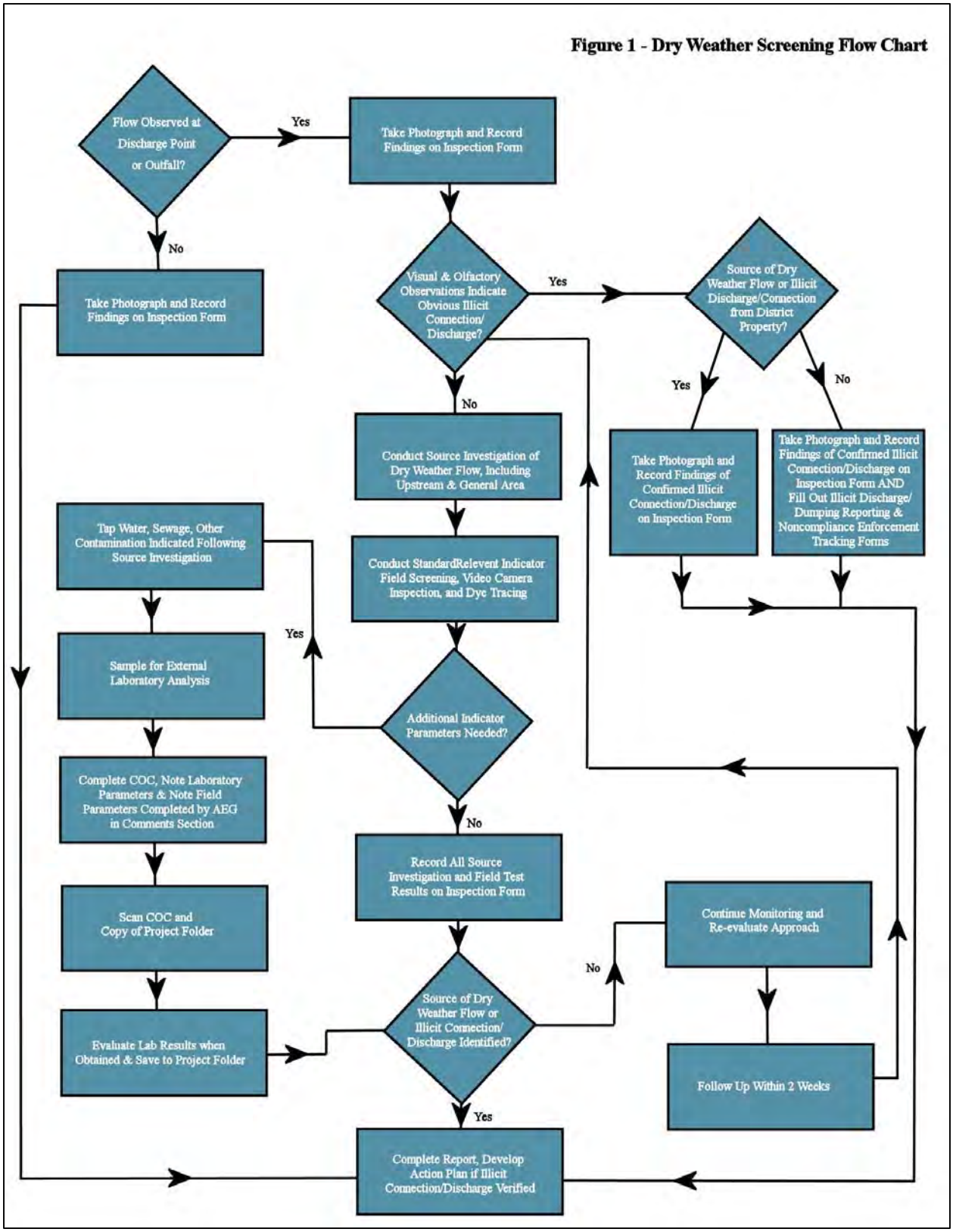
2) pH;
3) detergents (i.e., surfactants);
4) chlorine;
5) ammonia (NH_3-N);
6) turbidity; or
7) conductivity.

Indicator parameters used to assess the dry weather flow shall be determined by the visual and olfactory observations and source investigation. The pH and temperature measurements are made in-situ or as soon as possible after collecting the grab sample. If the pH and temperature measurements cannot be made within 15 minutes, another grab samples shall be collected. Sample collection instruments and test probes are rinsed with distilled water and triple rinsed with the water flow to be sampled prior to collection at each location. In accordance with published guidelines and manufactures recommendation, at a minimum, pH probes are calibrated monthly during periods of use to ensure accurate and consistent results.[6] For special investigations requiring additional documentation of meter accuracy, AEG may confirm calibration of the pH probes in the shop twice each sampling day (once in the morning prior to use and once in the evening at the end of sampling). The latest meter calibration date is documented on the field inspection forms, along with the results obtained for the seven (7) indicator parameters. Grab samples collected for analysis by field test kits are also noted on the Chain of Custody form without requesting external laboratory analysis. Refer to Appendix B. After use, the field test kits and portable meters are stored in accordance with the manufacturer's instructions.

Additional grab samples will be collected and delivered for external laboratory analysis only if additional test parameters are required for the source investigation. The laboratory analysis parameters for grab samples are determined by the type of contamination suspected at the time of the source investigation. Refer to Figure 1 for a DWS decision-making flowchart.

[6] http://stormwaterbook.safl.umn.edu/content/situ-site-and-grab-and-automatic-sampling

Figure 1 - Dry Weather Screening Flow Chart



Laboratory indicator parameters are based on MDEQ guidance and as specified in the reference sources identified above. The selected laboratory parameters are:

1) Fluoride;
2) Coliform;
3) E-coli;
4) Potassium;
5) Color; and
6) Ammonia.

The grab samples are transferred from the sampling device into the pre-prepared sample bottles in conformance with the cited reference sources and instructions in Appendices A-C for delivery to the external laboratory within allotted hold times and conditions. The laboratory records the temperature of the samples on the chain of custody form upon receipt. As noted above, the table in Appendix A lists sample containers, preservatives, hold times, test methods, and minimum reporting limits utilized as part of this protocol.

Once the laboratory analysis results are received, the results are interpreted using the Flow Chart Method described in reference source # 2 listed on Page 4. The Flow Chart Method is based on evaluating different indicator parameters in an effort to identify the potential source(s) of flow in dry weather.

The results from the DWS field tests and external laboratory analyses are recorded in a table "SW Outfall Sampling Log" maintained on behalf of the client by AEG. The table identifies the school district MS4, building, and unique outfall identifier descriptions. If any of the indicator parameters are outside of permit levels or published benchmark standards for stormwater, then AEG initiates further source investigation. The investigations typically involve additional DWS sampling at stormwater structures and/or outfalls upstream of the original discharge point/outfall.

If an illicit connection or discharge is identified during the source investigation, originating from non-district personnel or property, AEG will notify the appropriate district staff and note source information on the "SW Outfall Sampling Log". Additionally, AEG shall complete the following documentation:

- District Illicit Discharge Dumping and Reporting Form (if available)
- District Noncompliance Enforcement Tracking Form (if available)

If the illicit connection/discharge is identified to be originating from district personnel or property, AEG will notify the appropriate district staff and note source information on the "SW Outfall Sampling Log".

6.0 Wet Weather Monitoring (WWM) Sampling and Analytical Methods

The methods utilized for WWM sampling and analyses are similar to those described above for DWS investigations. The primary difference is that the activity is done during wet weather events to collect grab samples of "representative" flows. The primary purpose of WWM is to demonstrate compliance with applicable TMDL's or post-construction run-off requirements for TSS. For WWM, field screening tests are performed only for temperature and pH. Additional grab samples are collected by AEG field staff, at the same time as the field screening grab samples, for field analysis and by the external laboratory. The grab sample is analyzed using a field test kit and portable electronic probes for seven (7) indicator parameters: temperature, pH, detergents (i.e., surfactants), chlorine, ammonia (NH_3-N), turbidity and conductivity. Additional indicator parameters are analyzed for fluoride, coliform, E-coli, potassium, color and ammonia by the external laboratory, along with the regulated TMDL parameter(s) and/or TSS, as applicable. The applicable TMDL parameters are identified in the COC and are based on the MS4 receiving surface waters. TMDL's for the MS4 as currently identified are as follows: Dissolved Oxygen, E. coli, Phosphorus, and Sedimentation/Biota.

TMDL Sampling

For TMDL compliance, at least one "representative" sample of a stormwater discharge is required from at least 50% of the discharge points. Sampling at other outfalls/discharge points may also be performed as defined in the SWMP or SWPPI plans. The purpose of the sampling is to demonstrate the effectiveness of structural and non-structural controls (i.e., Best Management Practices – "BMP's") and for compliance with applicable permit limits (i.e., TMDL's).

Sampling at discharge points:

1) The sample will be from the stormwater, at or before the discharge point, not ambient waters after the discharge mixes with the water body.
2) The focus area is within, or contributing to, the listed TMDL reach. The municipality's jurisdiction may include land and discharge points upstream of this area. In this case, sampling of discharge points upstream of the TMDL reach should be included.

What constitutes a "representative" WWM sample is not defined in the permits. However, MDEQ and other guidance documents recommend that:

1) There be between 0.25" – 1.5"of rain within a twenty-four (24) hour period;
2) Sampling be conducted as soon as possible following the start of discharge to capture a sample of the "first flush";
3) Sampling be completed within the first 12 hours of the stormwater discharge event; and
4) WWM sampling should only occur following a dry period of 72 hours or more.[7] [8]

[7] http://michigan.gov/documents/deq/wb-sw-ms4-TMDL_sampling_305960_7.pdf

For TMDL compliance, sample of a stormwater discharge should be conducted:

1) Between May 1 and October 31 due to the difficulties with cold-weather sampling.
2) Sampling wet weather should occur only after it has been dry for at least 72 hours.
3) Very small storm events may not generate significant runoff. Therefore, sampling should not occur until there has been at least ¼ inch of rain within a 24 hour period. There will be times when a suitable event has been forecast, causing monitoring efforts to begin, only to have to cancel due to insufficient precipitation.
4) Sampling should be conducted as soon as possible following the start of discharge from targeted discharge points to capture a sample of the 'first flush'. First flush is defined as the runoff discharge at the beginning of a storm event and is assumed to consist of a significant amount of pollutants.
5) Synchronized sampling should be done as often as possible. Synchronized sampling is when several discharge points are sampled at or near the same time. If enough trained staff are available, all sites should be sampled during the same time period.

The results from the WWM field tests and external laboratory analyses are entered into the Excel spreadsheet for the MS4 in the same manner as done for DWS results. Further sampling is performed only if initial results are elevated or otherwise suspect.

In addition to the general quality provisions identified in the above sections, this protocol (SOP-101) for stormwater sampling and analysis includes the following QA/QC steps to ensure that the stormwater monitoring data is representative of the discharges and of sufficient quality to meet the identified current project objective and needs:

[8] http://www.ecy.wa.gov/pubs/0210071.pdf

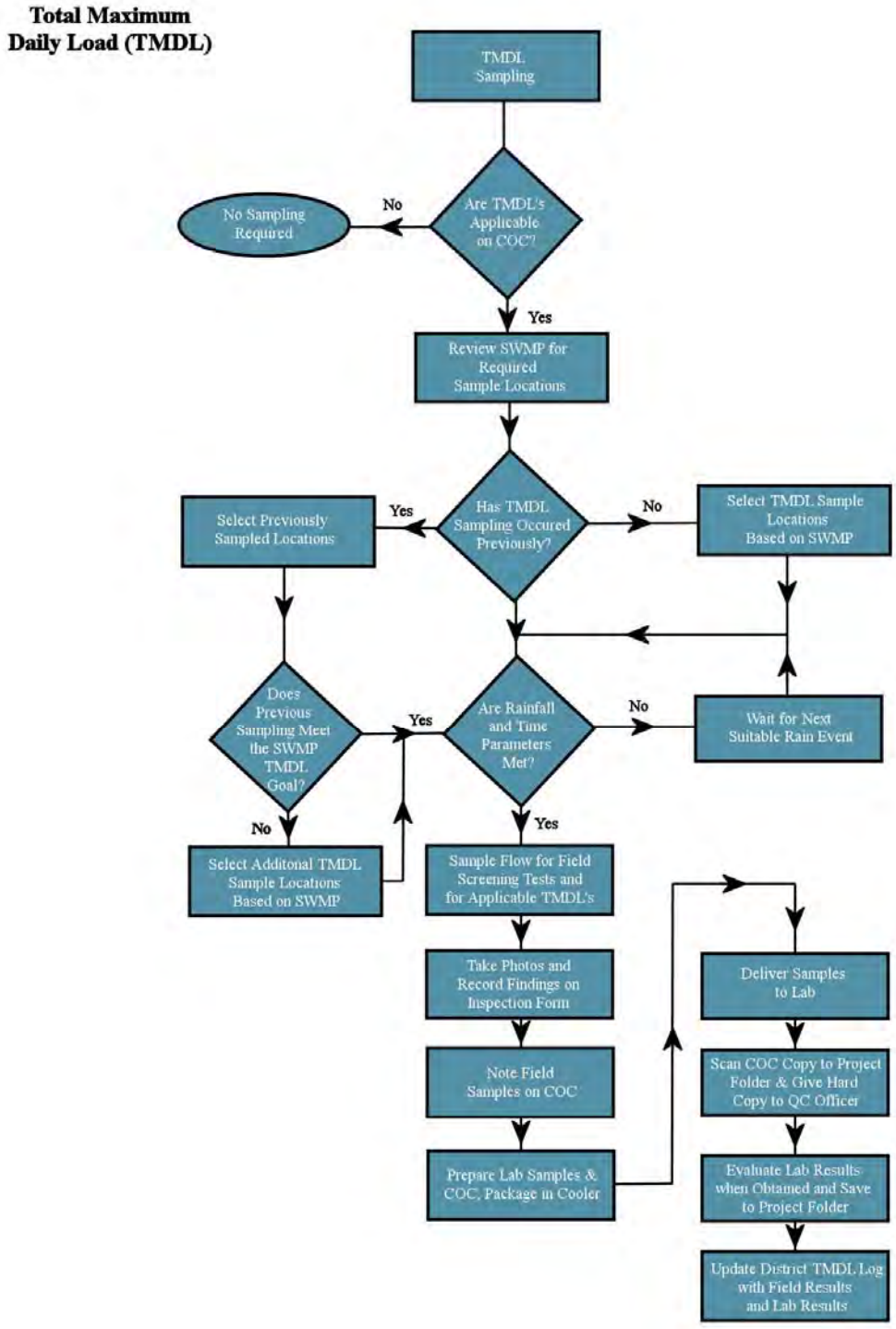


Figure 2 - Wet Weather Monitoring Flowchart

Construction & Post Construction Sampling

As noted above, sampling during wet weather may also be required to demonstrate compliance with the post-construction stormwater runoff requirements for total suspended solids (TSS). Post-construction sampling is only required for new and redeveloped projects that disturb one (1) acre or more (ex: a new parking lot).

WWM Construction & Post Construction sampling for total suspended solids shall be conducted for the following:

1) A rain event results in a sediment discharge from a construction site that meets the following:
    a. Greater than 1 acre in size;
    b. Within five hundred (500) feet of an EPA/MDEQ identified waterbody or wetland, and/or;
2) A construction site that is required by the permitting agency to monitor and regulate stormwater discharges.

In addition to the sampling, a Soil Erosion and Sediment Control inspection shall be conducted by a state certified SESC inspector. The inspection shall include corrections and recommendations as required by the SESC regulations.

Total Suspended Solid (TSS)

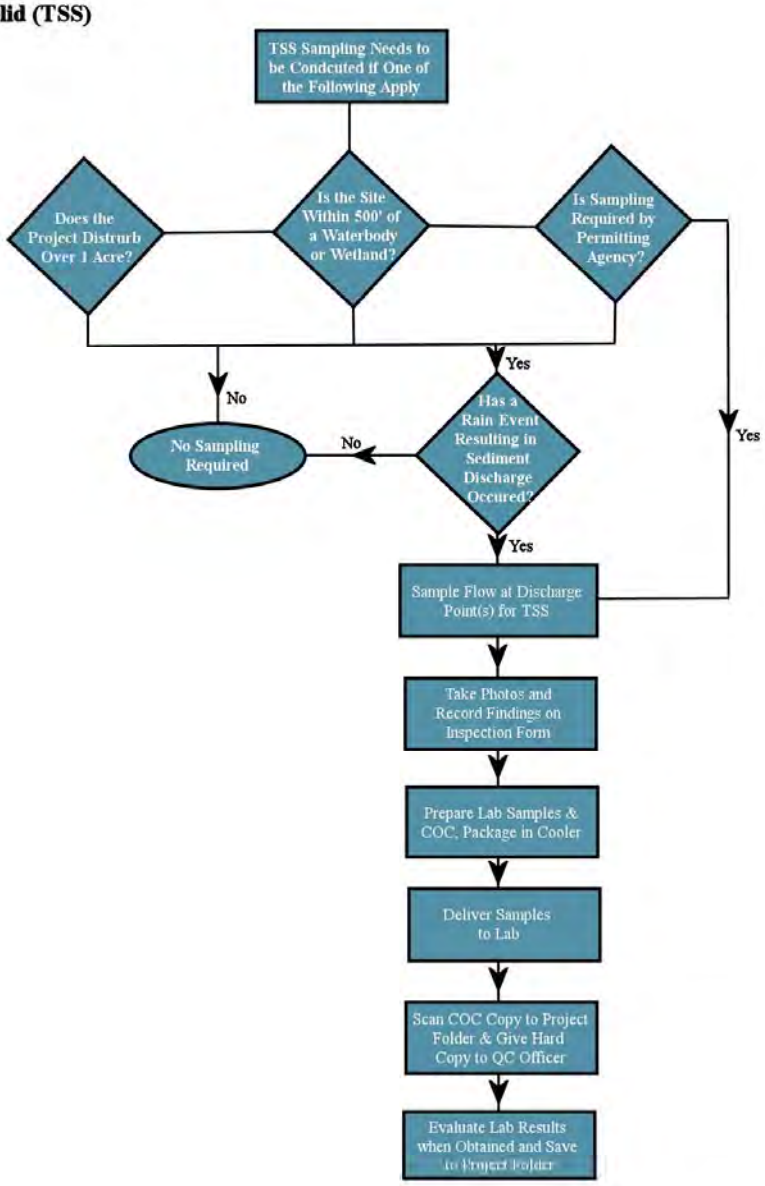


Figure 3 - Construction & Post Construction Sampling

7.0 Additional QA/QC Methods:

In addition to the general quality provisions identified in the above sections, this protocol (SOP-101) for stormwater sampling and analysis includes the following QA/QC steps to ensure that the stormwater monitoring data is representative of the discharges and of sufficient quality to meet the identified current project objective and needs:

Quality Assurance:

- Training
    - Field staff shall be stormwater operators certified by the MDEQ.
    - Field staff shall receive annual refresher training on this protocol, including:
        - proper stormwater sampling techniques and sample handling;
        - proper equipment operation, calibration, maintenance, cleaning & storage;
        - proper handling & storage of test kit reagents, DI water, & calibration fluids; and
        - identified quality assurance and quality control procedures.
    - Field staff shall receive annual HAZWOPER refresher training to ensure that all activities are performed in a safe manner (refer to HASP), including:
        - working in teams of two, unless authorized by management;
        - wearing proper personal protective equipment (PPE);
        - NOT entering confined spaces;
        - ensuring that all waste materials are properly managed, and
        - knowing what to do in case of an accident or emergency situation.
            - Management shall maintain staff training records, and make available upon request by clients and/or applicable government agencies (i.e., MDEQ).
- Equipment management, calibration, frequency, and documentation
    - Field staff shall inspect, maintain, and clean sample equipment and store items in a manner to prevent damage and contamination in accordance with the manufacturer's instructions and EPA guidance.[9][10]
    - Field staff shall calibrate pH meters (and other electronic probes, as applicable), monthly during periods of use, and report any problems to the QC Officer.[11] Staff shall follow written calibration procedures. Calibration dates and staff initials shall be recorded in a log maintained with the instrument or in a designated file cabinet.
    - Prior to sampling, field staff shall verify that the pH meter has been calibrated within the prior month and then enter the latest calibration date on the field inspection forms.

[9] http://www.epa.gov/epawaste/hazard/testmethods/faq/faqs_sampl.htm
[10] http://www.epa.gov/region4/sesd/fbqstp/Field-Equipment-Cleaning-and-Decontamination.pdf
[11] http://stormwaterbook.safl.umn.edu/content/situ-site-and-grab-and-automatic-sampling

  - Sample bottles shall be new and provided by the contracted laboratory in kits (sealed in zip-lock plastic bags) based on the tests to be performed, including any required preservatives. The date of receipt shall be noted on the plastic bag. Sample kits with bottles containing preservatives shall not be used if over six (6) months old.
  - Sample kits with bottles containing preservatives, DI water, calibration solutions, and field test kit reagents shall be dates and stored in a manner to prevent deterioration (i.e., lids securely closed, dry location, and room temperature).
  - DI water shall be replenished as needed, but in no case shall be used after being opened and stored for over six (6) months.
  - Chemical solutions and chemical reagents for field test kits shall be replaced on an as needed basis, and replaced at least annually once containers have been opened and used.
- Sample collection and analysis
  - All stormwater sampling shall be done in teams of two for safety reasons and to cross-check work, unless an exception is authorized by management. A clean-hands/dirty-hands technique shall be used by the field team to prevent contamination of samples.
  - Field staff shall properly complete the Chain of Custody form, in accordance with the procedures in Appendix B, for all collected samples (both analyzed by field test kits and delivered to the external laboratory).
  - Field staff shall identify on the Chain of Custody form any issues or exceptions that occurred when collecting samples.

<u>Quality Control:</u>

- Internal Quality Control
  - Equipment Quality Control
    - Field staff shall inspect equipment prior to use in order to ensure it is clean, in working order, and not damaged.
    - Field staff shall clean and inspect all equipment after use.
    - Field staff shall check the dates on all sample bottle kits, field test kit reagents, calibration fluids, and DI water containers prior to use to verify they are within the acceptable time limits as noted above.
  - Field Procedures Quality Control
    - Field staff shall check all Chain of Custody forms for proper completion before submitting with samples to the external laboratory
  - Data Analysis Quality Control
    - Staff shall check all manual calculations twice.
    - For automatic calculations (ex: iPad tables, Excel files, etc.), staff shall confirm all program formulas are correct prior to use.
    - For field data entry and management using electronic devices (ex: iPad), approximately 10% of entered data shall be double-checked by the field team partner for accuracy.

        - Prior to finalization, staff shall inspect all documents containing data for errors by comparing to original field notes, laboratory reports, etc.
        - The QC Officer or designee shall review all internal QC sample results on a quarterly basis, and provide management with a summary of findings.
        - All reports containing monitoring data and/or recommendations to be sent to the client or outside organizations shall first receive a quality review by the QC Office or Project Manager.
- External Quality Control
    - Laboratory Sample Quality Control
    - The contracted laboratory shall comply with the identified requirements of the NPDES MS4 general permits. Refer to Section 4.0 on Page 2, and Appendix A.
    - Follow an internal QA/QC program
        - Maintain and calibrate equipment to ensure accuracy
        - Use the EPA test procedures in 40 CFR 136 or approved alternate procedure.
        - The laboratory shall notify the client in writing of any test results which do not conform by the QC Officer.
    - Staff shall examine the completed Chain of Custody form returned from the laboratory with each sample result to check for any noted discrepancies. Discrepancies shall be reviewed with management prior to utilizing or reporting the analytical data.
    - QC Officer or designee shall review the external laboratory's QA/QC program every three years for conformance with internal procedures and test method specifications, and provided management with a summary of findings.

APPENDIX A

APPENDIX A

STORMWATER TEST METHOD SPECIFICATIONS

Field Screening Tests DWS/IDEP (Grab Sample)											
Parameter	Methodology	EPA 40 CFR 136 Approved Method [a]	Current or Alternate Procedure [b]	Container Type & Size [c]	Chemical Preservative	Holding Temperature °C	Holding Time [d]	Approx. Reporting Range [e]	Approx. Resolution or LRL	Units	Approx. Accuracy
pH	electrometric; ion-selective electrode	SM 4500-H+B	EPA 150.1; [f]	P, FP, G; 50 mL	none; no headspace	4°C if transported; test is time / temperature sensitive	ASAP; <15 min	0-14	1	pH	+/- 0.1
Temperature	thermometric	SM 2550 B	[f]	P, FP, G; 50 mL	none	at test temperature	ASAP	0-40 °C	0.1	°C	+/- 0.2
Surfactants (aka Detergents)	colorimetric; Hach Test Kit (Toluidine Blue-O)	SM 5540 C	EPA 425.1; [f]	P, FP, G; 100 mL	none; no headspace	4°C if transported	ASAP; <48 hrs	0-1.3 mg/L	0.05	mg/L	+/- 0.1
Ammonia (NH_3-N)	colorimetric; Hach Test Kit (Salicylate)	SM 4500-NH3 C	EPA 350.3; [f]	P, FP, G; 500 mL	no headspace, H2SO4 pH<2 [g]	4°C	ASAP; < 28 days [g]	0-5 mg/L	0.1	mg/L	+/- 0.1
Chlorine	Hach Test Kit	SM 4500 Cl F	EPA 330.1; [f]	P,G; 200 mL	none; no headspace	4°C	ASAP; <15 min	0-3.5 mg/L	0.1	mg/L	+/- 0.1
Conductivity	specific conductance by conductivity meter	EPA 120.1	EPA 120.1; [f]	P, FP, G; 50 mL	none; no headspace	4°C	ASAP; <24 hrs	0-2500 est.	1	uohm/cm	+/- 1
Turbidity	nephelometric	EPA180.1	EPA 180.1; [f]	A/P; 100 mL (amber bottle)	none; no headspace; store in dark	4°C	ASAP; <48 hrs	0-40	0.05	NTU	+/- 0.1

APPENDIX A

STORMWATER TEST METHOD SPECIFICATIONS

Laboratory Analytical Tests - Standard Indicator Parameters DWS/IDEP/WWM (Grab Sample)											
Parameter	Methodology	EPA 40 CFR 136 Approved Method [a]	Current or Alternate Procedure [b]	Container Type & Size [c]	Chemical Preservative	Holding Temperature °C	Holding Time [d]	Approx. Reporting Range [e]	Approx. Resolution or LRL	Units	Approx. Accuracy
Surfactants	colorimetric (MBAS)	SM 5540 C	EPA 425.1	P, FP, G; 100 mL	none; no headspace	4°C	</= 48 hrs	0.1-100	0.1	mg/L	+/- 0.05
Fluoride (total)	potentiometric, ion selective electrode	SM 4500-F B	EPA 340.2	P; 100 mL	none	none required	</= 28 days	0.1-1000	0.5	mg/L	+/- 0.1
Coliform (total)	Most Probable Number (MPN); Membrane Filter (MF)	SM 9221 B (MPN); SM 9222 B (MF)	SM 4500	PA, G; 50 mL	none or 0.0008% Na2S2O3	4°C	</= 6 hrs	1-2400	1	CFU/100 mL	+/- 1
E. Coli	Most Probable Number (MPN); Membrane Filter (MF)	SM 9223 B orColilert (MPN); EPA 1603 or mColiBlue-24 (MF); [EPA 1103.1 (MF) MDEQ]	SM 4500	PA, G; 50 mL	none or 0.0008% Na2S2O3	4°C	</= 6 hrs	1-2400	1	CFU/100 mL	+/- 1
Potassium (total)	direct aspiration, flame atomic absorbtion	SM 3111 B	EPA 258.1	P, FP, G; 100 mL	not specified	4°C	</= 6 mos	1-20 w/dilution	1	mg/L	+/- 0.1
Color	spectrophotometric	SM 2120 C	EPA 110.3	P, FP, G; 50 mL	none	4°C	</= 48 hrs	1-100	N/A	color units	+/- 1
Ammonia (NH_3-N)	potentiometric, ion selective electrode	SM 4500-NH3 D or E	EPA 350.3	P, FP, G; 500 mL	H2SO4 to pH<2	4°C	</= 28 days	0.5-1400	0.5	mg/L	+/- 0.04

APPENDIX A

STORMWATER TEST METHOD SPECIFICATIONS

Laboratory Analytical Tests - WWM/TMDL's/Post-Construction TSS (Grab Sample)											
Parameter	Methodology	EPA 40 CFR 136 Approved Method [a]	Current or Alternate Procedure [b]	Container Type & Size [c]	Chemical Preservative	Holding Temperature °C	Holding Time [d]	Approx. Reporting Range [e]	Approx. Resolution or LRI	Units	Approx. Accuracy
E. Coli	Most Probable Number (MPN); Membrane Filter (MF)	SM 9223 B orColilert (MPN); EPA 1603 or mColiBlue 24 (MF); [EPA 1103.1 (MF) MDEQ]	SM 4500	PA, G; 50 mL	none or 0.0008% Na2S2O3	4°C	</= 6 hrs	1-2400	1	CFU/100 mL	+/- 1
Phosphorous	colorimetric, ascorbic acid	EPA 365.3	EPA 365.3	P, G; 500 mL	H2SO4 to pH<2	4°C	</= 28 days	0.1-1.2	0.1	mg/L	+/- 0.1
Sedimentation/Biota	REFER TO TSS BELOW										
Dissolved Oxygen	electrode	SM 4500 O G	EPA 360.1	A/G; 50 mL (amber bottle)	none; no headspace; store in dark	4°C if transported; test is time / temperature sensitive	ASAP; <15 min	0-20	0.1	mg/L	+/- 0.05
Total Suspended Solids (TSS)	gravimetric, dried at 103-105°C	EPA 160.2	EPA 160.2	P, G; 200 mL	none	4°C	</= 7 days	4-20,000	4	mg/L	+/- 2

Notes:

[a] EPA 40 CFR 136 approved method, including listed EPA method, Standard Method, and/or ASTM method. Or, other MDEQ specified method.

[b] EPA procedure noted as approved for NPDES, but not listed in current 40 CFR 136, and/or laboratory identified equivalent alternative.

[c] P=polyethylene (generally HDPE); FP=fluoropolymer (not normally used due to cost); G=glass; A=amber; PA=autoclavable plastic, polypropylene; Q=quartz.

[d] Holding time specified in EPA guidance or referenced in Standard Method or literature for equivalent method.

[e] Dilution of sample may allow ability to analyze more concentrated samples, refer to test procedures.

[f] "Test Kits", including portable electronic sensors are allowed by MDEQ as noted in NPDES MS4 general permits.

[g] Preservative required only if sample is to be held for later analysis and not analyzed immediately (<15 min) with field test kit.

APPENDIX B

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INSTRUCTIONS FOR COMPLETING CHAIN OF CUSTODY FORM

Proper information and completion of the Chain of Custody (COC) form is the responsibility of the person(s) conducting the sampling. At the time sample bottles are obtained, field staff shall also obtain a COC form. This form is a legally defensible document that ensures that the sample taken at a specific site is the same sample that is received in the laboratory. It also provides information on the sample condition and integrity as received by the laboratory. The form shall be filled out as neatly, accurately and completely as possible.

Use a separate Chain of Custody form for each individual facility. Multiple stormwater samples collected from the facility on the same day may be listed on one form. Identify grab samples collected for analysis by field test kits on the COC, but do not request laboratory analysis. Results from the field test kits shall be reported on the field inspection form only, not on the Chain of Custody form. Keep COC form in a separate sealed plastic bag to protect it from the elements.

1. **Client information**:

Include Client Name, Site Address, Phone Number, Project Number, Project Name, Client Contact, and Sampler's name. After the samples have been collected, the sampler shall neatly sign his/her name at the bottom right section of the form. Refer to section 6 below for signatures required when relinquishing samples.

a) Client: Arch Environmental Group
b) Address: 37720 Interchange Drive, Farmington Hills, MI 48335
c) Project Number: Refer to school district project number
d) Project Name: School District Name-School Site Name
e) Phone Number: (248) 426-0165 Office Phone or (248) 427-0305 Office FAX
f) Client Contact: All laboratory stormwater test results shall be addressed to Project Coordinator and sent by e-mail to labs@archenvgroup.com
g) Sampler: Printed full name of the person who collected the sample(s)

2. **Sample Information**:

In the middle section of the form, information about each sample should be contained on a separate line item.

a) Sample number: Use the abbreviated outfall code description, following in parenthesis by the type of sample "AAA-XXX (CCC)". Where "AAA" is the 3 letter code for the specific

school building site ID, "XXX" is the 2 or 3 digit code for structure number, and "CCC" is the 2 or 3 letter code for the type of sample. The type of samples are:

- DWS = dry weather screening. Example: NHS-05 (DWS)
- WWM = wet weather monitoring. Example: NHS-05 (WWM)
- RS = resample (where there was a problem with the original samples submitted to the lab or the initial results are suspected. Example: NHS-05 (RS)
- QC = quality control sample. Example: NHS-05 (QC)
- FT = field test sample. Example: NHS-05 (FT)

b) Date: Carefully print the date in the following format MM/DD/YYYY. Example 05/10/2014

c) Matrix: Print "H2O".

d) Comp: Leave blank unless the stormwater sample is a composite sample.

e) Grab: Put an "X" in this box for all grab samples.

f) Sample Description: Use the full outfall/discharge point code description, preceded by the type of sample "CCC @ AAA-XXX-BBB.OF". Where "BBB" is the 2 or 3 letter code for type of structure. Refer to sample codes about, and the following examples:

- Put "DWS @ AAA-XXX.BBB.OF" if the outfall/discharge point sample is from dry weather screening, followed by the round of sampling in parenthesis after description. Example: "DWS @ NHS-05.CB.OF (2nd Round)"
- Put "WWM @ AAA-XXX.BBB.OF" if outfall sample is from wet weather monitoring, followed in parenthesis by sampling purpose. Examples: "WWM @ NHS-05.CB.OF (TMDL) or "WWM @ NHS-05.CB.OF (TSS)
- Put "RS @ AAA-XXX.BBB.OF" if this is a recent re-sample from the same outfall. Example: "RS @ NHS-05.CB.OF". Describe the purpose for the re-sample in the "REMARKS" box. Example: "Resample of DWS @ NHS-05.CB.OF due to expired hold time on original samples".
- Put "QC @ AAA-XXX.BBB.OF" if this is a quality control sample. The QC Officer will notify the field team separately of what type of sample should be submitted to the lab or performed in the field (blank, split, etc.)
- Put "FT @ AAA-XXX.BBB.OF" for grab samples analyzed with field test kits, and on the line below write which parameters were analyzed. For example, "(pH, Temperature, Ammonia, Surfactant)".

g) Number of Containers: Put "X", where X is the number of sample bottles submitted for the analyses described in the next section. The specific number of bottles required for the tests are prepared and provided by the laboratory. For example, the standard dry weather screening (DWS) kit contains 7 bottles. Some of the sample bottles may contain approximately 1 or 2 mL of sulfuric or nitric acid, so extra care should be taken when opening and filling these bottles. Bottles with acid preservatives are marked by the laboratory. Refer to Appendix A for a description of the standard stormwater test procedures, containers, preservatives, and hold times. In order to reduce the number of containers and field sampling time, the laboratory may perform more than one type of test

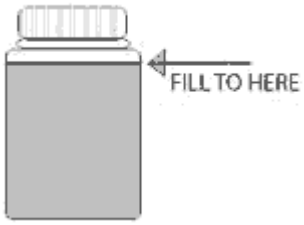
per sample bottle, provided the type of bottle, preservative, sample quantity and other quality considerations are met for each test specification. Refer to section 3 below.

3. **Analyses Desired (Indicate Separate Containers)**:

Bottles should not be rinsed prior to sampling. Bottles with preservatives should not be overfilled. Fill bottles to about the neck level with the exception of the VOA vial. The VOA vial should be filled to the top without headspace. See notes below. Sample bottle lids should be securely closed. Sample bottles should be labeled with the Project Name, Sample Number, and date of collection. Once labeled, the sample bottles should be immediately put on ice in the cooler. The laboratory will issue a unique number to each sample at the time it is logged into the laboratory and any issues with identification, limited sample volume, improper preservation, etc. will be flagged, and the client will be notified as detailed in Appendix C.

a) As noted in 2(g) above, sample bottles are provided from the laboratory with each standard DWS kit. For each container put an "X" on the line and above the "X" write the specific analyses in angled box, as follows:

   i. "SURFACTANTS / FLUORIDE" (amber 1 L glass bottle, no preservatives)
   ii. "AMMONIA" (clear white 500 mL HDPE bottle, labeled "Sulfuric Acid", do not rinse or overfill)
   iii. "E. COLI / COLIFORM" (sterilized and sealed, clear 100 mL polystyrene IDEXX bottle, may contain Na2S2O3 powder)



DO NOT SET THE CAP DOWN OR TOUCH THE INSIDE OF THE CAP OR BOTTLE. FILL THE SAMPLE BOTTLE TO THE MARKED LINE ON SHOULDER WITHOUT RINSING OR OVERFILLING.

   iv. "POTASSIUM" (clear white 100 mL HDPE bottle, labeled "Nitric Acid", do not rinse or overfill)
   v. "COLOR" (clear white 500 mL HDPE bottle, no preservatives)

4. **Turnaround time**:

Indicate the turnaround time needed. The standard is 10 working days – "2 WEEK TAT". More rapid turnaround time may be subject to surcharges. Refer to laboratory contract for current surcharge factors. If turnaround time is critical, and approved by management, then it's important to emphasize that fact to the laboratory person accepting the sample(s). Do not fill in the column marked "LAB #". This is for laboratory use.

5. **Remarks**:

In this section, write "Send results to labs@archenvgroup.com". This section should also be used for:

a) Any special instructions from the sampler to the laboratory, or problems during sampling. Sampler shall put his/her initials next to comment.
b) Upon receiving the cooler with the collected samples, the laboratory shall note the temperature at which the samples were received. Laboratory staff shall put his/her initials next to comment.

6. **Relinquishing Samples and Verifying Chain of Custody:**

Refer to the bottom left portion of the Chain of Custody form. It is necessary to maintain an unbroken, verifiable chain of custody for every sample in the event that analytical results for that sample are questioned. Each time the sample changes hands, the person relinquishing the sample shall note the item number and neatly sign his/her name and company affiliation in the column "Transfers Relinquished by" and record the date and time the sample was transferred. The person receiving the sample shall neatly sign his/her name and company affiliation in the column "Transfers Accepted by". When samples are shipped in a cooler, the shipper should be indicated on the Chain of Custody form and the form should be sealed inside the cooler (inside sealed zip-lock bag, taped to inside lid). The samples must remain cool and be returned to the laboratory as soon as possible (preferably Monday through Thursday). In no case shall samples be delivered to the laboratory later than 24 hours after the samples were collected. As noted above, the laboratory employee receiving the samples shall record the temperature of the samples in the Remarks box.

Samples collected for analysis of the 7 indicator parameters using field test kits should be analyzed ASAP in the field. At a minimum, pH and Temperature must be analyzed immediately in the field. Should field conditions prevent analyzing for Surfactants, Ammonia, Turbidity, and Conductivity then these sample bottles may be transported back to the shop in the cooler and maintained at $4^{o}C$ for analysis with the field test kits within 24 hours. Sample results (and date) shall be recorded on the field inspection forms.

APPENDIX C

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LABORATORY SAMPLE ACCEPTANCE POLICY

1.0 Chain of Custody. Laboratory shall provide the client with a standard Chain of Custody form. A client may submit his or her own COC subject to approval. All COC's will be deemed acceptable if the following information is completed and legible:

- 1.0.1 Company name address phone # and fax #
- 1.0.2 Contact name
- 1.0.3 Sampler's or collector's name
- 1.0.4 Project identify and/or location
- 1.0.5 Date and time of sample collection
- 1.0.6 Sample identification, description or location
- 1.0.7 Matrix Type
- 1.0.8 Bottle(s) submitted (type and quantity)
- 1.0.9 If the sample is suspected of containing a dangerous substance
- 1.0.10 Any preservation (Nitric Acid, Hydrochloric Acid et.) which the sample has been treated with
- 1.0.11 Analysis requested
- 1.0.12 For any Bacteria Analysis, Residual Chlorine must be done in the field and noted on the chain of custody, if required
- 1.0.13 Requested Turn Around Time
- 1.0.14 Signatures of the persons involved in the chain of possession including the collector
- 1.0.15 Comments or special instructions
- 1.0.16 Any field notes

1.1 The Laboratory Manager shall review and document the following:

- 1.1.1 Answer the following questions (Refer to Appendix B for instructions on completing the COC)
  - 1.1.1.1 Are the samples submitted with a chain of custody?
  - 1.1.1.2 Is the number of samples the same as stated on the chain of custody?
  - 1.1.1.3 Are the bottle caps tight and in place?
  - 1.1.1.4 Were all the containers intact when received?
  - 1.1.1.5 Were the samples submitted in an ice chest?
  - 1.1.1.6 Were the samples received cold at $4^{o}C$?
  - 1.1.1.7 Were the samples within the holding time for the requested analysis?
  - 1.1.1.8 Is the volume of sample submitted sufficient for the requested analysis?
  - 1.1.1.9 Are all samples for air sensitive parameters free of headspace?
- 1.1.2 Ensure the Chain of Custody is completed correctly
- 1.1.3 Note the condition of the sample shipper and bottles upon receipt
- 1.1.4 Preservation type (if any)
- 1.1.5 Ensure that Residual Chlorine was done in the field, if required

1.1.6 For all Liquid Samples, the pH and temperature will be taken and recorded
1.1.7 Temperature of the sample or blank shall be noted on the COC
1.1.7.1 All samples must be received chilled at 4^{o}C (+/- 2^{o}C) with the exception of where chilling would compromise the consistency of the sample. This is determined under the discretion of management.
1.1.7.2 If samples are received above 4^{o}C (>6^{o}C)
1.1.7.2.1 It will be noted on paperwork
1.1.7.2.2 Data qualified
1.1.7.2.3 Client shall be notified to verify that they want the samples run with the qualifier
1.1.8 Date and time of sample receipt
1.1.9 Signatures of persons involved in the Chain of Custody
1.1.10 Samples are accepted when all the conditions are met and the sample(s) deemed acceptable
1.1.10.1 Samples which do not meet all the criteria, but are still deemed acceptable will be data qualified
1.1.10.2 Samples will be deemed acceptable and data qualified upon client's approval.

1.2 For any other questions related to sample acceptance, the Laboratory Manager shall contact the client to resolve any potential issue prior to accepting and/or analyzing the samples.

Attachment "G"

Illicit Discharge Illegal Spill Reporting Form

April 1, 2015
Revision Date: October 25, 2015
October 8, 2019

District Illicit Discharge/Illegal Dumping Reporting Form
Rochester Community Schools

Date:_____ Time_____

Inspectors:_____

I. ORIGIN OF REPORT

1. Describe the reason for conducting the investigation.

- ❑ Illicit Discharge Inspection (Routine)
- ❑ Facility Staff
- ❑ Citizen Complaint
- ❑ Other _____

II. SOURCE

1. Describe location of source of discharge (company name, address, cross streets, physical features, etc.)

_____

_____

2. Describe the Source:

- ❑ Residential
- ❑ Transportation Facility
- ❑ Construction Site
- ❑ Custodial
- ❑ Other _____

3. Facility of the Source:_____

_____

III. TYPE

1. Describe the type of material discharged:

- ❑ Sanitary Leak/Spill
- ❑ Paint Discharge
- ❑ Dumpster Discharge
- ❑ Cleaning Discharge
- ❑ Unhardened Cement Discharge
- ❑ Paint Discharge
- ❑ Vehicle Repair
- ❑ Vehicle Washing
- ❑ Grey Water Discharge
- ❑ Landscape Material Dumping
- ❑ Cooling Water Discharge
- ❑ Allowable Discharge
- ❑ Other _____

Provide Additional Information:_____

_____

2. Other Sources:

- ❑ Illicit Connection
- ❑ Construction Site
- ❑ Other _____

IV. FOLLOW-UP AND ENFOREMENT ACTIVITIES

1. Describe Corrective Actions:_____

_____

2. Describe Enforcement Action:

- ❑ None/Incident Resolved
- ❑ Verbal Notice
- ❑ Administrative Action
- ❑ Cleaning Discharge

3. Date Resolved:_____

4. Responsible Party

Signiture:_____

*** Send all comments to Facility Operations , Attn: Director of Operations**

How to Spot Illicit Discharges

Sanitary Sewer Discharge

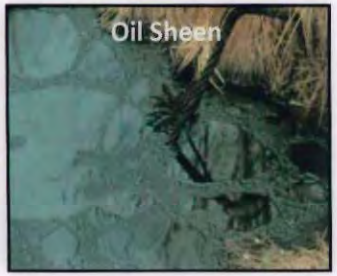
Observations:

- *Sanitary debris*
- *Staining on pipe*
- *Heavy Foam*
- *Gray or Discolored Water*
- *Odors (sewage, chlorine, rotten eggs and detergents)*

Illegal Dumping, Spills, or Floor Drain Connection

Observations:

- *Oily sheen*
- *Trash, non-sanitary debris*
- *Petroleum odors*
- *Stained sediment, rocks, and vegetation*



Industrial Discharge

Observations:

- *Discolored water*
- *Chemical odor*

Agricultural Runoff, Fertilizers, or Sanitary Sewer Waste

Observations:

- *Algae growth at or near outlet*
- *Heavy vegetation at or near outlet*

What to Report

- **Spills and contamination to lakes, rivers and streams**
  > Agency's IDEP Coordinator, MDEQ, Environmental Health Department, Drain Commissioner's Office
- **Suspicious dumping or discharges from pipes**
  > Agency's IDEP Coordinator, Environmental Health Department, Drain Commissioner's Office, MDEQ
- **Sewage on the ground or in surface water**
  > Agency's IDEP Coordinator, Environmental Health Department
- **Large number of dead fish in waterways**
  > Agency's IDEP Coordinator, MDEQ, Environmental Health Department
- **Failing or leaking septic systems**
  > Agency's IDEP Coordinator, Environmental Health Department
- **Construction site soil erosion to waterways**
  > Agency's IDEP Coordinator, Local SESC Enforcing Agency
- **Polluted runoff from storage piles or dumpsters entering waterways.**
  > Agency's IDEP Coordinator, Environmental Health Department, Drain Commissioner's Office

Important #'s

EMERGENCIES Call 9-1-1

arch environmental group 24 hour spill line	(248) 522-2821

NON EMERGENCY Numbers:

DEQ Environmental Assistance Center	(800) 662-9278
Genesee County Drain Commissioner	(810) 732-2940
Livingston County Dept of Public Health	(517) 546-9858
Livingston County Drain Commissioner	(517) 546-0040
Macomb County Public Works	(877) 679-4337
Oakland County Water Resources	(248) 858-0958
Washtenaw County Drain Commissioner	(734) 222-6860
Wayne County Department of Environment	(888) 223-2363

SCHOOL DISTRICT Number:

arch environmental group