From: MiEnviro Support
To: Jennifer Bernardin
Subject: Submission Status Change Notification - HPQ-WP3R-XM5W4, Delta Twp MS4-Eaton
Date: Thursday, March 30, 2023 2:30:22 PM

MiEnviro Portal User,

This notification is to inform you of a status change on your submission of "MS4 Progress Report" (submission **HPQ-WP3R-XM5W4**) for Delta Twp MS4-Eaton. The status has been updated to status "Completed" on 3/30/2023 2:25 PM.

The processor assigned to your submission is Patrick Klein.

This is an automated notification generated by MiEnviro Portal.

From: MiEnviro Support
To: Jennifer Bernardin
Subject: Compliance Schedule Submission Review Notification - HPQ-WP3R-XM5W4, Delta Twp MS4-Eaton
Date: Thursday, March 30, 2023 2:30:29 PM

MiEnviro Portal User,

This message is to notify you that the following compliance schedule for Permit MI0059725 v3.0 relating to Delta Twp MS4-Eaton has an updated review status:

Schedule Name: MS4 Program - MS4 Progress Report

Submission Reference Number: HPQ-WP3R-XM5W4

Due Date (if applicable): 4/1/2023 12:00:00 AM

Received Date: 03/25/2023

Submitted By: Jennifer Bernardin

Decision: Acknowledged

Decision Date: 3/30/2023 12:00:00 AM

EGLE Notes to Submitter: (No review comments entered)

This is an automated email sent by MiEnviro Portal.

MS4 Progress Report

version 1.18

(Submission #: HPQ-WP3R-XM5W4, version 1)

Details

Submission ID	HPQ-WP3R-XM5W4
Status	Draft

Form Input

Section 1. General Facility Information, Nested MS4 and Outfalls/Points of Discharge

Municipality/Site Name
Delta Charter Township

Nested MS4s:

1. Are you carrying out the terms and conditions of the permit for each nested MS4 listed in your permit? Select "NOT APPLICABLE" if you do not nest any regulated MS4s as part of your permit coverage.
Not Applicable - Nested MS4s not included in permit

2. Are you currently a Phase I or Phase II permittee?
Phase II

3. Did you add or remove any nested MS4s during the reporting period that have not been approved? If yes, submit a request for approval to add or remove a nested MS4 in accordance with Part I.A.1.b. of the permit.
NO

New Outfalls and/or Points of Discharge

4. Did you identify, construct, or install any new outfalls or points of discharge that have not been authorized? If yes, submit a request to authorize the discharge of storm water from the new outfall or point of discharge in accordance with Part I.A.2. of the permit via the following schedule in MiWaters: MS4 Outfall or Point of Discharge Identified, Constructed, or Installed After Permit Issuance.
NO

Section 2. Enforcement response Plan (ERP)

Upload referenced documentation identified below and other information relevant to the implementation of your ERP.

NONE PROVIDED
Comment
NONE PROVIDED

1. Were there any changes made to the approved ERP during the reporting period which have not been reviewed and approved in accordance with the permit language?
NO

2. Did you complete each ERP measurable goal and/or implement ongoing activities consistent with the measurable goals?
YES

3. Provide the reference (paragraph & page) to the document submitted above describing progress made toward implementing the ERP to compel compliance using enforcement actions (e.g. summarize findings from tracking method).
There was no need to pursue compliance using enforcement actions in the reporting period.

4. Identify the total number of enforcement actions taken during the reporting period (Type 0 if none).
0

5. Will you continue to implement the approved ERP during the next reporting cycle? If you responded "yes with changes" or "no", submit the SWMP modification request information as required in Part I.A.4. of the permit as an Unscheduled Permit Required Report in MiWaters.
YES

Section 3. Public Participation/Involvement Program (PPP)

Upload referenced documentation identified below and other information relevant to the PPP

Attachment 1 Delta Twp GLRC Progress Report.pdf - 03/24/2023 02:08 PM
Comment
NONE PROVIDED

1. Were there any changes made to the approved PPP during the reporting period which have not been reviewed and approved in accordance with the permit language?
NO

2. Did you complete each PPP measurable goal and/or implement ongoing activities consistent with the measurable goals?
YES

3. Provide the reference to the document submitted above describing progress made toward implementing the PPP and meeting each measurable goal, including a summary of results.
See Attachment 1 - GLRC Progress Report.

4. Will you continue to implement the approved PPP during the next reporting cycle? If you responded "YES with changes" or "NO," submit the SWMP modification request information as required in Part I.A.4. of the permit as an Unscheduled Permit Required Report in MiWaters.
YES

Section 4. Public Education Program (PEP)

Upload referenced documentation identified below and other information relevant to the PEP.

> Screenshot 1.PNG - 03/24/2023 02:08 PM
> Screenshot 2.jpg - 03/24/2023 02:08 PM
> **Comment**
> NONE PROVIDED

1. Were there any changes made to the approved PEP during the reporting period which have not been reviewed and approved in accordance with the permit language?
NO

2. Did you complete each PEP measurable goal and/or implement ongoing activities consistent with the measurable goals?
YES

3. PEP TOPICS
Provide the reference to the document submitted above describing progress made toward implementing the PEP and meeting each measurable goal, including a summary of results. If the PEP topic is not a part of the approved PEP, include “Not Applicable” in the comment box.

PEP Topic 1: Promote public responsibility and stewardship in the applicant’s watershed.
See Attachment 1 - GLRC Progress Report.

PEP Topic 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.
See Attachment 1 - GLRC Progress Report.

PEP Topic 3: Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4.
See Attachment 1 - GLRC Progress Report. See Screenshot 1.

PEP Topic 4: Promote preferred cleaning materials and procedures for car, pavement, and power washing.
See Attachment 1 - GLRC Progress Report. See Screenshot 2.

PEP Topic 5: Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers.
See Attachment 1 - GLRC Progress Report.

PEP Topic 6: Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter into the MS4.
See Attachment 1 - GLRC Progress Report, Appendix B page 1, magazine articles.

PEP Topic 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.
See Attachment 1 - GLRC Progress Report.

PEP Topic 8: Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure.
See Attachment 1 - GLRC Progress Report.

PEP Topic 9: Educate the public on, and promote the benefits of, green infrastructure and Low Impact Development.
See Attachment 1 - GLRC Progress Report.

PEP Topic 10: Identify and educate commercial, industrial, and institutional entities likely to contribute pollutants to storm water runoff.
See Attachment 1 - GLRC Progress Report.

Overall PEP

4. Provide the reference to the document submitted above summarizing the evaluation of overall effectiveness of the PEP.
See Attachment 1 - GLRC Progress Report.

5. Will you continue to implement the approved PEP during the next reporting cycle? If you responded "YES with changes" or "NO," submit the SWMP modification request information as required in Part I.A.4. of the permit as an Unscheduled Permit Required Report in MiWaters.
YES

Section 5. Illicit Discharge Elimination Program (IDEP)

Upload referenced documentation identified below and other information relevant to the IDEP.

Attachment 2 2021 IDEP Reports_Delta Twp.pdf - 03/24/2023 02:17 PM
Attachment 3 2022 IDEP Reports_Delta Twp.pdf - 03/24/2023 02:17 PM
Comment
See Attachment 2 and 3

1. Were there any changes made to the approved IDEP during the reporting period which have not been reviewed and approved in accordance with the permit language?
NO

2. Did you complete each IDEP measurable goal and/or implement the ongoing activities consistent with the measurable goals?
YES

3. Identify the number of outfalls and points of discharge in your storm sewer system.
17

4. Was dry weather screening (i.e., outfall observation, field screening, and source investigation) performed in accordance with the approved IDEP during the reporting period?
YES

5. How many illicit discharges were detected (Type 0 if none)?
0

6. How many of the illicit discharges led to an enforcement action? (Write 0 if none)
0

7. Was IDEP training provided in accordance with the approved program?
YES

8. Provide the reference to the document submitted above summarizing the evaluation and determination of overall effectiveness of the IDEP.
There was no need to pursue compliance under IDEP, so no findings to summarize in the reporting period. See Attachment 2 - 2021 IDEP Reports and Attachment 3 - 2022 IDEP Reports.

9. Will you continue to implement the approved IDEP during the next reporting cycle. If you responded "YES with changes" or "NO," submit the SWMP modification request information as required in Part I.A.4. of the permit as an Unscheduled Permit Required Report in MiWaters.
YES

Section 6. Construction Storm Water Runoff Control Program

1. Were there any changes made to the approved program during the reporting period which have not been reviewed and approved in accordance with the permit language?
YES
If YES, provide an explanation of changes to the approved program.
In March 2022, Delta Township rescinded its APA designation and returned control of construction stormwater runoff control program to Eaton County Drain Commissioner. This change was reviewed and approved by EGLE staff. See Attachment 4

2. Did you complete each program measurable goal and/or implement ongoing activities consistent with the measurable goals?
YES

3. Do you continue to rely on the Part 91 Agency identified in the application (other than yourself) to implement a Soil Erosion and Sedimentation Control Program?
YES

4. Was the Part 91 agency, or appropriate staff if you are the Part 91 agency, notified when the soil or sediment was discharged to your MS4 from a construction activity in accordance with the approved procedure?
Not Applicable – Soil or sediment was not discharged in accordance with the procedure during the reporting period

5. Was the Michigan Department of Environment, Great Lakes, and Energy (EGLE) notified when soil, sediment, or other pollutants were discharged to your MS4 from a construction activity in accordance with the approved procedure?
Not Applicable – Soil or sediment was not discharged in accordance with the procedure during the reporting period

6. Was a Part 91 permit issued for all construction activity one acre or greater in total earth disturbance with the potential to discharge to your MS4?
YES

6a. Were all landowners or recorded easement holders of a property with construction activity one acre or greater in total earth disturbance advised of the State of Michigan Permit by Rule in accordance with the approved procedures?
YES

7. Will you continue to implement the approved program during the next reporting cycle? If you responded "YES with changes" or "NO," submit the SWMP modification request information as required in Part I.A.4. of the permit as an Unscheduled Permit Required Report in MiWaters.
YES

Section 7. Post-Construction Storm Water Runoff Program (i.e. Post-Construction Control or PCC Program)

Upload referenced documentation identified below and other information relevant to the PCC.

Attachment 5_Aqua Swirls and Oil Separtors Manholes.pdf - 03/24/2023 02:25 PM
Comment
NONE PROVIDED

1. Were there any changes made to the approved PCC Program during the reporting period which have not been reviewed and approved in accordance with the permit language?
NO

2. Did you complete each PCC Program measurable goal and/or implement ongoing activities consistent with the measurable goals?
YES

3. Were the approved post-construction performance standards applied to all projects that disturb at least one or more acres, including projects less than one acre that are part of a larger common plan of development or sale, in accordance with the approved ordinance/regulatory mechanism?
YES

3a. Did you implement the approved procedure for reviewing the use of infiltration BMP's to meet the post-construction performance standards in areas of soil or groundwater contamination?
Not Applicable – No projects in areas of soil or groundwater contamination

3b. Were BMPs to address potential hot spots required in accordance with the approved ordinance/regulatory mechanism?
Not Applicable – No projects in potential hot spots

3c. Were all site plans reviewed and approved to ensure compliance with the ordinance/regulatory mechanism/procedures?
YES

3d. Was a maintenance agreement or other legal mechanism entered with the owners or operators of each BMP to ensure long-term operation and maintenance in accordance with the approved ordinance/regulatory mechanism?
YES

3e. Were you approved to implement an off-site mitigation or payment in lieu program?
NO

3f. Did you approve projects subject to your off-site mitigation or payment in lieu program during the reporting period?
NO

4. Provide the reference to the document submitted above describing the status and results of implementing the procedure for tracking compliance with entered maintenance agreements or other legal mechanisms.
See Attachment 5

5. Will you continue to implement the approved PCC Program during the next reporting cycle? If you responded "YES with changes" or "NO," submit the SWMP modification request information as required in Part I.A.4. of the permit as an Unscheduled Permit Required Report in MiWaters.
YES

Section 8.A. Pollution Prevention and Good Housekeeping Program (P2/GH) - Structural Controls, Standard Operating Procedures, Catch Basin Cleaning, and Street Sweeping

Upload referenced documentation identified below and other information relevant to the P2/GH Program.

> Attachment 6 CB Tracking_Jan 2021 to Dec 2022.pdf - 03/24/2023 02:25 PM
> Attachement 7 Parking Lot Jan 2021 to Dec 2022.pdf - 03/24/2023 02:25 PM
> Attachement 8 Inspections.pdf - 03/24/2023 02:29 PM
> **Comment**
> NONE PROVIDED

1. Were there any changes made to the approved P2/GH Program during the reporting period which have not been reviewed and approved in accordance with the permit language?
NO

2. Did you complete each P2/GH Program measurable goal and/or implement ongoing activities consistent with the measurable goals?
YES

3. Did you update your structural control inventory in accordance with the approved procedure (i.e. additions, deletions, no longer owned or operated)?
Not Applicable – No updates during the reporting period

4. For each facility with a Standard Operating Procedure (SOP) is the content up-to-date?
YES

4a. Are routine and comprehensive inspections being performed at each facility with an SOP in accordance with the approved schedule?
YES

5. Did you implement the identified BMPs at facilities with medium to low potential to discharge pollutants
YES

6. Were any new facilities added during the reporting period that were not reviewed and approved by EGLE? If yes, submit the assessment for approval in accordance with Part I.A.3.g.2. of the permit as an Unscheduled Permit Required Report in MiWaters.
NO

7. Were the inspection, maintenance, and cleaning activities for the following structural controls implemented in accordance with the approved procedure?

Structural Control Type:	Inspection and Maintenance Activities Conducted in accordance with Approved Procedures?	If "NO," provide an explanation:
Detention Basins	YES (Provide date of last inspection/maintenance) **Certify date inspection and/or maintenance was last completed?** July 2022 See Attachment 8	NONE PROVIDED
Oil/Water Separators	YES (Provide date of last inspection/maintenance) **Certify date inspection and/or maintenance was last completed?** On June 2, 2021 and on July 19, 2022 Delta Township Utilities Department Staff used the Utilities vactor truck and cleaned the oil separator manholes at Fire Station #1, Fire Station #3, and the Delta Parks Department. Garage oil separator manhole. Water, dirt, sand and rocks was removed from the oil separator manholes.	NONE PROVIDED
Pump Stations	N/A: Do not own/operate	NONE PROVIDED
Secondary Containment	N/A: Do not own/operate	NONE PROVIDED
Vegetated Swales	N/A: Do not own/operate	NONE PROVIDED
Constructed Wetlands	N/A: Do not own/operate	NONE PROVIDED
Infiltration Basins/Trenches	N/A: Do not own/operate	NONE PROVIDED
Porous Pavement	N/A: Do not own/operate	NONE PROVIDED
Rain Gardens	YES (Provide date of last inspection/maintenance) **Certify date inspection and/or maintenance was last completed?** July 2022 See Attachment 8	NONE PROVIDED

Structural Control Type:	Inspection and Maintenance Activities Conducted in accordance with Approved Procedures?	If "NO," provide an explanation:
Underground Storage Vaults/Tanks	N/A: Do not own/operate	NONE PROVIDED
Other Structural Controls (add rows as needed). Specify control type in explanation.	YES (Provide date of last inspection/maintenance) **Certify date inspection and/or maintenance was last completed?** On June 2, 2021 and on July 19, 2022 Delta Township Utilities Department Staff used the Utilities vactor truck and cleaned the aqua swirl manholes at the two Canoe Launch sites: Delta Mills Canoe Launch Park and Willow Canoe Launch Park. Water, dirt, sand and organic material (leaves & sticks) were removed from the two aqua swirl manholes.	NONE PROVIDED

8. Provide the reference to the document submitted above demonstrating implementation of the procedure for inspecting, cleaning, and maintaining catch basins to ensure proper performance.
Catch basins cleaned in years 2021 and 2022, see Attachment 6

9. Provide the reference to the document submitted above demonstrating implementation of the approved procedure for sweeping streets, parking lots, and other impervious surfaces.
Parking lots sweep in years 2021 and 2022, see Attachment 7

Section 8.B. P2/GH - Operation and Maintenance Activities and Employee Training

Upload referenced documentation identified below and other information relevant to BMPs or employee training.

> NONE PROVIDED
> **Comment**
> NONE PROVIDED

1. Are you implementing BMPs in accordance with your approved procedures to prevent or reduce pollutant runoff from the following operations and maintenance activities?

Activity:	BMPs Implemented?	Provide the reference to the document submitted above describing the BMPs implemented or an explanation of why BMPs were not implemented:
Road, Parking Lot, and Sidewalk Maintenance (e.g. pothole, sidewalk, and curb and gutter repair)	YES	Only minor parking lot crack sealing performed during the reporting period, which are done yearly in March/April timeframe and scheduled by the Parks Department.
Bridge Maintenance	N/A	NONE PROVIDED
Right-of-Way Maintenance	N/A	NONE PROVIDED
Unpaved Road Maintenance	N/A	NONE PROVIDED
Cold Weather Operations (e.g. plowing, sanding, application of deicing agents, and snow pile disposal)	YES	The Township only salts Township facilities parking lots and sidewalks. The Township uses the minimum amount of salt to get the job done. Surface Temperatures are considered when determining volume of salt to apply. The Township is calibrating salt equipment according to manufacturers recommendations.
Maintenance of permittee-owned vehicles (e.g. police, fire, school bus, public works), including certifying that no vehicles are washed with a discharge to the regulated MS4.	YES	The Township has a properly designed, maintained, and operated vehicle/equipment wash bay at its Water Operations Building that is equipped to handle and properly dispose of the wash waters that drain to the sanitary sewer. The fire apparatus and equipment washing at Fire Stations Nos. 1 and 3 are conducted within the vehicle apparatus bays where there are floor drains piped to the Township's sanitary sewer system.

2. Were all new permittee-owned and operated facilities or new structural stormwater controls for water quantity designed and implemented in accordance with the PCC performance standards and long-term operation and maintenance requirements?
YES

3. Was P2/GH training provided in accordance with the approved program?
YES

3a. If yes, provide the reference to the training records in the document submitted above or in Section 8a.
See page 31 of Attachment 1 and Appendix B and C.

4. Is your pesticide applicator certified by the State of Michigan?
YES

5. Was contractor oversight provided to ensure contractors hired by the permittee comply with P2/GH BMPs when performing O&M activities?
YES

6. Will you continue to implement the approved P2/GH Program during the next reporting cycle? If you responded “YES with changes” or “NO,” submit the SWMP modification request information as required by Part I.A.4. of the permit as an Unscheduled Permit Required Report in MiWaters.
YES

Section 9. Total Maximum Daily Load (TMDL) Implementation Plan

Upload referenced documentation identified below and other information relevant to the TMDL Implementation Plan.

> Attachment 10 20221202_Delta Township TMDL Sampling Report.pdf - 03/24/2023 02:31 PM
> Attachment 9 211117_Delta Twp TMDL Sampling Report.pdf - 03/24/2023 02:31 PM
> **Comment**
> See Attachment 9 and 10 TMDL Sampling Report

1. Is there a TMDL applicable to the discharge from your MS4 identified in your permit?
YES

2. List the TMDLs in your permit.
Carrier Creek - Sediment
Grand River - E.coli

3. Were the prioritized BMPs implemented as per the approved TMDL Implementation Plan?
YES

4. Provide the reference to the summary of any monitoring results – including outfall monitoring, in-stream monitoring, or modeling – in the document submitted above.
See Attachment 8 and 9

5. Provide the reference to the document submitted above with the assessment of progress made toward achieving the TMDL pollutant load reduction requirements.
See Attachment 8 and 9

6. Will you continue to implement the approved TMDL Implementation Plan during the next reporting cycle? If you responded "Yes with changes" or "no", submit the SWMP modification request information as required in Part I.A.4. of the permit as an Unscheduled Permit Required Report in MiWaters.
YES

Additional Information

Comments (As needed)
Section 3 Question 1 - see Attachment 4

Additional Documents (As needed)
Attachment 4_SESC.pdf - 03/24/2023 02:33 PM
Comment
NONE PROVIDED

Attachments

Date	Attachment Name	Context	User
3/24/2023 2:33 PM	Attachment 4_SESC.pdf	Attachment	Jennifer Bernardin
3/24/2023 2:31 PM	Attachment 10 20221202_Delta Township TMDL Sampling Report.pdf	Attachment	Jennifer Bernardin
3/24/2023 2:31 PM	Attachment 9 211117_Delta Twp TMDL Sampling Report.pdf	Attachment	Jennifer Bernardin
3/24/2023 2:29 PM	Attachement 8 Inspections.pdf	Attachment	Jennifer Bernardin
3/24/2023 2:25 PM	Attachment 6 CB Tracking_Jan 2021 to Dec 2022.pdf	Attachment	Jennifer Bernardin
3/24/2023 2:25 PM	Attachement 7 Parking Lot Jan 2021 to Dec 2022.pdf	Attachment	Jennifer Bernardin
3/24/2023 2:25 PM	Attachment 5_Aqua Swirls and Oil Separtors Manholes.pdf	Attachment	Jennifer Bernardin
3/24/2023 2:17 PM	Attachment 2 2021 IDEP Reports_Delta Twp.pdf	Attachment	Jennifer Bernardin
3/24/2023 2:17 PM	Attachment 3 2022 IDEP Reports_Delta Twp.pdf	Attachment	Jennifer Bernardin
3/24/2023 2:08 PM	Screenshot 1.PNG	Attachment	Jennifer Bernardin
3/24/2023 2:08 PM	Screenshot 2.jpg	Attachment	Jennifer Bernardin
3/24/2023 2:08 PM	Attachment 1 Delta Twp GLRC Progress Report.pdf	Attachment	Jennifer Bernardin

Municipal Separate Storm Sewer System (MS4) Stormwater Program Progress Report

January 1st, 2021, to December 31st, 2022

Submitted to:

Department of Environment, Great Lakes, and Energy

GREATER LANSING REGIONAL COMMITTEE FOR STORMWATER MANAGEMENT
www.mywatersheds.org

TRI-COUNTY regional planning commission

Table of Contents

1.0 General Information

This progress report is being submitted by the Delta Township (Delta Twp MS4-Eaton) in partial fulfillment of the requirements of the Phase II Stormwater National Pollutant Discharge Elimination System (NPDES) Permit No. MI0059725. The permit allows discharges from a municipal separate storm sewer system (MS4). The Michigan Department of Environment, Great Lakes, and Energy (EGLE) requires that a progress report be submitted on the implementation status of the current permit. This progress report covers the period of January 1st, 2021, to December 31st, 2022. An Abbreviated NPDES MS4 Application Form (Reissuance) is due by 11:59 p.m. on April 1st, 2024.

2.0 GLRC

The GLRC is a guiding body comprised of participating permitted MS4 communities within the Greater Lansing Region. The committee has been established to guide the implementation of the MS4 program for the communities within three identified urbanized watersheds: the Grand River, the Red Cedar River, and the Looking Glass River Watersheds.

2.1 GLRC Background

In November 1999, nine communities and three counties in the Greater Lansing area organized to discuss the federal regulations for the Stormwater Phase II Program. The result of this organization was an agreement to pool resources on a regional basis to fulfill the requirements of the program. Initially, based on 1990 census population data, these nine communities and three counties were the only entities in the Greater Lansing area that were designated to participate in the Phase II "Voluntary Permit Program" by EGLE. Following several meetings of this group during late 1999 and early 2000, a resolution was drafted to establish the "Greater Lansing Area Regional NPDES Phase II Stormwater Regulations Committee" and representatives from each jurisdiction were named to serve on the Committee.

Soon after the organization of the Committee in 2000, the Tri-County Regional Planning Commission (TCRPC) began to assist in providing contractual, fiduciary, and administrative support. Tetra Tech was selected to produce a permit strategy study, and later to prepare the Voluntary Grant Permit Applications for each community. Again in 2002, Tetra Tech was retained to prepare watershed management plans (WMPs) for the Grand River and Red Cedar River watershed areas and would later prepare a WMP for the Looking Glass River watershed area.

Based on the increased population data following the release of the 2000 Census, ten additional communities were designated to meet the stormwater MS4 requirements under federal and state regulations. Ultimately, seventeen communities and the three counties agreed to participate in a regional approach until 2007, when a lawsuit determined some townships no longer required an MS4 permit from EGLE. GLRC members then took formal action to establish an Associate Membership category within its Memorandum of Agreement (MOA). The MOA with GLRC member communities continues to be updated and reapproved, most recently in 2022 to align with the current permit cycle. The recent MOA was adopted by GLRC members and

therefore establishes the GLRC legally through April 30, 2027. There are also several interested parties that are consistently involved with the planning activities associated with this program such as parks departments, conservation districts, utility authorities, and transportation authorities. The participating communities recognize the substantial benefits that can be derived through cooperative management of the watersheds to achieve the MS4 permit requirements and protect our watershed.

2.2 GLRC Members

The participating MS4 entities that currently make up the GLRC are as follows:

- City of DeWitt
- City of East Lansing
- City of Grand Ledge
- City of Lansing
- City of Mason
- Delhi Charter Township
- Delta Charter Township
- DeWitt Charter Township
- Lansing Charter Township
- Meridian Charter Township
- Lansing School District
- Waverly Community Schools
- Clinton County
- Clinton County Road Commission
- Eaton County
- Ingham County
- Michigan State University

2.3 GLRC Organization

Within the GLRC, committees have been established to guide various components of the MS4 program. Other committees may be established as needed throughout the course of the program. A list of the committees including a brief description of their responsibilities follows.

Public Education Program (PEP) Committee

The PEP Committee guides the overall public education, participation, outreach, and involvement process. This also includes evaluation of the program and assessment of public knowledge and activities.

Illicit Discharge Elimination Program (IDEP) / Post-Construction Committee

The IDEP/Post-Con Committee guides the organization and implementation of the Illicit Discharge Elimination Program, mapping guidelines, field-sampling protocols, and how the watershed will be monitored for progress, as well as advises on matters regarding post-construction measures. The Committee has reviewed and provided recommendations related to pet waste reduction techniques, septic tank maintenance issues, and staff training, as well as channel protection and TSS removal practices.

Total Maximum Daily Load (TMDL) Committee

The TMDL Committee makes recommendations regarding the Grand River and Red Cedar River E. coli Total Maximum Daily Load (TMDL) requirement. The committee provides education and updates to GLRC members to assist in the development and implementation of TMDL programs.

Executive Committee

The GLRC Executive Committee is comprised of a maximum of eight voting members consisting of the Chair and Vice Chair of the GLRC, one representative from each of the three counties, and the chairs of the Illicit Discharge Elimination Program (IDEP)/Post-Construction Committee, Public Education Program (PEP) Committee, and Total Maximum Daily Load (TMDL) Committee. The Executive Committee meets five times a year and the Full Committee meets twice a year.

Current GLRC Organization
Effective December 5th, 2019

2.4 Watershed Partnerships and Related Efforts

Middle Grand River Organization of Watersheds (MGROW)

MGROW is an outgrowth of the Grand River Expedition 2010, founded in 2011 and established as a 501(c)3 in February 2012. MGROW is striving to bring together local communities, watershed groups and other stakeholders in the Middle Grand River Watershed to build a greater understanding of and stewardship for our water resources. MGROW's mission is "To protect and preserve the history and the natural resources of the Middle Grand River Watershed by promoting education, conservation, restoration, and wise use of watershed resources." While the Upper Grand River Watershed Alliance (Jackson area) and the Lower Grand River Organization of Watersheds (or LGROW, in the Grand Rapids area) assist local watersheds in their respective regions, serving as umbrella organizations to network and share ideas with local watersheds, the Middle Grand River Watershed was without such support until the formation of MGROW. Local watersheds and program administrators in the MGROW area include: Friends of the Looking Glass River; Friends of the Maple River; Friends of the Red Cedar River; GLRC; Clinton, Eaton, and Ingham Conservation Districts; Michigan State University Institute of Water Research (MSU-IWR); TCRPC; and Mid-Michigan Environmental Action Council (Mid-MEAC). These groups operate independently from one another but continue to explore avenues for collaboration.

The GLRC Coordinator continues to work with MGROW to identify collaborative opportunities related to education, recreation, and conservation and the GLRC Coordinator serves on the board of MGROW. Visit http://www.mgrow.org/ for more information on this valuable partner.

Water Trail Planning/Grand River Partnership

The GLRC Coordinator assisted MGROW with the development of the DNR-designated Middle Grand River Water Trail and associated materials, with the goal of inspiring new watershed stewards through recreation. The GLRC Coordinator serves on the Water Trail Committee and has been working to establish a Regional Middle Grand River Water Trail Development Plan Advisory Group. The Advisory Group will bring all stakeholders together to further the Plan and ensure proper safety, education, marketing, and maintenance of the Middle Grand River Water Trail. The GLRC Coordinator also participates in the Grand River Partnership, a group composed of LGROW, MGROW, and Upper River Watershed Alliance who work together to promote watershed wide educational opportunities, collaborate on watershed protection, and collaborate on a headwaters to Lake Michigan paddle trail planning effort. Most recently, the group is leading the planning effort for the 2025 Grand River Expedition and has planned the Hugh Heward Challenge on April 29th, 2023. The annual paddling event reenacts a one-day, 50-mile sprint down the Grand River in Mid-Michigan by British fur trader Hugh Heward and his French-Canadian crew in two birchbark canoes on April 24, 1790. The event includes a 50-mile route, a 25-mile route, and a 13-mile route.

Looking Glass River Watershed Efforts

The GLRC partners on related events and activities to promote recreation and awareness of the river. Friends of the Looking Glass River Watershed Council hosted local paddling events such as

a Spring, Summer and Fall River Clean Up Float on May 1st, July 17th, and September 18th, 2022. The group also gathered volunteers for log jam removals in May, August, September and October of 2021. Friends of the Looking Glass River also participated in a program with 260 fourth graders in September of 2021 to learn about the life and health of the river. The group has also established a can and bottle collection drop off and has successfully produced and sold a beautiful Friends of Looking Glass 2021 and 2022 sticker with all proceeds going to improving the watershed and keeping it clean and accessible. The two groups are currently exploring further opportunities for partnering.

Red Cedar River Watershed Efforts

Since forming in 2019, the Friends of the Red Cedar River have worked to promote watershed stewardship and recreation. Working with the city through a grant, the group completed a new launch site with a ramp of steps to down to the river and a parking lot with 16 spots in Williamston in 2022. The group has worked diligently to clear the river with partners and volunteers including finding funding for contractual work. The upper part of the Red Cedar from Webberville to Meridian Road is clear and the group worked with Meridian Township on a grant to clear the river in the summer of 2021. The group actively works with a local Boy Scout troop to monitor the river, remove debris, and clear small log jams. In November of 2022, they also partnered with a local enthusiast who convinced Adrian and Blissfield Railroad Company to retrieve trees and logs piled at their S. Cedar Street Bridge. The Railroad has promised to help again in 2023. Volunteers also worked in August and October 2022 to clear log jams. The GLRC Coordinator has worked regularly with the group to provide guidance on Red Cedar River Water Trail effort with the goal of inspiring new watershed stewards and educational opportunities through water-based recreation and sits on a new MGROW Red Cedar River Water Trail Committee. A grant through the Ingham County Parks millage has funded signage for the water trail, and the GLRC Coordinator worked with the group to design a logo similar to MGROW. The group has been coordinating with MSU to clear the river and provide additional education. The group has successfully partnered with rotary clubs along the river to further development of a water trail, and a river celebration event is planned for September, 2023.

Maple River Watershed Efforts

While outside of the urban area, the GLRC partners with Maple River stakeholders in their watershed planning efforts. The GLRC Coordinator sits on the Upper Maple River Non-Point Source Steering Committee as well as the Stony Creek Planning Project, a tributary of the Maple. The Friends of the Maple River held their annual Maple River Cleanup and Logjam Removal Day on Saturday, April 23, 2022, but were not able to host the event in 2021. The group has undergone much turnover and is currently reorganizing.

Dam Removal Exploration Workgroup (DREW)

The GLRC Coordinator participates with a group of watershed stakeholders exploring feasibility of removing Lansing's two dams, advising on possible green infrastructure solutions to post-removal riparian restoration. DREW has successfully secured Army Corps of Engineer funds to remove the N. Lansing Dam via their Section 206 Aquatic Restoration Program. This would fund

the entire dam removal up to $10 million. The federal funds will not cover removal of contaminated sediments that might be found behind the dam, and it was noted PCBs are commonly found in the river here. The City of Lansing, Army Corps, and Board of Water & Light are formalizing a Feasibility Cost Share Agreement (FCSA). Next steps are executing the FCSA and initiating a draft detailed project report and environmental assessment.

Capital Area Sustainability Partnership (CASP)

In 2021, a group of regional stakeholders began meeting to discuss regional sustainability and climate change planning efforts. The GLRC Coordinator, through the capacity of planner at the Tri-County Regional Planning Commission, assisted in the facilitation of these discussions and has helped include stormwater management as a focus of these conversations. The GLRC Coordinator has worked to bring additional watershed partners into the planning effort to share knowledge and resources. With the passage of the Infrastructure Investment and Jobs Act in 2021 that provided approximately $11 billion to Michigan for infrastructure improvement and the Inflation Reduction Act of 2022, much of the focus of CASP has been to help municipalities understand the availability of federal funding for sustainability and resiliency and how to apply for that funding.

3.0 Implementation Committee Reports

3.1 PEP Committee (including individual community activities)

The PEP Committee met on the following occasions:

January 20th, 2021
April 11th, 2022
July 28th, 2022
September 22nd, 2022
January 18th, 2023

Committee Activities:

Regional Water Quality Survey – As stated in previous progress reports, the survey results continue to be used as a tool for the PEP Committee regarding all educational efforts and public participation. Surveys were conducted in 2006, 2012, and 2018. The surveys provide comparison data and demonstrate where we have made progress through our educational efforts as well as identify areas that need improvement. This is used to craft and evaluate the success of our PEP BMPs. The survey results can be found on the GLRC website at mywatersheds.org/water-quality-surveys. The PEP Committee has met recently and decided our next required assessment tool will be an additional survey in 2024. The Committee is working to budget for the survey and develop a maximum of 30 questions.

Pollution Isn't Pretty (PIP) - Originally funded by TCRPC's Mid-Michigan Program for Greater Sustainability, MGROW has facilitated the use of the water resource education campaign entitled Pollution Isn't Pretty (PIP). The PIP campaign was professionally designed and is still being used across the region. The campaign is currently owned and housed by MGROW. In late 2020, an error at the web hosting firm caused the web content to be deleted, and MGROW offered to redirect the website to GLRC's website. Today, existing materials, including the roughly 250 pet waste trail signs throughout the region, direct to GLRC's "For Residents" page. The GLRC will continue to financially maintain the Pollution Isn't Pretty domain. Partners from throughout the watershed, including the GLRC, distribute materials from this campaign with the domain pollutionisntpretty.org. GLRC members and MGROW will continue to distribute the campaign's printed materials at watershed-related events throughout the region until supplies are depleted.

The following GLRC members have placed Pollution Isn't Pretty signs in their communities: Lansing Charter Township (3); City of East Lansing (21); Ingham County Parks (5); Clinton County Parks (2); DeWitt Charter Township (3); Meridian Charter Township (5); City of Lansing (5); City of Grand Ledge (4); and MSU (1). Several signs have also been placed on the Lansing River Trail.

Delta Township has approximately 30 Doggie Poo Stations around the Township and go through over 70,000 bags a year.

Watershed Signage – With the help of local road commissions, signage was placed along roads to indicate watershed boundaries to passing vehicles, cyclists, and pedestrians. These were installed between 2005-2006 but are maintained indefinitely.

Delta Township has watershed signage, and it is being maintained indefinitely.

GLRC Exhibit Display – A traveling exhibit display was developed in 2008 and has been used extensively at local workshops, conferences, community lobbies, etc. When the display is not being used for a special event, it travels throughout the region to GLRC member offices. The GLRC display panels were redesigned in 2014 to incorporate the PIP campaign, and in 2017 a scroll

style “pop up” banner was developed that could be utilized in more places, like outdoor events. It was designed with the header “We All Live In A Watershed” in order to address survey results that indicated many residents don’t know they live in a watershed. Starting in 2019, most GLRC members agreed to display the scroll style banner in their lobbies or other public places for 2-3 weeks each year*. Multiple communities purchased their own scroll banners to display for longer periods. In 2022, two additional communities purchased their own scroll banners bringing the total to seven. All member groups were able to display either their or GLRC’s copy of the display for at least two weeks during 2022. A table of the display usage can be found in Appendix A. As the GLRC Coordinator brings the display to members, additional copies of GLRC publications and educational materials are replenished as needed. Members also reached out to the GLRC Coordinator throughout the reporting period to request additional materials when needed.

*Due to the COVID-19 pandemic, display use at lobbies and public events was temporarily replaced with digital PEP BMPs, per the GLRC PEP Amendment submitted in summer 2020. EGLE requested in person-activities resume at the June 2022 GLRC Full Committee meeting.

Delta Township displayed the traveling exhibit display in the lobby of the Delta Township Administration Building the following dates: 2021 from 10/5/2021 to 11/1/2021 and 2022 from 10/10/2022 to 11/1/2022.

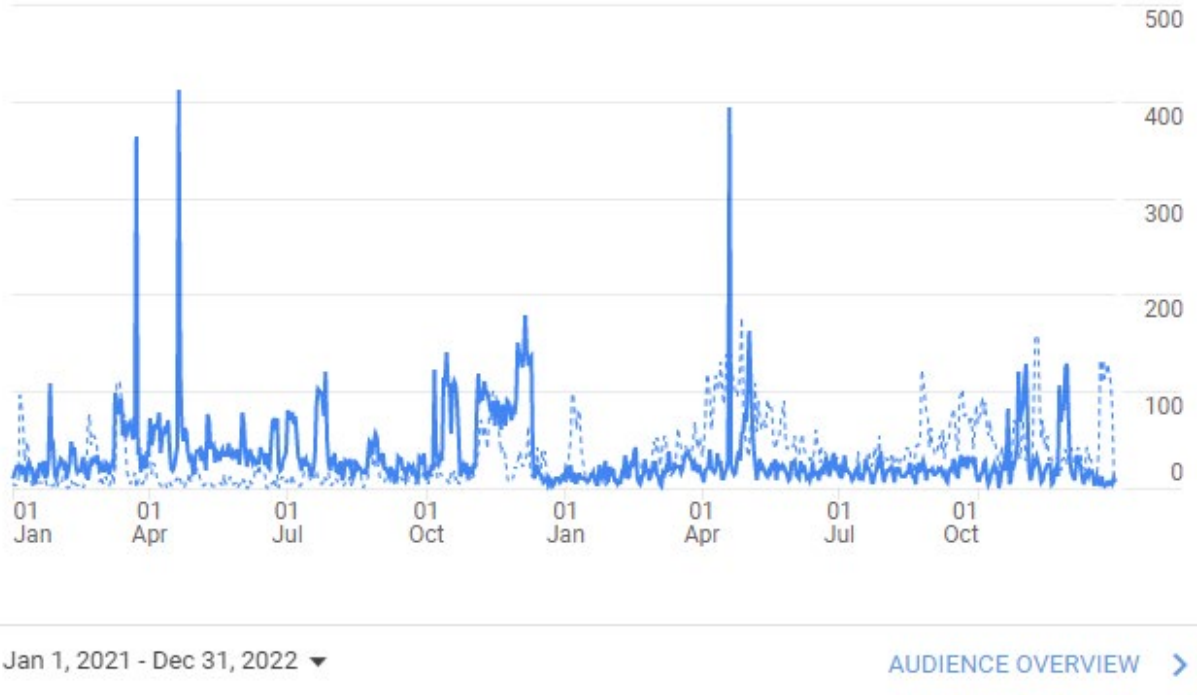
Delta Township displayed the traveling exhibit display at the in Trick or Treat Trail in 2021 on 10/12/2021 and in 2022 on 10/11/2022.

Enviroscape – In late 2017, the GLRC purchased an Enviroscape Watershed model, a hands-on, interactive demonstration of the sources and impacts of stormwater pollution. It is utilized at events where time and setting allow for hands-on learning. The GLRC has frequently partnered with EGLE at events and utilizes their interactive floodplain model. Due to the COVID-19 pandemic, the GLRC Coordinator has not had the opportunity to attend in-person events with the Enviroscape. However, an Enviroscape model was utilized in training a group of 24 teachers in watershed education in July of 2022.

GLRC Website mywatersheds.org – The public website for the GLRC is maintained and updated on a regular basis. The website includes a significant amount of information relating to watersheds, stormwater stewardship, GLRC reports, educational information, links to other environmental organizations and much more. All public education outreach materials direct the viewer to our website so we can further educate them about pollution prevention. A 2020 update was driven by survey data which indicated many residents do not realize they live in a watershed. This is why "EVERYONE LIVES IN A WATERSHED" remains the home page header and the first thing visitors see. Results also indicated that residents prefer learning about environmental issues from videos, which are also included on the home page and throughout the website. All content was reviewed for accuracy in 2021. In 2022, a new webpage was added to showcase the new Augmented Reality Sandbox and serve as a landing page to direct teachers and the public in how to use the free educational tool.

The PEP Committee reviews the website stats on a regular basis. There have been over 71,000 total hits on the website, as indicated by the "ticker" at the bottom of the webpage. Google Analytics show a total of 26,381 page views and 22,296 users during the Progress Report period. Spring continued to be the most popular time of year to visit the website.

- 2021: 16,945 pageviews
- 2022: 9,369 pageviews



The committee also tracks traffic to individual pages to monitor the strength of individual pages and interpret what information resonates well. GLRC's "Rain Garden 101" continues to be the most popular with 6,158 views in 2021 and 2022. A new how-to video and additional resources were added to the page in 2022. Our "Pet Waste Management" and "Different Types of Sewers" pages received a total of 6,240 views during the reporting period.

https://www.deltami.gov/departments/engineering/delta_township_stormwater_management.php

DELTA TOWNSHIP STORMWATER MANAGEMENT

Stormwater runoff is created when rain falls on pavement, buildings, and other impervious surfaces that do not allow water to soak into the ground. In developed areas like Delta Township, we limit flooding by moving this runoff from our roads, parking lots, and neighborhoods through storm drains which discharge directly into rivers and streams. Since the discharge from separate storm sewer systems does not get processed at a treatment plant, any contaminant on the ground can "hitch a ride" with runoff and impact our shared surface waters. Pet waste, oil, leaves and dirty water from cleaning your car can enter storm drains and flow downstream where it harms aquatic habitats and makes water unsafe for swimming, canoeing and other water-related activities. The Township takes steps to reduce this pollution to improve water quality and to meet State and Federal requirements.

Per these requirements, the Township must apply for a stormwater discharge permit every five years. A large part of that application consists of a description as to how the Township will commit to and proceed with the development, implementation, and enforcement of practices to reduce the discharge of pollutants from its municipal separate storm sewer system to the maximum extent practicable. This documentation was formally designated as Delta Township's Stormwater Management Plan, which is located below for public review and input.

To help facilitate a regional approach to stormwater management, the Township is also a member of the Greater Lansing Regional Committee (GLRC) for Stormwater Management, a guiding body comprised of Municipal Separate Storm Sewer System (MS4) communities within the Greater Lansing Region. The

committee has been established to guide the implementation of the stormwater program for participating communities within the Grand River, the Red Cedar River and the Looking Glass River watersheds. Visit MyWatersheds.org to learn about upcoming events, find steps you can take to limit water pollution, and to get involved in managing our shared water resources!

If you have questions or comments regarding the Township's stormwater management plan, please contact Ernie West P.E., Township Engineer in the Delta Township Engineering Department at engineer@deltami.gov or 517-323-8540.

Illicit Discharge

An illicit discharge is defined as any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater, except for discharges allowed under an NPDES permit or waters used for firefighting operations. Many of these non-stormwater discharges occur due to illegal connections to the storm drain system from commercial, residential, and other establishments.

Illicit discharges and dumping allow contaminated wastewater into our local waterways without receiving any treatment. Such activities may be intentional, but also may be unknown to the property owner. Some examples of illicit discharges or dumping are failing septic systems, improper disposal of sewage from recreational vehicles, illicit connections of sanitary sewer lines to the storm sewer system, or the cleaning of pool filters, paint brushes, and vehicles in a driveway or street.

Please help us protect the Grand River and other watersheds by reporting illicit discharges and dumping into Eaton County and Delta Township stormwater sewer systems. You may call the Eaton County Drain Commissioner's Office at 517-543-3809 or the Delta Township Engineering Department at 517-323-8540. You may also contact the Michigan Department of Environmental Quality's Pollution Emergency Alerting System (PEAS) at 800-292-4706.

GREATER LANSING REGIONAL COMMITTEE FOR STORMWATER MANAGEMENT

The Greater Lansing Regional Committee for Stormwater Management (GLRC) is a guiding body comprised of participating Phase II Stormwater communities within the Greater Lansing Region. The committee has been established to guide the implementation of the entire Phase II Stormwater Program for the communities within three identified watersheds: the Grand River, the Red Cedar River, and the Looking Glass River watersheds. For more information related to the Phase I & II Programs, visit the Michigan Department of Environment, Great Lakes, and Energy website.

Reports & Programs:

- GLRC Annual Report
- GLRC Quarterly Newsletters
- Delta Township MS4 Stormwater Progress Report
- 2020 Delta Township Stormwater Management Plan
- Delta Twp NPDES Permit MS4-Eaton

Press Releases:
Greater Lansing Regional Water Quality Survey Final Findings Report

Following is more information on what we are doing and how you can help:
Greater Lansing Regional Committee Official Memo

Pollution Prevention Tips Want to learn more about how you can protect our waterways at your home, school, or business? Check out these articles, brochures, and flyers and feel free to print and post them at your workplace or classroom!

- Educational Articles
- GLRC Brochures
- Business and Construction Stormwater Flyers

Visit the GLRC website at www.mywatersheds.org for more materials like these and to discover what watershed you live in, and other pollution prevention tips!

Other information:

- Michigan Department of Environment, Great Lakes, and Energy (EGLE)
- Tri-County Regional Planning Commission (TCRPC)
- TCRPC Environmental Planning
- Delta Township Recycling Center
- Eaton County Recycling & Hazardous Material Disposal
- RV Dumping Sites

Website traffic for Delta Township's Stormwater page:

January 1, 2021 to December 31, 2021 = 416

January 2, 2022 to December 31, 2022 = 256

There were no reports/comments received during the reporting period.

GREATER LANSING REGIONAL COMMITTEE FOR STORMWATER MANAGEMENT

Search... Log In

About Stormwater Watersheds Get Involved Resources

PET WASTE & WATER QUALITY

WINNERS OF THE 2023 GLRC DOG PHOTO CONTEST

The Greater Lansing Regional Committee for Stormwater Management successfully completed its annual dog photo calendar contest. Twelve lucky pups were selected as a monthly feature for our 2023 calendar and won a $20 gift certificate to a pet supply store. Check out our winning entries and digital calendar!

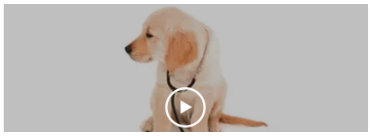
View the 2023 Dog Calendar

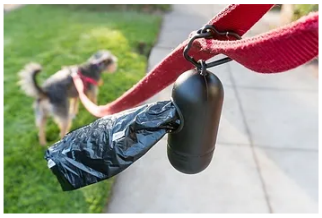
Winners of the GLRC Annual Dog Photo Calendar Contest!

WHAT HAPPENS TO PET WASTE?

When dog waste is left on the ground, rain runoff washes it (and its bacteria) into storm drains. Since many storm sewers discharge into rivers, lakes, and streams without undergoing any treatment, bacteria from pet waste can enter our shared surface waters, impair water quality, and make it unsafe for aquatic life and human health. In the U.S. alone, dogs produce **10 million tons** of waste each year, and just one gram can contain as many as **23 million fecal coliform bacteria**! Salmonella, giardia, and other bacteria and parasites in dog waste can spread disease and impair water quality.

On walks, always carry a baggie (preferably biodegradable!) to scoop the poop and dispose of it in the trash. At home, clean up dog waste in your yard at least once a week and either flush it down the toilet, dispose of it in the trash, or bury it.





You can also hire a pet waste removal firm to routinely clean your yard. These are local firms that perform this service:

GLRC Website Subpages

For Residents Webpage – This page was developed on the website to allow GLRC members and the public to review files for educational purposes. These files include brochures, posters, articles, seasonal tips, and other information to educate residents on stormwater pollution prevention. The webpage is updated regularly to add new materials and per survey results, video content is emphasized near the top and in focus. The For Residents webpage had 778 views during the reporting period.

For Educators Webpage – The PEP Committee maintains a webpage on the GLRC website for educators in the region. The page serves as a resource guide for local teachers, workshop leaders, or anyone interested in environmental education. State and federal environmental curriculum is highlighted as well as links to lesson plans. It includes resources and example projects that the schools can integrate into their current activities. The webpage also serves as a toolbox for teachers and school district officials that are required to meet MS4 permit requirements. This page continues to be updated on a regular basis. This webpage includes multiple at-home-learning lessons to assist parents and teachers with finding lessons and activities suitable for online learning. During the reporting period, this webpage had 11 views.

For Members Webpage – The GLRC developed this webpage in 2019 to house relevant documents and information for municipalities. There is particular focus on making it easier to view and use digital PEP materials and request physical resources for outreach events. During the reporting period, this webpage had 52 views.

Be Septic Smart Webpage – The GLRC developed a septic focused webpage to house info on septic systems, time of sale programs, and our septic-focused video. It was updated to contain additional "Be Septic Smart" videos from US EPA during the reporting period. The "Be Stormwater Smart" webpage received 33 views during the reporting cycle.

Rain Garden 101 – Our most popular webpage, Rain Garden 101, includes manuals, videos, and planting resources to help homeowners plan and install their own native plant rain garden. Residents were commonly directed to this page and its updates during this reporting cycle. GSI focused webpages received nearly 13,000 views during the reporting period.

Local Green Infrastructure Projects -- This page was added to highlight Lansing area GSI projects and includes the video clip developed as part of the Greening Mid-Michigan project. It had 146 views during the reporting period.

Household Hazardous Waste Calendar – Respondents to the GLRC survey indicated they were not utilizing household hazardous waste sites because they didn't know where they were. In response, the GLRC created a webpage dedicated to these resources. It includes an event calendar and information on disposal in the tri-county area. This received 569 views during the reporting cycle.

Reporting Webpage – To simplify the GLRC's shared outreach efforts, MyWatersheds.org/REPORT was created to house the IDEP reporting information for all members. This allows the GLRC to easily promote a one-stop reporting resource to the region's residents in a simple, easy to remember domain. The IDEP and reporting webpages received a total of 51 visits during the reporting period.

Event Calendar – The committee is continuously updating the GLRC calendar with applicable meetings, webinars, educational opportunities, and recreation and cleanup activities throughout the watersheds. The Events page received a total of 143 views during the reporting cycle.

Educational Articles – The PEP Committee continues to use and promote a series of news articles. They are posted on the GLRC website so members can easily include them in their local community newspapers and newsletters. They are also located in the "For Residents" page and at least one is included in each quarterly newsletter. The articles cover the following topics:

What is a Watershed?
Pet Waste and the Environment
Riparian Buffers
Storm vs. Sanitary Sewer Systems
Septic System Overview
Illicit Discharges
Adopt Your Catch Basin
Safe Fertilizer Use
Vehicle Maintenance
Wetlands: An Overview
Septic System Maintenance
Responsible Car Washing

Rain Gardens: A Homeowner's Guide
The articles are updated periodically for content and design updates, most recently in 2020. A suggested timeline for seasonal articles is also provided.

Throughout the permit cycle these articles were used in the monthly Talk of the Township publication in Delta Township, for example You're Not Just Fertilizing Your Lawn was published in the May 27, 2022. In addition, a tracking sheet for educational brochures distributed from Delta Township is located in Appendix F.

GLRC Media Toolkit – In fall of 2020, GLRC developed a Media Toolkit for members and their communications staff. It was designed to clearly illustrate the content available for municipal newsletters, social media, and other outreach and provide "plug and play" language. Municipal communications staff often lack the technical knowledge or time to craft stormwater related content, but the Media Toolkit features 71 pages of resources that they can pull from and customize to their needs. This reduces the barrier to frequent stormwater-related outreach.

Press Releases – A suite of press release templates was developed in 2020. Covering Pet Waste, Soil Erosion, Industrial Facilities, and Dumpster/Trash BMPS, they are structured as customizable news articles for inclusion in community newspapers or municipal newsletters.

Adopt A River – The GLRC display was part of the environmental fair at the Adopt A River events held in May of 2016 through 2019. The 2020 event was canceled due to the Covid-19 pandemic and the 2021 event was scaled back. In 2022, the GLRC did not attend due to a vacancy in the Coordinator's position. Participation will resume in 2023, with the Enviroscape Watershed model to make the public interaction more hands-on. Over 500 residents participate in this event each year.

MSU Science Festival – The MSU Science Festival is an annual month-long educational event hosted by Michigan State University. The GLRC has participated in the Festival's EXPO Days, utilizing the Enviroscapes Watershed model, handing out brochures, and speaking with children and families. The EXPO Days draw 10,000 people each year, but it was cancelled in 2020 due to the COVID-19 pandemic and was virtual only in 2021. The GLRC participated in 2018 and 2019 and is scheduled to present in April of 2023 with the new Augmented Reality Sandbox.

Presentations – The following presentations were given by the GLRC Coordinator within the reporting period:

- January 27th, 2021: Meridian Green Neighbor presented to residents. A total of 28 residents attended.

- April 8th, 2021: Presented at a Michigan State University environmental planning class. A total of 100 students and teachers attended.

- April 26th, 2021: Ingham County Health Department surface water roundtable discussion with 20 participants.

- April 28th, 2021: Moderated the MWEA Watershed Summit, where 100 people attended.

- May 25th, 2022: Mid-Michigan Watershed Connections teacher training introduction to the GLRC with 34 educators.

- July 23rd, 2022: Conducted an interview with Meridian Township's Green Team on what it means to be green during the Green Fair at the Farmers' Market and spoke with all participants at environmental booths.

- July 25th, 2022: Presented Mid-Michigan Watershed Connections teacher training on how to use the Augmented Reality Sandbox with 35 educators.

- August 9th, 2022: Presentation to librarians and Writer's Workshop at CADL's South Lansing Library on the Augmented Reality Sandbox (ARS) with 10 participants. The ARS remained on view at the library and where the public engaged with the interactive model for two weeks.

- August 6th, 2022: 20th Annual Chuck Gorman Youth Day. Discussed the watershed and how to protect it while teaching 100 youth how to paddle a kayak. An estimated 250 people attended the event, with a parent presence required at the kayaking station on Stony Creek.

- November 30th, 2022: Presented on who the GLRC is and what we do to 55 engineers and planners attending the GLRC's seminar on Stormwater Treatment in Clay Soils: Mechanical Devices or Nature-Based Solutions.

- Throughout 2021 and 2022, the GLRC Coordinator attended Meridian Township's weekly Wednesday Green Dialogue meetings at least once a month. Township residents interested in environmental issues meet for free-flowing discussion. The GLRC Coordinator provides regular updates on Committee activities to this group and helps connect them with regional resources.

GLRC Annual Report – The first GLRC Annual Report was developed in early 2012 (reporting on 2011). The intent of the report is for GLRC members to share it with their boards, councils, and commissions in order to demonstrate the work that has been done throughout the year. TCRPC also shares the report with TCRPC Commissioners, subscribers to our newsletter, and on the website. The effort continues with reports developed through 2021 (the 2022 report is due by March 2023).

The following table indicates the annual report mailing to the GLRC newsletter subscriber list. These recipient numbers reflect members of the public who have volunteered to receive these updates, not partner/governmental contacts. This list has seen consistent growth but was late in distribution in 2021 due to staff turnover.

Edition	Date Sent	Number of Recipients
2020	1/26/2021	525
2021	5/31/2021	182

GLRC Quarterly Newsletters – The GLRC began publishing quarterly newsletters in January 2010 and continues to do so. The newsletters are posted on the GLRC and TCRPC websites and are shared through an email distribution list of over 500 stakeholders. It is recommended that GLRC members share the newsletters with elected officials and appropriate boards, councils, and commissions.

Edition	Date sent	Number of Recipients
Winter 2021	1/26/2021	525
Spring 2021	4/20/2021	525
Summer 2021	7/27/2021	527
Fall 2021	10/18/2021	528
Winter 2022	1/31/2022	580
Spring 2022	4/25/2022	530
Summer 2022	7/19/2022	349
Fall 2022	10/25/2022	675

The newsletters are printed and posted in the lobby of the Delta Township Administration Building, in addition to being shared with the Board of Trustees and Staff.

GLRC Fact Sheet – A fact sheet describing the Phase II program and purpose of the GLRC was created in 2017 to help community leaders quickly understand the requirements of the program and how the GLRC helps meet them. The fact sheet was updated in 2022. This educational piece is distributed with annual reports, dues invoices, and to new TCRPC Commissioners to help those in leadership roles understand their municipality's responsibilities and the GLRC resources available to them.

Social Media – The GLRC joined Facebook and Twitter in December 2009. Regular posts/updates are related to watershed stewardship, public involvement, and participation. GLRC and partner events are also posted frequently. Currently 1,412 people follow GLRC on Facebook and we have 383 followers on Twitter. The GLRC places emphasis on the use of paid advertising through Facebook boosts to spread our messaging on required PEP topics. This tool allows the GLRC to target residents within the urban area of the tri-county region and ensure that we are reaching people who do not already interact with our page. During this reporting period, a renewed emphasis was placed on Twitter to grow our audience beginning in May of 2022, and the GLRC

Coordinator also began posting on Instagram. GLRC's Instagram currently has 59 followers and had a total reach of 727 accounts in 2022.

Over the past two years, our posts have reached 447,076 Facebook accounts and have been shared 1,090 times. Reached is defined as the number of Facebook and Instagram accounts that saw a post at least once and is separate from impressions, which may include multiple views of your post by the same Facebook and Instagram accounts. Paid posts or Facebook boosting has allowed GLRC to target all urban areas within the tri-county region. When boosting, posts can be displayed not just on Facebook, but also on Instagram, Messenger, Facebook Marketplace, and in the sidebar of Facebook.

The GLRC has not advertised on Twitter during the reporting period. During 2021, total tweet impressions were 362 with only 36 profile visits. In 2022, tweet impressions increased threefold to 1,847 and profile visits increased 100 times to 3,625 visits. Impressions on Twitter is a total tally of all the times the tweet has been seen, and a profile visit refers to people who clicked on our profile to learn more about GLRC.

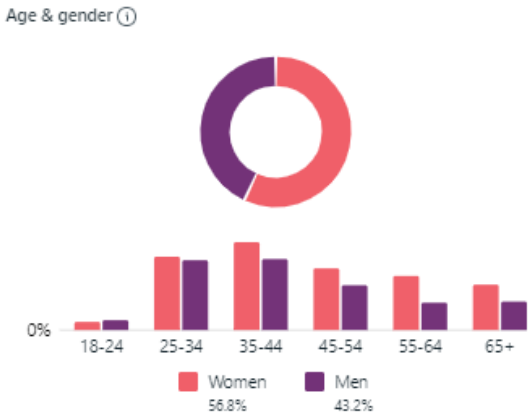
View our pages here: facebook.com/GLRC4stormwater/ and twitter.com/GLRC4stormwater and instagram.com/mywatersheds/.

Delta Township Facebook page includes stormwater related content.

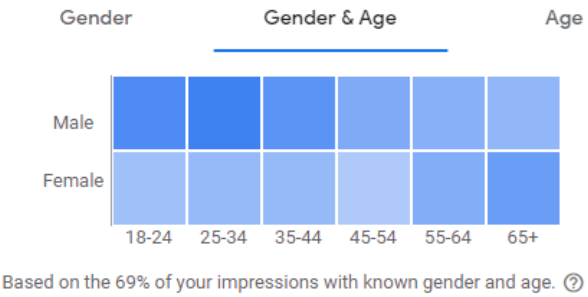
YouTube -- Survey results indicated that respondents prefer learning about environmental issues through video. As such, GLRC invested in a suite of videos for inclusion on the website, Facebook, and YouTube. One video is two minutes and explains the GLRC and basic stormwater pollution prevention, other videos cover the required PEP topics. Most topics have two videos: one that is roughly 60-90 seconds and one that is under 15 seconds, as 15 seconds is the maximum length of a non-skippable ad. The GLRC pays to promote these videos as "pre-roll" advertisements on YouTube, utilizing both the short, non-skippable ads and traditional skippable ads. While Google indicates that a "good" view rate is 15%, GLRC's is 23%, indicating that nearly a quarter of users presented our videos are watching them. Data also indicates that many users continue to watch our pre-roll advertisements even when given the option to skip ahead to their intended video.

Utilizing YouTube has also expanded our audience demographic. While Facebook analytics indicate that content is reaching more females than males that are typically 25 years or older, a quarter of our YouTube views are from younger men. Our multimedia approach is meeting our residents where they are and ensuring our outreach material has a broad reach. It also helps us diversify the places our ads display, because these ads show up throughout the Google ecosystem and on any website that uses Google Ads. View the YouTube channel here: youtube.com/channel/UCm-2OdB67N_dSAnR5osYSFw.

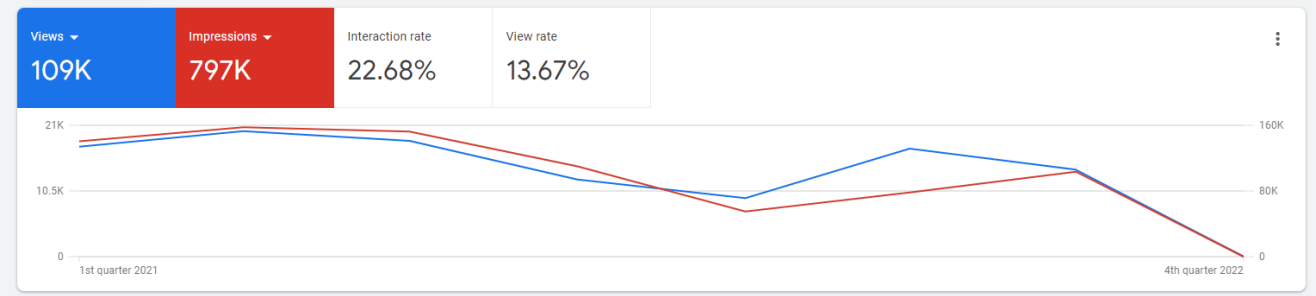
FACEBOOK



YOUTUBE



During Covid-19, the GLRC Coordinator and GLRC members were unable to satisfy in-person outreach events. In summer 2020, GLRC members submitted a PEP amendment to replace in-person PEP BMPs with a commitment to fund YouTube ads. This amendment remained in place until June 2022. The GLRC began utilizing these YouTube ads at the beginning of 2020, with use tapering off in the last half of 2022 as in-person events resumed. A total of $5,807 was spent on YouTube ads from January 1st, 2021, to December 31st, 2022. The results are reflected in this graph:



Dog Calendar Contest – One of our most successful outreach initiatives, the annual Dog Photo Calendar Contest, offers residents a chance to see their dog as a month's feature photo and win a $20 gift card to an area pet store. To enter, contestants must read about pet waste's impact on water quality and pledge to pick up after their pets. The GLRC launched the first contest in 2018 and it grew steadily through 2020 with 300 plus participants each year but declined in 2021 with 121 participants and again in 2022 with only 27 participating. The GLRC Coordinator will discuss how best to engage with pet owners in the future and the fate of the contest with the PEP Committee.

The submittal form includes an option for entrants to subscribe to the GLRC newsletter, allowing us to continue to reach these new contacts and engage them in our messaging in the future. The following indicates the number of newsletter signups resulting from each contest.

2018: 107 signups
2019: 75 signups
2020: 118 signups
2021: 45 sign ups
2022: 19 sign ups

Brochures – In late 2018 and early 2019, the GLRC redesigned its suite of brochures and added Green Infrastructure as an additional topic. Redesigned tri-fold brochures also include Pet Waste Management, Fertilizer and Lawn Care, Responsible Car Washing, Motor Oil Management, and Do You Know Your Watershed? These are distributed at events and lobbies. The GLRC Coordinator distributed 1,487 brochures at events during the reporting period. The brochures were also available on GLRC webpages that received 853 views. The following reflects distribution of brochures related to individual required PEP topics.

- Topic A: 1,487 brochures distributed
- Topic B: 1,487 brochures distributed
- Topic D: 335 brochures distributed
- Topic E: 315 brochures distributed
- Topic F: 475 brochures distributed
- Topic G: 150 brochures distributed
- Topic I: 475 brochures distributed

Similar information is presented digitally on the website and on social media.

Overall, 661 total pieces of outreach material - including MyWatersheds.org stickers, cups, water bottles, bracelets, pet waste bag dispensers, etc. were distributed by the GLRC coordinator at events during the reporting period. An additional 2,550 pieces were purchased for use at members during their events. These totals will increase in 2023 as in-person events resume.

See the Delta Township PEP Tracking spreadsheet for lobby and event distribution tracking for the reporting report.

Rain Garden Seed Cards – In 2017, the GLRC began distributing rain garden information cards printed on paper embedded with native black-eyed Susan seeds. These provide information on the benefits of native plantings and provide residents with seeds to plant their own. They have proven very popular at events. Since 2017, 821 have been distributed through the GLRC Coordinator, with distributed during the reporting period. GLRC looks forward to continuing this campaign as more in-person events are scheduled.

During 2022, 25 Rain Garden Seed Cards were distributed as part of the Trick or Treat Trail Event.

Dog Waste Bag Dispensers -- In 2017 the GLRC began distributing branded dog waste bag dispensers with the tagline "In The Bag, Not The River" to meet pet waste education requirements. To receive one at events, attendees must sign a pledge to pick up after their pets. The pledge form also gives them the option to sign up for the GLRC newsletter. Since 2017, 1,093 dog waste bag dispensers have been distributed by the GLRC Coordinator, with 18 being distributed during the reporting period. The GLRC will continue to distribute this popular tool to encourage all residents to pledge to scoop at area events.

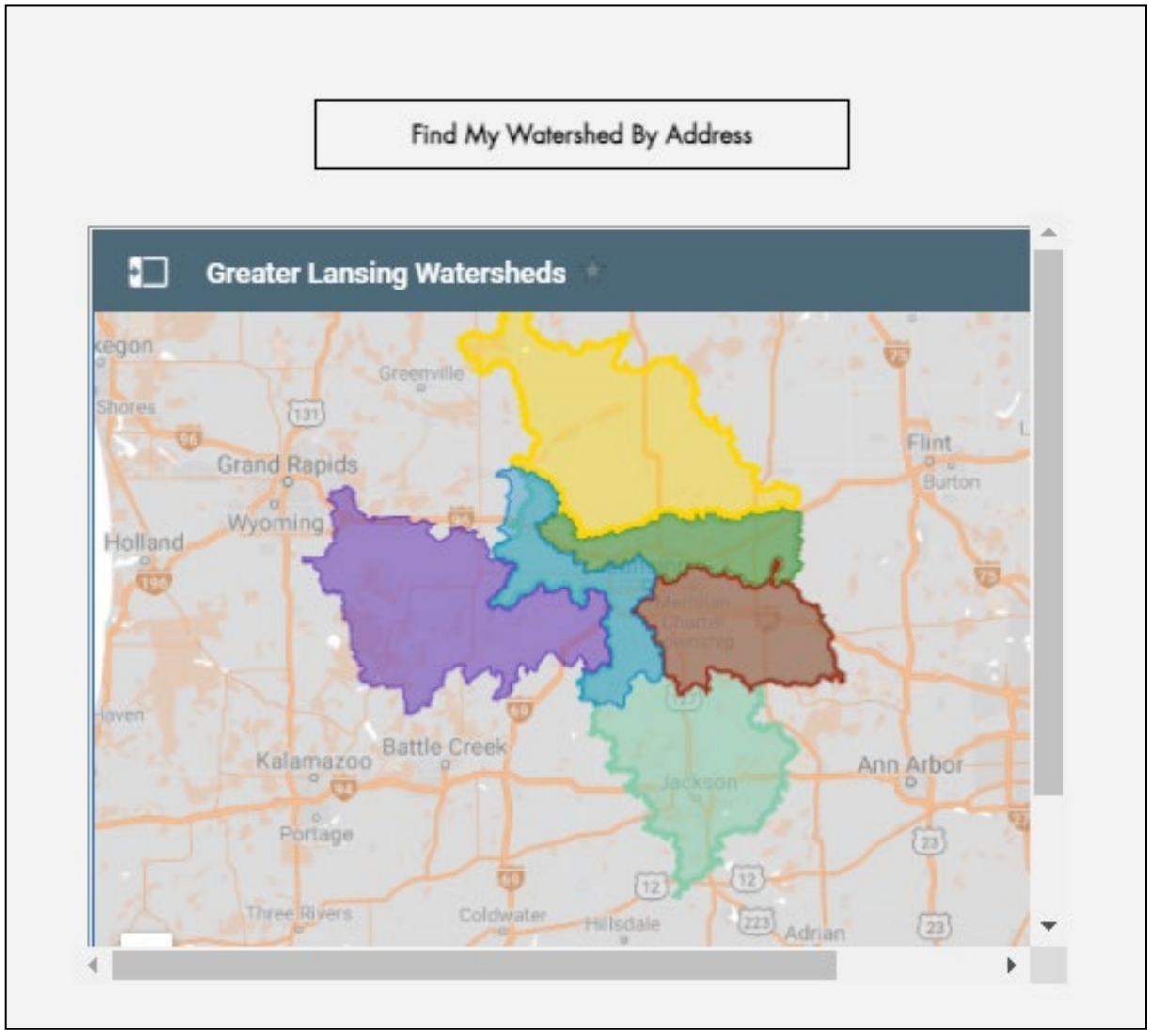
Dog Park Map and Pledge: In 2017, the GLRC developed a map of local dog friendly parks that includes information on pet waste's impact on our water resources. These were hung up at area park and trail head bulletin boards. An additional version was developed for in-person events that included the pledge mentioned above. Signatories received a dog waste bag dispenser and a copy of the dog park map to take home.

Green Infrastructure Bike Tour – A bicycle tour of area green infrastructure was developed in 2019 to provide users an interactive experience and inspire them to install green infrastructure on their own properties. The bike tour follows area bike trails and includes a printable map as well as a custom Google Map.

Watershed Tattoos – The GLRC added an additional "swag" item to distribute during the permit cycle: a temporary Middle Grand River watershed tattoo. Sized to fit a hand, it creates a geographically accurate depiction of the Middle Grand River watershed overlaid the Michigan "mitten".

Color Changing Cups and Sport Water Bottles – In 2021 and 2022, the GLRC designed a reusable cup and sport water bottle for event giveaways. As the cup changes with the temperature of the water, it engages children and both promotional items allow for discussion on how the GLRC works to protect our water. These lasting items drive residents to the website, and the cups were also utilized by participants at the GLRC seminar in 2022.

Find My Watershed Tool – In 2019, GLRC developed a Find My Watershed Tool. Users can plug in their home address and see which watershed they live in and where they live within it. It also provides information about the watershed, links to 319 plans, and contact information for watershed organizations focused on stewardship within its boundaries. Survey results indicate that many residents do not know that they live in a watershed and this tool has made it easier for them to learn about the watershed they call home. This tool has been viewed 46,706 times since its debut.



General Outreach/Education Efforts – The GLRC Coordinator partners with several different groups, agencies, and organizations in the region. Here is a summary of general collaboration and activities related to stormwater and pollution prevention:

- MWEA Watershed Committee – The GLRC Coordinator attended all MWEA Watershed Committee meetings in 2021 and provided some support to the group related to the MS4 permit application process. This is a good networking opportunity for GLRC to share our experiences and learn what others are doing around the state. This group plans the Watershed and Stormwater summits, which the GLRC coordinator has presented at.

- December 2017; 2018; 2019; 2021; 2022 – The GLRC Coordinator promoted and attended the annual MWEA Stormwater Seminar.
  *The event didn't occur in 2020, and no GLRC Coordinator was in place in December 2016.

- March 2018, 2019, 2020, February 2019 – Promoted and exhibited at the Quiet Adventures Symposium (QAS). *GLRC Coordinator volunteered at the 2017 QAS, having been hired after the deadline to be able to exhibit. In 2021, and 2022, GLRC participated in the virtual QAS events as a sponsor. In 2021, sponsorship included a viewing of the What is the GLRC video, and in 2022, sponsorship included a viewing of the educational Road Salt and Water Quality video. Both virtual events had an estimated 500 participants. The GLRC Coordinator will attend the March 2023 in-person event.

- January – June, 2021 – Served as an advisor to the Wayne State Microplastic Project on their outreach team. The overall effort included an exploration of using Green Stormwater Infrastructure to capture microplastics in stormwater. The GLRC Coordinator helped Wayne State and the Ingham County Conservation District prepare for pilot project implementation in Pontiac and Williamston in the summer of 2021.

- February 2021 – Provided a letter of support for Clinton County Conservation District's 2021 Annual Looking Glass River Summer Cleanup project.

- July 2021 – Provided a letter of support for the Mid-Michigan Watershed Connections grant through NOAA's BWET program. Worked with the Eaton Conservation District and Mid-MEAC to develop and submit the grant and gathered letters of support from area watershed groups.

- May – August, 2022 – Worked with the Eaton Conservation District and Elkhart County Soil and Water Conservation District to build an Augmented Reality Sandbox for use in education.

- November 2022 – Donated two Landscaping for Water Quality Designs for Homeowners 3rd edition books, 10 rain garden seed cards, a pet waste dispenser with bags, a green

stormwater infrastructure map and a GLRC sports water bottle for a rainwater-themed basket for the 123rd Winter Drain Commissioners Conference for the Southwest District.

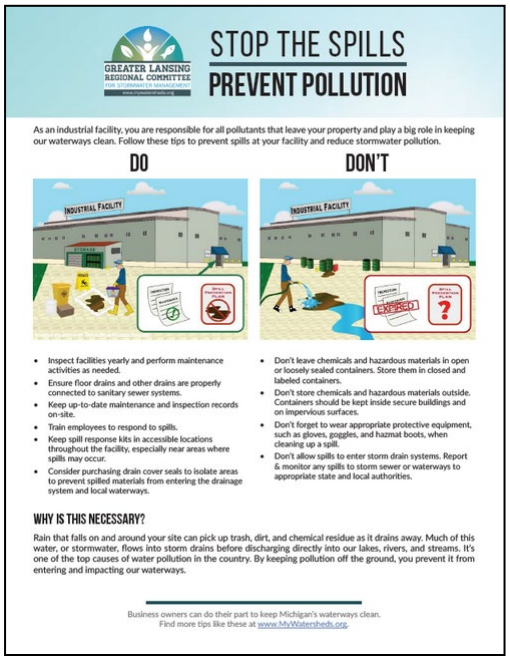
- The GLRC Coordinator has consistently provided notices to GLRC members regarding anything relevant to the MS4 program including seminars, training, webinars, legislative updates, etc.

Business Outreach: The GLRC has developed a variety of resources for local businesses to help educate them and staff on pollution prevention at their facilities and as part of their operations:

For Business Webpage – In 2020, a For Businesses webpage was developed to house outreach information particular to businesses and industrial facilities and flyers/posters detailing industrial BMPs. Since its debut, the page MyWatersheds.org/businesses has been viewed 192 times.

Business Mailing – In 2020 the GLRC is developed a mailable poster focused on business and industrial BMPs. This was mailed to industrial facilities and is available online for other businesses.

Business Posters – Ten posters/flyers focusing on business and industrial facilities were produced in 2020 and included on the GLRC For Business webpage. It includes facility management BMPs for salt usage, vehicle cleaning, landscaping, and more. They are designed to be utilized on break room bulletin boards and other public areas.



Customer Education Collaboration – The GLRC seeks to work with area businesses to educate their customers on stormwater pollution prevention:

- Between 2019 and 2021, the GLRC worked with the Capital Area Humane Society to provide 750 dog waste bag dispensers and pet waste brochures to be included in the adoption packets for new pet owners. These materials highlight the importance of picking up pet waste while providing owners with the tools needed to start good dog ownership habits. This relationship will continue.

- Throughout 2021, the GLRC worked with a group of MSU students to develop an educational campaign focused on car washes as the most environmentally-friendly choice for customers versus at-home car washing. The GRLC Coordinator met with the PEP Committee upon multiple occasions in 2022 to further refine the campaign, which will be implemented in 2023.

- In 2022, the GLRC Coordinator reached out to all developers in the region, as well as consulting engineering firms, to invite them to attend the free and public GLRC educational seminar on Stormwater Treatment in Clay Soils: Mechanical Devices or Nature-Based Solutions.

3.2 IDEP Committee/Post-Construction Committee

All GLRC members work hard to implement their individual IDEP programs. The GLRC Coordinator continues to work with regional partners on watershed protection efforts focused on pollution prevention and Illicit Discharge Elimination.

As referenced above, the GLRC developed a reporting page on the website to better advertise the contact information for reporting illicit discharges to member communities. Mywatersheds.org/report is easy to remember and promote. A Septic Smart webpage was also developed to educate residents on reducing illicit connections to the storm sewer. The primary focus of this committee has been staff training.

In 2022, the IDEP/Post-Construction Committee met routinely with the PEP Committee to help plan the free and public educational seminar GLRC seminar on Stormwater Treatment in Clay Soils: Mechanical Devices or Nature-Based Solutions.

Field Training –
The GLRC routinely hosts field training for outfall screening. Two hands-on dry weather screening training sessions were also held on July 20th and 21st, 2022 at Hawk Island County Park for area municipalities with 31 attending. Sign-in sheets from these events are in Appendix B.

IDEP Training Video –

Group Training:
The GLRC hosted three IDEE: A Grate Concern video training sessions on May 5th, 2022, and May 6th, 2022, which 44 municipal staff attended. As always, the training included a quiz and review of answers. Chief Engineer Younes Ishraidi of Meridian Township joined to answer any technical questions and guide the discussion. Sign-in sheets from these events are in Appendix C.

3.3 TMDL Committee

The TMDL Committee provides a forum for discussing TMDL implementation. Members have individual TMDL implementation plans but utilize GLRC's Quality Assurance Project Plan (QAPP) to standardize sample collection and guide field operations related to wet weather monitoring. The QAPP informs project managers and field staff of laboratory requirements and options for analysis. In the summer of 2022, the QAPP was updated and distributed to all members with new lab contact information and all procedural changes/recommendations from EGLE and US EPA.

4.0 Other GLRC Activities

Good Housekeeping Training -

Group Training: The GLRC hosted training video viewings for 33 members and their staff on Rain Check: Stormwater Pollution Prevention for MS4s on May 8th, 2018 and May 10th, 2018.

On May 5th, 2022, and May 6th, 2022, the video training viewings on Stormwater Pollution Prevention for MS4s were hosted again for 44 municipal staff. As always, the training included a quiz and review of answers. Chief Engineer Younes Ishraidi of Meridian Township joined to answer any technical questions and guide the discussion. Sign-in sheets from these events are in Appendix C.

On June 29, 2022, Delta Township in partnership with Spicer, held a Good Housekeeping/Pollution Prevention Training for seasonal Parks Department Staff and new Engineering Department staff. Sign-in-sheet from the event is in Appendix C.

GLRC Stormwater Seminar – In June 2018, the GLRC held an educational seminar for members to learn about a variety of topics, including stormwater utilities, impervious surface mapping, GSI

site plan reviews, and NJDEP performance standards. Thirty-five people attended. A second GLRC Seminar was planned for 2020 but was postponed due to Covid-19.

In November of 2022, the GLRC held a technical, educational seminar for members and the public to explore Stormwater Treatment in Clay Soils. Per an EGLE suggestion, GLRC brought in national expert Don Carpenter, PhD, PE, LEED AP, Executive Director of the Great Lakes Stormwater Management Institute at Lawrence Technological University to help engineers learn how to address stormwater quality goals by evaluating mechanical separators and the retention and infiltration of Michigan's clay soils. A total of 55 people attended. A flyer and sign-up sheet are included in Appendix D.

Ingham County Surface Water Program -- The Ingham County Health Department regularly tests sites for *E.coli* and has done so through this program for 17 years. Several Ingham County based GLRC members support this effort and in 2021 applied for a grant to expand the program to different sites and explore the feasibility of similar programs throughout the Middle Grand River watershed. The grant was not funded but would have supported the development of a water quality database to house current and historical sampling results as well.

Recreation Efforts
The GLRC promotes partner efforts and recreational events through the website and social media, like paddling expeditions and races and other opportunities for residents to connect to our watershed and water resources. The GLRC understands that residents will be more likely to adopt pollution prevention strategies if they use and love the resources those actions would protect.

Green Infrastructure Code Audit – The GLRC Coordinator worked with Meridian Township to audit their codes and ordinances for barriers to green infrastructure implementation. In 2020, the Committee agreed to reconvene the GLRC Ordinance Committee to develop a GSI Ordinance Manual for area communities interested in similar audit exercises. The document will provide model ordinances and language to standardize and improve the region's landscape and surfacing requirements in a way that promotes the use of green infrastructure. The final document is almost complete, and GSI Code Audits at other GLRC members will resume.

Coal Tar Seal Coat – The GLRC also tasked the Ordinance Committee with assisting area communities in the development of coal tar seal coat bans, as Polycyclic Aromatic Hydrocarbons or PAHs within are showing up in significant concentrations in runoff. So far, two of GLRC's members have passed a total coal tar seal coat ban, requiring contractors to register and certify that they are not using mixtures with PAH content greater than .1%. In 2021, GLRC developed a fact sheet on coal tar sealcoating. The educational piece outlines the cancer risk for people as the PAHs make it into their homes on shoes and pets. The Committee will continue to work to develop a resource guide to standardize the region's approach to these contaminants.

APPENDIX A

2023 GLRC Progress Report

Appendix A

Display Usage

2021

Name	Community	Date Provided	Date Returned	Event	Display Used	Attendance
Cliff Walls	Meridian Township	1/27/2021	1/27/2021	Green Neighbor	Scroll	20
Cliff Walls	Michigan State University	4/8/2021	4/8/2021	Environmental planning class	Scroll	30
Cliff Walls	MWEA members	4/28/2021	4/28/2021	MWEA Watershed Summit	Scroll	35
Younes Ishraidi	Meridian Township	5/22/2021	5/24/2021	Meridian Farmers Market	Scroll	50
Jennifer Bernardin	Delta Charter Township	10/5/2021	11/1/2021	Lobby	Scroll	
Jennifer Bernardin	Delta Charter Township	10/12/2021	11/1/2021	Trick or Treat Trail	Scroll	2,000+ kids and adults
Kattie White	Lansing School District	2/19/2021	11/18/2022	Outside Forest View Elem. office	Scroll	500+ kids and adults

2022

Name	Community	Date Provided	Date Returned	Event	Display Used	Attendance
Phil Hanses	Clinton County Drain Commission	6/27/2022	7/8/2022	Lobby	Scroll	
Marc Trotter	Clinton County Road Commission	7/11/2022	7/22/2022	Lobby	Scroll	
Angie Cosman	Ingham County Drain Commission	7/25/2022	8/5/2022	Lobby	Scroll	
Amanda Hathaway Frattarelli	Cliinton, Eaton, Ingham counties	7/29/2022	7/29/2022	Mid-Michigan Watershed Connections Tea	Scroll	35
Amanda Hathaway Frattarelli	Village of Fowler	8/6/2022	8/6/2022	20th Annual Chuck Gorman Youth Day	Scroll	250+ kids and adults
Dan Coss	City of DeWitt	8/8/2022	8/19/2022	Lobby	Scroll	
Andrew Dymczyk	DeWitt Charter Township	8/22/2022	9/2/2022	Lobby	Scroll	
Eric Diebel	Eaton County Drain Commission	9/6/2022	9/20/2022	Lobby	Scroll	
Dave Gutchess	City of Grand Ledge	9/21/2022	10/5/2022	Lobby	Scroll	
Jennifer Bernardin	Delta Charter Township	10/10/2022	10/21/2022	Lobby	Scroll	
Jennifer Bernardin	Delta Charter Township	10/11/2022	10/21/2022	Trick or Treat Trail	Scroll	2,000+ kids and adults
Alec Malvetis	City of Lansing	10/24/2022	11/4/2022	Lobby	Scroll	
Kattie White	Lansing School District	2/19/2021	11/18/2022	Outside Forest View Elem. office	Scroll	
Brad Beck	Lansing Charter Township	11/21/2022	12/2/2022	Lobby	Scroll	
Amanda Hathaway Frattarelli	Clinton, Eaton, Ingham Counties	11/30/2022	11/30/2022	GLRC Seminar: Stormwater Treatment in (	Scroll	60
Kyle Scripter	Waverly Community Schools	12/5/2022	12/16/2022	Lobby	Scroll	

Google Ads

2021

Video Title	Community	Time Period	Impressions*	Views**	Video Length	Platform
Stormwater Short: What Is A Watershed	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	79,504	4,962	:15	Google Ads
Stormwater Short: Pet Waste & Water Quality	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	119,968	21,765	:15	Google Ads
Stormwater Short: Sweep for Stormwater	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	137,662	8,887	:15	Google Ads
Stormwater Short: Storm Drains & Waterways	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	61,075	1,618	:14	Google Ads
Stormwater Short: Responsible Car Washing	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	62,269	12,513	:14	Google Ads
Road Salt & Water Quality	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	23,766	4,468	1:01	Google Ads
Top 5 Reasons to Install a Rain Barrel	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	18,632	3,096	:56	Google Ads
The Greater Lansing Regional Comm. For Stormater Mgmt.	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	13,690	4,126	2:01	Google Ads
Stormwater Short: Rain Garden for Water Quality	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	12,967	1,572	:16	Google Ads
Stormwater Short: Road Salt and Water Quality	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	4,880	394	:15	Google Ads
Car Washing and Water Quality	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	2,801	496	:43	Google Ads
Properly Disposing of Household Hazardous Waste	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	4,445	1,057	:45	Google Ads
Lawn Care and Water Quality	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	344	29	1:14	Google Ads
Be Stormwater Smart: Use Lawn Fertilizers Properly	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	175	9	1:05	Google Ads
Motor Oil and Water Quality	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	1,138	219	:54	Google Ads

Picking Up After Pets for Clean Water	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	3,727	903	1:06	Google Ads
Managing Your Septic System	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	1,590	243	1:13	Google Ads
Stormwater Basics	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	8,094	1,088	:25	Google Ads
Watershed Protection	Clinton, Eaton, Ingham counties	1/1/2021-12/31/2021	3,844	1,048	1:37	Google Ads
Top 5 Reasons to Install a Rain Barrel	Clinton, Eaton, Ingham counties	3/9-/2021-3/23/2021	20,360	1,609	:56	Facebook Boost
Stormwater Short: Rain Garden for Water Quality	Clinton, Eaton, Ingham counties	4/1/2021-4/15/2021	12,793	1,051	:15	Facebook Boost
Car Washing and Water Quality	Clinton, Eaton, Ingham counties	7/27/2021-8/3/2021	8,748	297	:43	Facebook Boost
Properly Disposing of Household Hazardous Waste	Clinton, Eaton, Ingham counties	8/24/2021-8/30/2021	12,411	481	:45	Facebook Boost
Leaf Management	Clinton, Eaton, Ingham counties	10/7/2021-10/17/2021	14,944	598	:31	Facebook Boost
TOTALS			**629,827**	**72,529**		

2022

Name	Community	Time Period	Impressions*	Views**	Video Length	Platform
The Greater Lansing Regional Comm. For Stormater Mgmt.	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	1,043	342	2:01	Google Ads
Stormwater Short: Responsible Car Washing	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	39,121	6,650	:14	Google Ads
Car Washing and Water Quality	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	173	19	:43	Google Ads
Properly Disposing of Household Hazardous Waste	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	46	7	:45	Google Ads
Lawn Care and Water Quality	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	164	9	1:14	Google Ads
Motor Oil and Water Quality	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	271	28	:54	Google Ads
Picking Up After Pets for Clean Water	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	17,675	3,472	1:06	Google Ads
Stormwater Short: Pet Waste & Water Quality	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	10,489	1,786	:15	Google Ads
5 Reasons YOU Should Install a Rain Barrell!	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	2,704	495	:56	Google Ads
Stormwater Short: Rain Garden for Water Quality	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	26,394	3,115	:16	Google Ads
Managing Your Septic System	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	92	18	1:13	Google Ads
Stormwater Short: Storm Drains & Waterways	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	70,281	12,127	:14	Google Ads
Stormwater Basics	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	263	43	:25	Google Ads
Stormwater Short: Sweep for Stormwater	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	30,761	3,135	:15	Google Ads
Watershed Protection	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	333	73	1:37	Google Ads
Stormwater Short: What Is A Watershed	Clinton, Eaton, Ingham counties	1/1/2022-12/31/2022	37,026	9,214	:15	Google Ads
Lawn Care and Water Quality	Clinton, Eaton, Ingham counties	6/22/2022-6/30/2022	6,865	151	1:14	Facebook Boost
Stormwater Short: Sweep for Stormwater	Clinton, Eaton, Ingham counties	8/8/2022-8/14/2022	17,268	190	:15	Facebook Boost
Stormwater Short: Storm Drains & Waterways	Clinton, Eaton, Ingham counties	8/25/2022-8/27/2022	1,797	67	:14	Facebook Boost
Properly Disposing of Household Hazardous Waste	Clinton, Eaton, Ingham counties	8/29/2022-9/4/2022	5,592	143	:45	Facebook Boost
Managing Your Septic System	Clinton, Eaton, Ingham counties	9/23/2022-9/27/2022	9,570	5,558	1:13	Facebook Boost
Stormwater Short: Pet Waste Management in Winter	Clinton, Eaton, Ingham counties	12/23-2022-12/30/2022	4,855	668	:14	Facebook Boost
TOTALS			**282,783**	**47,310**		

*Impression: Each time a viewer is exposed to the video
**View: When a person watches for 30 seconds or until the end of the video, whichever comes first.

APPENDIX B

GREATER LANSING REGIONAL COMMITTEE FOR STORMWATER MANAGEMENT
www.mywatersheds.org

IDEP FIELD TRAINING JULY 20, 2022

PLEASE PROVIDE YOUR MUNICIPALITY, NAME AND SIGNATURE TO INDICATE ATTENDANCE

MUNICIPALITY	NAME	SIGNATURE
Dewitt Township	John Moody	
	Anthony Chapko	
	Joe Gomez	
City of Lansing	Natalie Trotter	
Delhi Twp	Allen Bryant	
Clinton Co. Road Comm.	Marc Trotter	
	Jake Perkins	
City of Mason	Michael Hussey	
David Fuller	Mike Prater	
Meridian Township	Nyal Nunn	
	Madison Murphy	
	Lauren Falzarano	
MSU	Mary Lindsey	
Ingham Co. Drain Comm.	Nick Patrick	
	Jeremy Hatherly	
Delta Township	Jacob Kleinhenz	
	Erik Dehring	
City of East Lansing	Cliff Walls	
	Pradip Shrestha	
	Aden Duong	
City of Mason	Employee	
	Employee	
City of Dewitt	Rob McGowan	
Lansing School District	Caleb Thelen	
	Kattie White	
	Christopher Mireles	
Dennis Lowney	M.d- MEAC	
Marty Lowney	" "	

GREATER LANSING
REGIONAL COMMITTEE
FOR STORMWATER MANAGEMENT
www.mywatersheds.org

IDEP FIELD TRAINING JULY 21, 2022

PLEASE PROVIDE YOUR MUNICIPALITY, NAME AND SIGNATURE TO INDICATE ATTENDANCE

MUNICIPALITY	NAME	SIGNATURE
City of Mason		
Meridian Township	Younes Ishraidi	
	Mike Love	
Meridian Township	Tom Westerfield	
City of Grand Ledge	Dan Telman	
Meridian Twp.	Nyal Nunn	
"	MIKE LOVE	

TOTAL ATTENDANCE AT GLRC IDEP FIELD TRAININGS JULY 21 & 22, 2022

City of DeWitt	Rob McGowan
City of East Lansing	Cliff Walls
	Pradip Shrestha
	Aden Duong
City of Grand Ledge	Dan Telman
City of Lansing	Natalie Trotter
City of Mason	Michael Hersey
	David Fuller
	Mike Prater
Clinton County Road Commission	Marc Trotter
	Jake Perkins
Delta Township	Jacob Kleinhenz
	Erik Dehring
DeWitt Township	John Moody
	Anthony Chapko
	Joe Gomez
Delhi Township	Allen Bryant
Ingham County Drain Commission	Nick Patrick
	Jeremy Hatherly
Lansing School District	Caleb Thelen
	Kattie White
Meridian Township	Nyal Nunn
	Madison Murphy
	Lauren Falzarano
	Younes Ishraidi
	Tom Westerfield
	Mike Love
MSU	Mary Lindsey
	Christopher Mireles
Mid-MEAC	Dennis Louney
	Marty Louney
TCPRC	Amanda Hathaway Frattarelli
Spicer Group	Emily Short

APPENDIX C

Supervisor Kenneth R. Fletcher
Clerk Mary R. Clark
Treasurer Dennis R. Fedewa
Manager Brian T. Reed

Trustee Elizabeth S. Bowen
Trustee Fonda J. Brewer
Trustee Andrea M. Cascarilla
Trustee Karen J. Mojica

DELTA TOWNSHIP

Engineering Department

(517) 323-8540

MEETING SIGN-IN SHEET

Project: Delta Twp Good Housekeeping/Pollution Prevention Training (Spicer MS4 Training)

Meeting Date: June 29, 2022 at 10:00 am

Place/Room: Delta Twp Admin Offices, 7710 West Saginaw Highway, Lansing, MI 48917 - Meeting Room A

Name	Department	Phone	E-Mail
Brandon Kiefer	Utility	517-648-2471	BKiefer94@yahoo.com
MIKE CORTS	UTILITIES		MCORTS@deltami.GOV
Foster Anderson	Parks & Rec.	517-927-8909	mdvlle972@gmail.com
Joshua Fravy	Parks & Rec	517-626-0580	joshfravy10@gmail.com
Miles Pier	Parks & Rec	517-492-6466	mrlespier00@ymail.com
Jack O'Connor	Parks & Rec	517-898-6376	jtoconnor2001@gmail.com
Lily Stephan	Parks & Rec	517-614-1078	stephanzla@alma.edu
Don Bush	Parks	517-749-1224	dbush@deltami.gov
Jacob Kleinhenz	Engineering	517-281-5119	jkleinhenz@deltami.gov
Ernie West	Engineering	517-719-5491	ewest@deltami.gov
Jennifer Bernardin	Engineering	5174896282	jbernardin@deltami.gov
Emily Short	Spicer	989-820-8056	emily.short@spicergroup.com

IDDE
a grate concern

Acknowledgment of Training

(This top section should be filled in by the trainer)

Signature(s) below are acknowledgment that on (date) 05/05/2022, these individuals participated in a training session at the:

Location Name: Tri-County Regional Planning Commission

Address: 3135 Pine Tree Rd, Ste 2C Lansing, MI 48911

Given by: (trainer's name) Lauren Schnaebelen

(title) Environmental Sustainability Planner

This training session presented information on illicit discharge detection and elimination. During this session, the individuals listed below viewed the training video:

IDDE: a grate concern

The participants' signatures below affirm they were given adequate time to ask questions about their particular job activities and how they could best conduct these activities.

Please read the above paragraph before signing below.

PRINT NAME HERE	SIGNATURE HERE
DEREK BREEBAN	
Tyler Wells	
ANDREW FORTIN	Andrew Fortin
Jennifer Olds	Jennifer Olds
Dan welch	
Todd Woodard	
Kattie White	Kwhite
CALEB THELEN	
CHRISTOPER MIREELES	

IDDE a grate concern

Acknowledgment of Training

(This top section should be filled in by the trainer)

Signature(s) below are acknowledgment that on (date) 05/05/2022, these individuals participated in a training session at the:

Location Name: Tri-County Regional Planning Commission

Address: 3135 Pine Tree Rd, Ste 2C Lansing, MI 48911

Given by: (trainer's name) Lauren Schnoebelen

(title) Environmental Sustainability Planner

This training session presented information on illicit discharge detection and elimination. During this session, the individuals listed below viewed the training video:

IDDE: a grate concern

The participants' signatures below affirm they were given adequate time to ask questions about their particular job activities and how they could best conduct these activities.

Please read the above paragraph before signing below.

PRINT NAME HERE	SIGNATURE HERE
Marc Trotter - CCRC	
ERIC DEIBEL - ECDC	
John Lonergan ECDC	
Cody Schleicher	
Jeremy Hatherly ICDC	
Nick Patrick - ICDC	
DAVID SCHULTZ	
CHET DAVIS	
Rocky Wing	

IDDE
a grate concern

Acknowledgment of Training

(This top section should be filled in by the trainer)

Signature(s) below are acknowledgment that on (date) 05/06/2022, these individuals participated in a training session at the:

Location Name: Tri-County Regional Planning Commission

Address: 3135 Pine Tree Rd, Ste 2C Lansing, MI 48911

Given by: (trainer's name) Lauren Schnaebelen

(title) Environmental Sustainability Planner

This training session presented information on illicit discharge detection and elimination. During this session, the individuals listed below viewed the training video:

IDDE: a grate concern

The participants' signatures below affirm they were given adequate time to ask questions about their particular job activities and how they could best conduct these activities.

Please read the above paragraph before signing below.

PRINT NAME HERE	SIGNATURE HERE
Rich Miller	
Lori Baetz	
Stephen Clayton	
Aden Duong	
Brian Brannon	
Carl J Bristle	
Ken Herman	

IDDE
a grate concern

Acknowledgment of Training

(This top section should be filled in by the trainer)

Signature(s) below are acknowledgment that on (date) 05/06/2022, these individuals participated in a training session at the:

Location Name: Tri-County Regional Planning Commission

Address: 3135 Pine Tree Rd, Ste 2C Lansing, MI 48911

Given by: (trainer's name) Lauren Schnaebelen

(title) Environmental Sustainability Planner

This training session presented information on illicit discharge detection and elimination. During this session, the individuals listed below viewed the training video:

IDDE: a grate concern

The participants' signatures below affirm they were given adequate time to ask questions about their particular job activities and how they could best conduct these activities.

Please read the above paragraph before signing below.

PRINT NAME HERE	SIGNATURE HERE
Todd Thie	
Dylan Ulman	
Jonathon Stevens	
Anthony Hopkins	COEL
Cliff Walls - COEL	
Rick Colegrove	
Corey Szczepaniak	
Pete Hurst	

IDDE
a grate concern

Acknowledgment of Training

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Signature(s) below are acknowledgment that on (date) 05/05/2022, these individuals participated in a training session at the:

Location Name: Tri-County Regional Planning Commission

Address: 3135 Pine Tree Rd, Ste 2C Lansing, MI 48911

Given by: (trainer's name) Lauren Schnaebelen

(title) Environmental Sustainability Planner

This training session presented information on illicit discharge detection and elimination. During this session, the individuals listed below viewed the training video:

IDDE: a grate concern

The participants' signatures below affirm they were given adequate time to ask questions about their particular job activities and how they could best conduct these activities.

Please read the above paragraph before signing below.

PRINT NAME HERE	SIGNATURE HERE
Justin Strack	
MIKE Corts	mike corts
Brandon Kiefer	Brandon Kiefer
Brian Hatfield	
Geremy Freed	
MIKE MYSZAK	

IDDE
a grate concern

Acknowledgment of Training

(This top section should be filled in by the trainer)

Signature(s) below are acknowledgment that on (date) 05/05/2022, these individuals participated in a training session at the:

Location Name: Tri-County Regional Planning Commission

Address: 3135 Pine Tree Rd, Ste 2C Lansing, MI 48911

Given by: (trainer's name) Lauren Schnaebelen

(title) Environmental Sustainability Planner

This training session presented information on illicit discharge detection and elimination. During this session, the individuals listed below viewed the training video:

IDDE: a grate concern

The participants' signatures below affirm they were given adequate time to ask questions about their particular job activities and how they could best conduct these activities.

Please read the above paragraph before signing below.

PRINT NAME HERE	SIGNATURE HERE
Dennis M. Louney	Dennis M. Louney
Joe Gomez	Joe Gomez
Kevin Bradley	Kevin Bradley
Joe Ward	Joe Ward
John Moody	John Moody

GREATER LANSING REGIONAL COMMITTEE FOR STORMWATER MANAGEMENT
www.mywatersheds.org

Clinton County Drain Com
Clinton County Road Com
Delhi Charter Twp
Delta Charter Twp
DeWitt Charter Twp
City of DeWitt
City of East Lansing
Eaton County
City of Grand Ledge

Ingham County
Lansing Charter Twp
Lansing School District
City of Lansing
City of Mason
Meridian Charter Twp
Michigan State University
Waverly Community Schools

Administrative Support:
Tri-County Regional
Planning Commission
3135 Pine Tree Road.
Suite 2C
Lansing, MI 48911
(517) 393-0342
Fax (517) 393-4424

GLRC 2022 Rain Check and IDDE Training Video Screening Sessions

Member Community	*Thursday Morning*	*Thursday Afternoon*	*Friday Morning*	*Total Member Attendance*
Clinton County Drain Commission				
Clinton County Road Commission	1			**1**
Delhi Charter Township				
Delta Charter Township		4	2	**6**
DeWitt Charter Township		4		**4**
City of DeWitt	3	2	1	**6**
DeWitt School District			4	**4**
City of East Lansing			5	**5**
Eaton County Drain Commission	2			**2**
City of Grand Ledge			3	**3**
Ingham County Drain Commission	2			**2**

Lansing Charter Township				
Lansing School District	3			**3**
City of Lansing	7			**7**
City of Mason				
Meridian Charter Township				
Michigan State University				
Spicer Group		1		**1**
Waverly Community Schools				
Total Daily Attendees	**18**	**11**	**15**	**44**

APPENDIX D

GREATER LANSING REGIONAL COMMITTEE FOR STORMWATER MANAGEMENT
www.mywatersheds.org

DRUMMOND CARPENTER
engineering + research

TRI-COUNTY
regional planning commission

This seminar presented by Greater Lansing Regional Committee for Stormwater Management is free and open to the public.

Learn how to address stormwater quality goals by evaluating mechanical separators and the retention and infiltration in Michigan's clay soils from *national expert* Dr. Don Carpenter.

November 30
10 a.m. - 12 p.m.

Register today: mywatersheds.org/events

MSUFCU Headquarters 2
3899 Coolidge Rd.
East Lansing, MI 48823


GREATER LANSING REGIONAL COMMITTEE FOR STORMWATER MANAGEMENT
www.mywatersheds.org
DRUMMOND CARPENTER
engineering + research
TRI-COUNTY
regional planning commission
Greater Lansing Regional Committee for Stormwater Management Presents
Stormwater Treatment in Clay Soils
Mechanical Devices or Nature-based Solutions
Free registration: mywatersheds.org/events
NOV. 30
10 a.m. - 12 p.m.


GREATER LANSING REGIONAL COMMITTEE FOR STORM WATER MANAGEMENT
www.mywatersheds.org
DRUMMOND CARPENTER
engineering + research
TRI-COUNTY
regional planning commission
Greater Lansing Regional Committee for Stormwater Management Presents
Stormwater Treatment in Clay Soils
Mechanical Devices or Nature-Based Solutions
Learn more at mywatersheds.org/events
NOV. 30
10 a.m. - 12 p.m.

Greater Lansing Regional Committee for Stormwater Management
www.mywatersheds.org | ahathawayfrattarelli@mitcrprc.org

A GLRC Educational Seminar:

Stormwater Treatment in Clay Soils

In Partnership With:

TRI-COUNTY regional planning commission

DRUMMOND CARPENTER engineering + research

Agenda:

9:30 a.m.	Event check in begins
10:00 a.m.	Introduction to GLRC & TCRPC
10:05 a.m.	Presentation by Don Carpenter
11:30 a.m.	Q & A
12:00 p.m.	Event concludes

Tri-County Regional Planning Commission
3135 Pine Tree Rd., Suite 2C Lansing, MI 48911
mitcrpc.org | info@mitcrpc.org

Drummond Carpenter Engineering + Research
47 E. Robinson St. Suite 210, Orlando, FL 32801
drummondcarpenter.com
dcarpenter@drummondcarpenter.com

SPEAKER: Don Carpenter, PhD, PE, LEED AP

Executive Director, Great Lakes Stormwater Management Institute at Lawrence Technological University
Vice President, Drummond Carpenter Engineering + Research

Donald D. Carpenter is professional engineer and accredited green design professional whose expertise includes green infrastructure (GI), stormwater best management practices (BMPs), hydrologic modeling and design, and field data collection. Dr. Carpenter has 20+ years' experience working with diverse clients across the U.S. as a researcher and engineer. His efforts have focused on researching innovative stormwater management practices and designing stormwater management retrofits for nonprofit organizations and local municipalities. As an NCI Certified Charrette Facilitator, he has extensive experience in community engagement and planning. His efforts have facilitated community implementation of GI and the development of community socio-economic sustainability plans.

Dr. Carpenter also serves as Director of the Great Lakes Stormwater Management Institute at Lawrence Technological University where he has been on the faculty since 2000. In this capacity, he conducts research on stormwater BMPs; teaches civil engineering, design, and leadership courses; provides professional lectures and short courses on innovative stormwater management; and advises communities on how to implement green infrastructure. Finally, he is an active leader and board member for several regional committees and nonprofit organizations dedicated to improving water quality and citizen quality of life.

GLRC SEMINAR ATTENDEES NOVEMBER 30, 2022		
Name	**Email**	**Organization**
Aden Duong	aduong@cityofeastlansing.com	City of East Lansing
Alan Boyer	aboyer@peagroup.com	PEA Group
Alec Malvetis	Alec.Malvetis@lansingmi.gov	City of Lansing
Alexandria Jones	ajones@mitcrpc.org	Tri-County Regional Planning Commission
Allen Bryant	allen.bryant@delhitownship.com	Delhi Charter Township, Department of Public Services
Amanda Frattarelli	ahathawayfrattarelli@mitcrpc.org	Tri-County Regional Planning Commission
Andrea Polverento	apolverento@watertownmi.gov	Watertown Charter Township
Angie Cosman	ACosman@ingham.org	Ingham County Drain Commission
Anthony Hopkins	ahopkins@cityofeastlansing.com	City of East Lansing
Benjamin Darling	darlin21@msu.edu	Michigan State University
Brad Beck	bbeck@lansingtownship.org	Lansing Township
Brandon Williams	brandonw@spicergroup.com	Spicer Group, Inc.
Amanda Hathaway Frattarelli	ahathawayfrattarelli@mitcrpc.org	Tri-County Regional Planning Commission
Cara Decker	deckerc@gvmc.org	Grand Valley Metro Council
Carla Clos	Cclos@ingham.org	Ingham County Drain Commission
Chirs Mattson	chrism@spicergroup.com	Spicer Group
Chris Harrington	harringtonc@engdot.com	Eng. Engineering & Surveying
Christe Alwin	ALWINC@michigan.gov	Michigan Department of Environment, Great Lakes, and Energy
Cliff Walls	cwalls@cityofeastlansing.com	City of East Lansing
Dan Opsommer	opsommer@meridian.mi.us	Meridian Township
Daniel Taber	dtaber@grcity.us	City of Grand Rapids
Emily Short	emily.short@spicergroup.com	Spicer Group, Inc.
Erik Dehring	edehring@deltami.gov	Delta Township
Ernie West	EWest@deltami.gov	Delta Township
Fred Cowles	fredcowles@cowlesenvironmental.com	Cowles Environmental
Gregory Lamkin	glamkin@peagroup.com	PEA Group
Hannah Garner	hannah.garner@spicergroup.com	Spicer Group, Inc
Jack Hughes	hughes@meridian.mi.us	Meridian Township
Jacob Kleinhenz	JKleinhenz@deltami.gov	Delta Township
Jennifer Bernardin	jbernardin@deltami.gov	Delta Township
Jocob Kleinhenz	jkleinhenz@deltami.gov	Delta Township
Joseph Lehning	joseph.lehning@c2ae.com	C2AE
Kurt Wolf	kurt.wolf@macd.org	Clinton Conservation District
Lauren Schnoebelen	lschnoebelen@mitcrpc.org	Tri-County Regional Planning Commission
Miekyn Cotton	cottonm1@michigan.gov	Michigan Department of Environment, Great Lakes, and Energy
Nicole Baumer	nbaumer@mitcrpc.org	Tri-County Regional Planning Commission
Nicole McPherson	nmcpher@cityofeastlansing.com	City of East Lansing
Nyal Nunn	nunn@meridian.mi.us	Charter Township of Meridian
Patrick Klein	KleinP3@michigan.gov	EGLE
Paul Pratt	PPratt@ingham.org	Ingham County Drain Commission
Phil Hanses	hansesp@clinton-county.org	Clinton County Drain Commission
Rebecca Wolters	rebecca.wolters@conteches.com	Contech Engineered Solutions
Ron Hoeft	rhoeft@peagroup.com	PEA Group
Ruth Kline-Robach	kliner@msu.edu	Michigan State University
Ruthann Clarke	RClarke@eatoncounty.org	Eaton County Drain Commission
Sam Diorka	sandra.diorka@delhitownship.com	Delhi Charter Township
Senci Pace	senci.pace@gvmc.org	Lower Grand River Organization of Watersheds
Sharee Fink	sfink@mitcrpc.org	Tri-County Regional Planning Commission
Sherry Martin	slmartin@usgs.gov	United States Geological Survey (USGS)
Stephanie Whitney	whitneys@engdot.com	Eng., Inc.
Stephen Clayton	sclayton@cityofeastlansing.com	City of East Lansing Department of Public Works
Taylor Warstler	twarstler@hrcengr.com	Hubbell, Roth & Clark, Inc.
Thomas Miller	Millert45@michigan.gov	Michigan Department of Environment, Great Lakes, and Energy
Wilber David	wilberda@msu.edu	Michigan State University
Younes Ishraidi	ishraidi@meridian.mi.us	Meridian Township

APPENDIX E

Year	When	How	What	Articles
2021	Summer	Print	Magazine	Recycling articles and Fall deleafing articles
2021	Spring	Print	Magazine	Spring clean-up, free yard waste day, and special recycling programs
2021	Fall	Print	Magazine	Electronics recycling, yard waste, paper shredding event, fall deleafing
2021	Winter	Print	Magazine	Christmas tree recycling, electronics recycling
2021	Monthly	Email	Talk of Township	Various articles pertaining to stormwater
2021	Monthly	Print	Recycling Newsletter	Information related to recycling electronics and yard waste
2022	Summer	Print	Magazine	Stormwater tips flyer
2022	Spring	Print	Magazine	Illicit discharges flyer, protect our watershed flyer
2022	Fall	Print	Magazine	Illicit discharges flyer, stormwater smart flyer
2022	Winter	Print	Magazine	Protect our waters flyer, stormwater smart flyer
2022	Monthly	Email	Talk of Township	Various articles pertaining to stormwater
2022	Monthly	Print	Recycling Newsletter	Information related to recycling electronics and yard waste

Stormwater PEP Check-list

Website

The Delta Township Municipal website contains the following items:
Updated copy of stormwater management plan (SWMP)
Recent copy of Progress Report
Link to MyWatersheds.org (GLRC shared webpage) and description of GLRC
Contact information of who the public should contact with questions or comments on SWMP
Contact information of who dumping and illicit discharge/connections should be reported to.
Links to or PDF uploads of MyWatershed Annual Report and Quarterly Newsletters
GLRC stormwater/watershed articles or link to this area of Mywatersheds.org (Water Quality: A Citizens Guide located on MyWatersheds.org)
Information detailing where household hazardous waste can be recycled.

Year	Number of "hits"
2021	416

Township Facilities and Brochures /Township Events and Brochures

Event Trick or Treat Trail **Date** 10/12/2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Green Mood Cup	1200	256	944
Green and Orange Braclets	382	0	382
MyWatersheds.org Sticker	100	0	100
Know your Watershed Trifold.	500	0	500
Pollution Isn't Pretty Cards	50	0	50
GLRC Logo Sticker	25	0	25
Pet Waste Trifold	500	0	500
Total Swag Distributed			2501

Township Facility Delta Township District Library **Date** Jan 2021 - March 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Note: Library was carside service only

Township Facility Delta Township District Library **Date** April 2021 - June 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Note: Library was carside service only

Township Facility Delta Township District Library **Date** July 2021 - Sept 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Note: Library was carside service only

Township Facility Delta Township District Library **Date** Oct 2021 -Dec 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Note: Library was carside service only

Township Facility Enrichment Center **Date** Jan 2021 - March 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Note: Enrichment Center was closed until March 2021

Township Facility Enrichment Center **Date** April 2021 - June 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Note: Enrichment Center had limited occupancy during this time

Township Facility Enrichment Center **Date** July 2021 - Sept 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Note: Enrichment Center had limited occupancy during this time

Township Facility Enrichment Center **Date** Oct 2021 -Dec 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Note: Enrichment Center had limited occupancy during this time

Township Facility Administration Buiding **Date** Jan 2021 - March 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0

Township Facility Administration Buiding **Date** April 2021 - June 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0

Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Note: Admin Building was closed to public until February 2021

Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Note: Administration Building had limited occupancy during this time

Township Facility Administration Buiding **Date** July 2021 - Sept 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	22	3
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	21	4
Total Swag Distributed			7

Note: Administration Building had limited occupancy during this time

Township Facility Administration Buiding **Date** Oct 2021 -Dec 2021

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	19	6
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	21	4
Total Swag Distributed			10

Note: Administration Building had limited occupancy during this time

Stormwater PEP Check-list

Website

The Delta Township Municipal website contains the following items:
Updated copy of stormwater management plan (SWMP)
Recent copy of Progress Report
Link to MyWatersheds.org (GLRC shared webpage) and description of GLRC
Contact information of who the public should contact with questions or comments on SWMP
Contact information of who dumping and illicit discharge/connections should be reported to.
Links to or PDF uploads of MyWatershed Annual Report and Quarterly Newsletters
GLRC stormwater/watershed articles or link to this area of Mywatersheds.org (Water Quality: A Citizens Guide located on MyWatersheds.org)
Information detailing where household hazardous waste can be recycled.

Year	Number of "hits"
2022	256

Township Facilities and Brochures /Township Events and Brochures

Event Govenor Event with Marcus **Date** 5/21/2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	50	0	50
Total Swag Distributed			50

Event Trick or Treat Trail **Date** 10/11/2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
GLRC Sports Water Bottle	1000	100	900
Rain Garden Cards	50	0	50
MyWatersheds.org Sticker	1000	97	903
Know your Watershed Trifold.	500	42	458
Pollution Isn't Pretty Cards	18	0	18
GLRC Logo Sticker	10	0	10
Pet Waste Trifold	500	0	500
Total Swag Distributed			2839

Event Delta Township District Library **Date** Jan 2022 - March 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	23	2
Pollution Isn't Prety Cards	25	19	6
Total Swag Distributed			8

Event Delta Township District Library **Date** April 2022 - June 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	22	3
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Pollution Isn't Prety Cards	25	25	0
Total Swag Distributed			3

Event	Delta Township District Library	Date	July 2022 - Sept 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Pollution Isn't Prety Cards	25	19	6
Total Swag Distributed			6

Event	Delta Township District Library	Date	Oct 2022 -Dec 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Pollution Isn't Prety Cards	25	25	0
Total Swag Distributed			0

Event	Enrichment Center	Date	Jan 2022 - March 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Event	Enrichment Center	Date	April 2022 - June 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25		25
Motor Oil Info Trifold	25		25
Green Infrastructure Trifold	25		25
Car Wash info Trifold	25		25
Lawn Care/Fertilizer Trifold	25		25
Pet Waste Trifold	25		25
Total Swag Distributed			150

Event	Enrichment Center	Date	July 2022 - Sept 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Event	Enrichment Center	Date	Oct 2022 -Dec 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	7	18
Motor Oil Info Trifold	25	22	3
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	23	2
Pet Waste Trifold	25	19	6
Total Swag Distributed			29

Event	Administration Buiding	Date	Jan 2022 - March 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0

Event	Administration Buiding	Date	April 2022 - June 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	17	8
Motor Oil Info Trifold	25	24	1
Green Infrastructure Trifold	25	23	2

Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	25	0
Total Swag Distributed			0

Car Wash info Trifold	25	22	3
Lawn Care/Fertilizer Trifold	25	24	1
Pet Waste Trifold	25	19	6
Total Swag Distributed			21

Event Administration Buiding **Date** July 2022 - Sept 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	22	3
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	14	11
Total Swag Distributed			14

Event Administration Buiding **Date** Oct 2022 -Dec 2022

Brochure/Swag Description	Starting Count	Ending Count	Distributed
Know your Watershed Trifold.	25	25	0
Motor Oil Info Trifold	25	25	0
Green Infrastructure Trifold	25	25	0
Car Wash info Trifold	25	25	0
Lawn Care/Fertilizer Trifold	25	25	0
Pet Waste Trifold	25	24	1
Total Swag Distributed			1

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #1A OUTFALL DELTA ADMIN

Date: 8/24/2021	Time: 2:30	Air Temp: 89°	Last rain date/time 8/12/2021 (48-72 hours of dry weather is required)
Screened By: Walter Kulaga			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 7710 W. SAGINAW Hwy. CANAL/SAGINAW

Latitude/State Plane: 13043642.005

Longitude/State Plane: 453 201.301

Cross-street: ADMINISTRATION DR/CANAL

Receiving Waterbody: WETLANDS – BENJAMIN DRAIN

DRY WEATHER FLOW PRESENTS?

☐ Yes, dry weather flow present

☑ Trace, insufficient flow to sample

☐ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check

☐ Not checked

☐ Left sand bag in channel

☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS

Odor	Floatables	Deposits/Stains	Vegetation	Structural
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

Comments: IN 2017 WATER WAS FLOWING. HAD TESTED AND FOUND TO COME FROM CONDISATE FOR THE AIR CONDITIONERS

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: # 1B FIRE STATION #1

Date: 8/24/2021	Time: 2:45	Air Temp: 89°	Last rain date/time 8/12/2021 (48-72 hours of dry weather is required)
Screened By: Walter Kulasa			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 811 CANAL Rd (FIRE STA #1)

Latitude/State Plane: 13043761.363

Longitude/State Plane: 453128.602

Cross-street: CANAL / SAGINAW

Receiving Waterbody: WETLANDS – BENJIMAN DRAIN

DRY WEATHER FLOW PRESENTS?

☐ Yes, dry weather flow present	☐ Standing Water
☐ Trace, insufficient flow to sample	☐ Submerged
☑ No dry weather flow present	☐ Inundated
☐ N/A	

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
- ☐ Not checked
- ☐ Left sand bag in channel
- ☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS

Odor	Floatables	Deposits/Stains	Vegetation	Structural
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: # 2A DELTA LIB (NORTH)

Date: 8/9/21 MON | Time: 2:15 | Air Temp: 86° | Last rain date/time 8/4/21 (48-72 hours of dry weather is required)

Screened By: Walter Kulaga

- ☐ Clear/Sunny
- ☑ Partly Cloudy
- ☐ Overcast
- ☐ Rain

LOCATION

Address/Description: DELTA LIBRARY 5130 DAVENPORT DR

Latitude/State Plane: 13,055,203.464

Longitude/State Plane: 454,894.219

Cross-street: ELMWOOD

Receiving Waterbody: BOLLMAN DAMON DRAIN

DRY WEATHER FLOW PRESENTS?

- ☐ Yes, dry weather flow present
- ☐ Trace, insufficient flow to sample
- ☑ No dry weather flow present
- ☐ N/A
- ☐ Standing Water
- ☐ Submerged
- ☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
- ☐ Not checked
- ☐ Left sand bag in channel
- ☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS

Odor	Floatables	Deposits/Stains	Vegetation	Structural
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: 2B DELTA LIB (SOUTH)

Date: 8/9/2021 (MON) Time: 2:18

Screened By: Walter Kulasa

Air Temp:

Last rain date/time 8/4/21
(48-72 hours of dry weather is required)

- ☐ Clear/Sunny
- ☑ Partly Cloudy
- ☐ Overcast
- ☐ Rain

LOCATION

Address/Description: 5130 DAVENPORT DR.

Latitude/State Plane: 13,055,304.894

Longitude/State Plane: 454,560.954

Cross-street: ELMWOOD DR

Receiving Waterbody: BOLLMAN DAMON DRAIN

DRY WEATHER FLOW PRESENTS?

- ☐ Yes, dry weather flow present
- ☑ Trace, insufficient flow to sample
- ☐ No dry weather flow present
- ☐ N/A
- ☐ Standing Water
- ☐ Submerged
- ☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
- ☐ Not checked
- ☐ Left sand bag in channel
- ☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS

Odor	Floatables	Deposits/Stains	Vegetation	Structural
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #5 SNOW Rd GROUND STORAGE

Date: 8/9/2021 MON	Time: 2:50	Air Temp: 86°	Last rain date/time 8/4/21 (48-72 hours of dry weather is required)
Screened By: Walter Kulpa			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 495 SNOW RD. (SNOW RD. GROUND STORAGE)

Latitude/State Plane: 13055 230.50

Longitude/State Plane: 449 393.43

Cross-street: MICHIGAN AVE / SNOW RD.

Receiving Waterbody: MICHIGAN AVE DRAIN

DRY WEATHER FLOW PRESENTS?

- ☐ Yes, dry weather flow present
- ☐ Trace, insufficient flow to sample
- ☑ No dry weather flow present
- ☐ N/A
- ☐ Standing Water
- ☐ Submerged
- ☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
- ☐ Not checked
- ☐ Left sand bag in channel
- ☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS				
Odor	**Floatables**	**Deposits/Stains**	**Vegetation**	**Structural**
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #6 FIRE STA #3

Date: 8/9/2021 MON	Time: 2:46	Air Temp: 86°	Last rain date/time 8/4/21 (48-72 hours of dry weather is required)
Screened By: Walter Kulaga			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 215 SNOW RD. (FIRE STA #3)

Latitude/State Plane: 13 055 225.89

Longitude/State Plane: 449 252.12

Cross-street: MICHIGAN AVE / SNOW RD.

Receiving Waterbody: MICHIGAN AVE. DRAIN

DRY WEATHER FLOW PRESENTS?

☐ Yes, dry weather flow present	☐ Standing Water
☐ Trace, insufficient flow to sample	☐ Submerged
☑ No dry weather flow present	☐ Inundated
☐ N/A	

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
- ☐ Not checked
- ☐ Left sand bag in channel
- ☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS

Odor	Floatables	Deposits/Stains	Vegetation	Structural
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #8 SNOW RD. ELEVATED TANK

Date: 8/9/2021 MON | Time: 2:40 | Air Temp: 86°

Last rain date/time 8/4/21 (48-72 hours of dry weather is required)

Screened By: Walter Kulaga

- ☐ Clear/Sunny
- ☑ Partly Cloudy
- ☐ Overcast
- ☐ Rain

LOCATION

Address/Description: 209 SNOW RD. (WATER TOWER @ SNOW RD)

Latitude/State Plane: ~~13054~~ 13055056.59

Longitude/State Plane: 447 860.21

Cross-street: SNOW RD. / ST. JOE

Receiving Waterbody: MICHIGAN AVE DR.

DRY WEATHER FLOW PRESENTS?

- ☐ Yes, dry weather flow present
- ☐ Trace, insufficient flow to sample
- ☑ No dry weather flow present
- ☐ N/A
- ☐ Standing Water
- ☐ Submerged
- ☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
- ☐ Not checked
- ☐ Left sand bag in channel
- ☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS				
Odor	**Floatables**	**Deposits/Stains**	**Vegetation**	**Structural**
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #10 SHARP PARK MH. @ VILLAGE GREEN APT.

Date: 8/9/2021 MON	Time: 2:30	Air Temp: 86°	Last rain date/time 8/4/21 (48-72 hours of dry weather is required)
Screened By: Walter Kulpa			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 5200 MALL DR. WEST (OVER FLOW FOR THE POND)

Latitude/State Plane: 13054085.74

Longitude/State Plane: 454 608.52

Cross-street: ELMWOOD / MALL DR. WEST

Receiving Waterbody: BOLLMAN DAMON DRAIN

DRY WEATHER FLOW PRESENTS?

☐ Yes, dry weather flow present

☑ Trace, insufficient flow to sample

☐ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check

☐ Not checked

☐ Left sand bag in channel

☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS				
Odor	**Floatables**	**Deposits/Stains**	**Vegetation**	**Structural**
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: # 14

Date: 8/19/21	Time: 9:45am	Air Temp: 79°	Last rain date/time 8/12/21 (48-72 hours of dry weather is required)
Screened By: Walter Kulaga			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 7812 W. Willow Hwy. (WATERS OPS)
Latitude/State Plane: 13042858.415
Longitude/State Plane: 459 131.416
Cross-street: Willow Hwy / CANAL RD.
Receiving Waterbody: OVER LAND 2800+FT. TO GRAND RIVER

DRY WEATHER FLOW PRESENTS?

☐ Yes, dry weather flow present	☐ Standing Water
☐ Trace, insufficient flow to sample	☐ Submerged
☑ No dry weather flow present	☐ Inundated
☐ N/A	

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
☐ Not checked
☐ Left sand bag in channel
☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS

Odor	Floatables	Deposits/Stains	Vegetation	Structural
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #15

Date: 8/19/21	Time: 10am	Air Temp: 79°	Last rain date/time 8/12/21 (48-72 hours of dry weather is required)
Screened By: Walter Kulasa			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 7812 W. Willow Hwy (WATERS OPS)

Latitude/State Plane: 13 042 438.043

Longitude/State Plane: 458 450.258

Cross-street: Willow Hwy / CANAL RD

Receiving Waterbody: OVER LAND 2800± FEET to GRAND RIVER TO MDOT DRAINAGE DITCH

DRY WEATHER FLOW PRESENTS?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check

☐ Not checked

☐ Left sand bag in channel

☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs---put in comments section.

DISCHARGE OBSERVATIONS

Odor	Floatables	Deposits/Stains	Vegetation	Structural
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #10

Date: 8/19/21	Time: 10:30am	Air Temp: 79°	Last rain date/time 8/12/21 (48-72 hours of dry weather is required)
Screened By: Walter Kulasa			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 7812 W. Willow Hwy (Waters Dps)
Latitude/State Plane: 13042 990.754
Longitude/State Plane: 458 154.441
Cross-street: Willow Hwy / CANAL RD.
Receiving Waterbody: OVER LAND 2800± FEET TO GRAND RIVER TO MDOT DRAINAGE DITCH.

DRY WEATHER FLOW PRESENTS?

- ☐ Yes, dry weather flow present
- ☐ Trace, insufficient flow to sample
- ☑ No dry weather flow present
- ☐ N/A
- ☐ Standing Water
- ☐ Submerged
- ☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
- ☐ Not checked
- ☐ Left sand bag in channel
- ☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS

Odor	Floatables	Deposits/Stains	Vegetation	Structural
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #17 Community Center

Date: 8/9/2021 (MON)	Time: 3:20	Air Temp: 86°	Last rain date/time 8/4/21 (48-72 hours of dry weather is required)
Screened By: Walter Kulaga			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 7550 W. Willow Hwy (Delta Community Center - Joe Drolett Center)

Latitude/State Plane: 13044154.111

Longitude/State Plane: 457945.098

Cross-street: Canal / W. Willow

Receiving Waterbody: Carlton Creek

DRY WEATHER FLOW PRESENTS?

☐ Yes, dry weather flow present	☐ Standing Water
☐ Trace, insufficient flow to sample	☐ Submerged
☑ No dry weather flow present	☐ Inundated
☐ N/A	

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
- ☐ Not checked
- ☐ Left sand bag in channel
- ☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS

Odor	Floatables	Deposits/Stains	Vegetation	Structural
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #18

Date: 8/19/21	Time: 9:00 am	Air Temp: 79°	Last rain date/time 8/12/21 (48-72 hours of dry weather is required)
Screened By: Walter Nelson			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 5717 MILLETT Hwy

Latitude/State Plane: 13 051 857.06

Longitude/State Plane: 434 407.14

Cross-street: Millett Hwy / SANDERS RD.

Receiving Waterbody: HUNTERS + BRANCHES DRAIN

DRY WEATHER FLOW PRESENTS?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
☐ Not checked
☐ Left sand bag in channel
☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs--put in comments section.

DISCHARGE OBSERVATIONS				
Odor	**Floatables**	**Deposits/Stains**	**Vegetation**	**Structural**
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

_____

_____

Comments: _____

_____

_____

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #20 DELTA MILLS CANOE LAUNCH

Date: 8/9/2021 (Mon)	Time: 3:10	Air Temp: 86°	Last rain date/time 8/4/21 (48-72 hours of dry weather is required)
Screened By: Walter Kulasa			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 6890 OLD RIVER TRAIL (DELTA MILLS CANOE LAUNCH)

Latitude/State Plane: 13047 540.038

Longitude/State Plane: 459 663.001

Cross-street: OLD RIVER TRAIL / WEBSTER

Receiving Waterbody: GRAND RIVER

DRY WEATHER FLOW PRESENTS?

- ☐ Yes, dry weather flow present
- ☑ Trace, insufficient flow to sample
- ☐ No dry weather flow present
- ☐ N/A
- ☐ Standing Water
- ☐ Submerged
- ☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
- ☐ Not checked
- ☐ Left sand bag in channel
- ☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS				
Odor	**Floatables**	**Deposits/Stains**	**Vegetation**	**Structural**
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

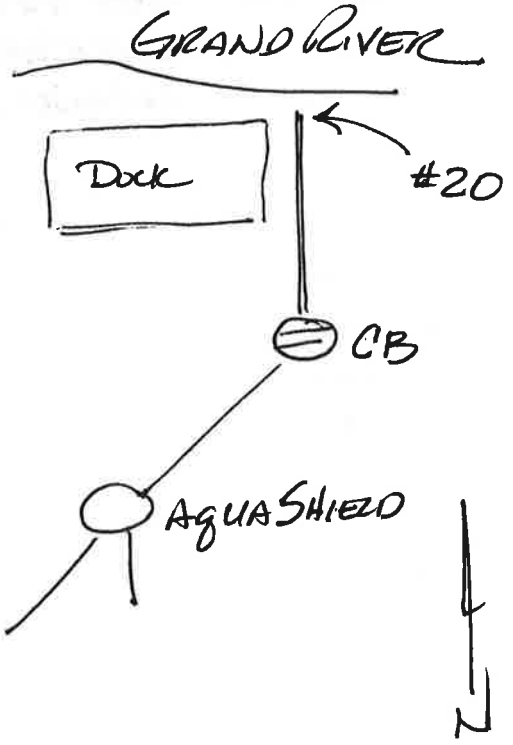
_____

_____

Comments: _____

_____

_____



OLD RIVER TR.

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: #21

Date: 8/9/21 MON	Time: 3:14	Air Temp: 86°	Last rain date/time 8/4/21 (48-72 hours of dry weather is required)
Screened By: Walter Nelson			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 7242 OLD RIVER TRAIL HUNTER'S ORCHARD PARK

Latitude/State Plane: 13 045 621.024

Longitude/State Plane: 459 627.630

Cross-street: OLD RIVER TRAIL / WEBSTER

Receiving Waterbody: GRAND RIVER

DRY WEATHER FLOW PRESENTS?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
☐ Not checked
☐ Left sand bag in channel
☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS				
Odor	**Floatables**	**Deposits/Stains**	**Vegetation**	**Structural**
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

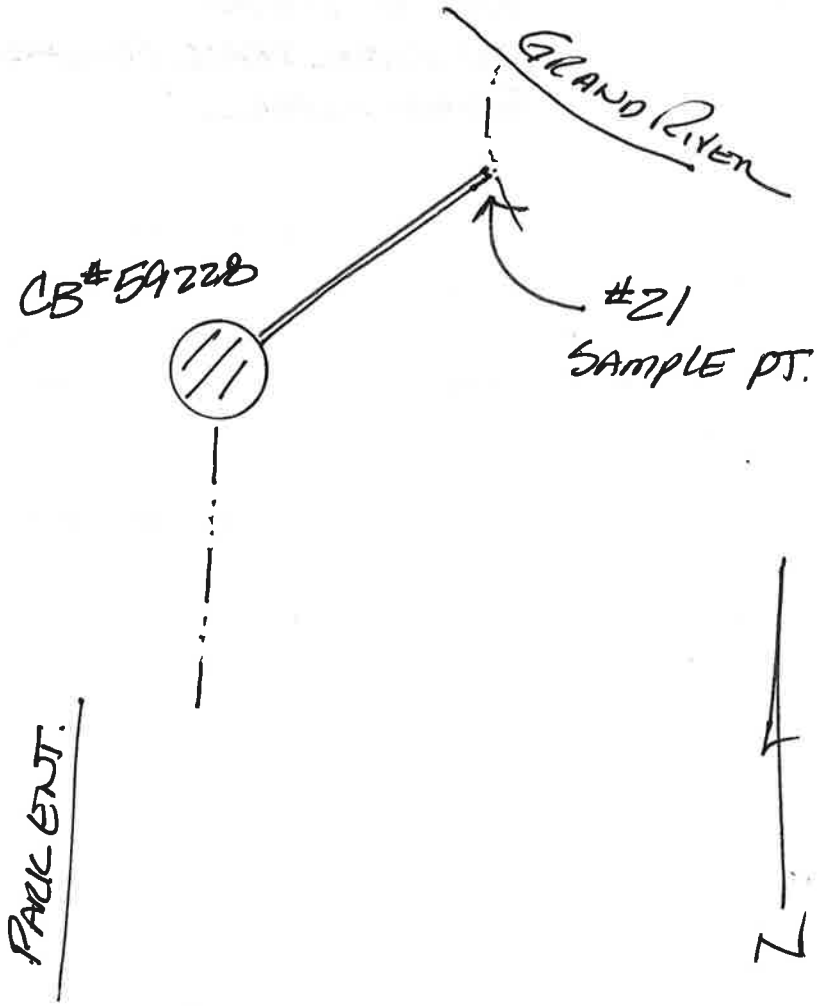
_____

_____

Comments: _____

_____

_____



OLD RIVER TRAIL

DELTA TOWNSHIP

DRY WEATHER SCREENING

MS4 (NPDES) Permit No. MI0059725 (Permit Cycle Feb 1, 2020 thru Oct 1, 2024)

Discharge/Structure ID: # 22

Date: 8/19/21	Time: 9:15	Air Temp: 79	Last rain date/time 8/12/21 (48-72 hours of dry weather is required)
Screened By: Walter Kulasa			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: 3110 CREYTS RD. (CREYTS GROUND STORAGE)

Latitude/State Plane: 13 048 319.152

Longitude/State Plane: 437 716.326

Cross-street: M-1177 HWY / CREYTS RD.

Receiving Waterbody: HUNTERS & BRANCHES

DRY WEATHER FLOW PRESENTS?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: Size (in) _____ Direction _____

Method: ☐ Area * Velocity

General Data		Travel Time Trials	
Depth (in)		#1 (sec)	
Dist Traveled (ft)		#2 (sec)	
Bucket Vol (l)		#3 (sec)	
Channel slope (%)		Avg (sec)	
Channel material		Vel (fps)	
Channel, n			

Flow: _____

Intermittent Flow Check
☐ Not checked
☐ Left sand bag in channel
☐ Removed sand bag, intermittent DWF present ☐ Yes ☐ No

If possible, describe frequency, duration, time of day of flow slugs—put in comments section.

DISCHARGE OBSERVATIONS				
Odor	**Floatables**	**Deposits/Stains**	**Vegetation**	**Structural**
☐ None	☐ None	☐ None	☐ None	☐ Normal
☐ Musty	☐ Trash	☐ Mineral	☐ Normal	☐ Cracking
☐ Sewage	☐ Sewage	☐ Sediment	☐ Excessive	☐ Spalling
☐ Rotten Egg	☐ Bacterial Sheen	☐ Oily	☐ Algae	☐ Corrosion
☐ Gas	☐ Oil Sheen	☐ Grease	☐ Slime	☐ Settlement
☐ Oil	☐ Suds	☐ Suds		☐ Staining
☐ Other	☐ Other	☐ Other	☐ Other	☐ Other

Description: _____

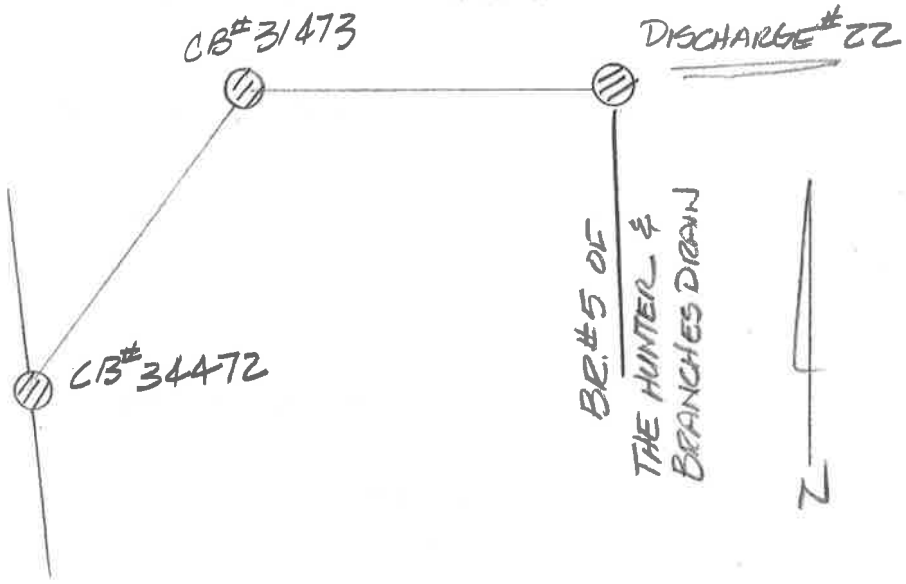
_____

_____

Comments: _____

_____

_____



DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#1A Outfall Delta Administration Building*			
Date: *7/19/2022*	Time: *1:19 PM*	Air Temp: *90 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *7710 W. Saginaw Highway. Canal/Saginaw*

Latitude/State Plane: *13043642.005*

Longitude/State Plan: *453201.301*

Cross-street: *Administration Drive/Canal*

Receiving Waterbody: *Wetlands - Benjiman Drain*

DRY WEATHER FLOW PRESENT?

☑ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☐ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *NA*

Size (in): *12"*

Flow Direction: *North*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *0.25"*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☐ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☑ Other	**Vegetation** ☐ None ☐ Normal ☐ Excessive ☑ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

_____

_____

_____

COMMENTS:

Slight flow, may be due to condensation from air conditioning.

_____

_____

FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#1A Outfall Delta Administration Building*			
Date: *11/15/2022*	Time: *3:45 PM*	Air Temp: *33.7 °F*	Last Rain Date/Time *Oct 31, 2022 (0.46")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short*			☐ Clear/Sunny ☐ Partly Cloudy ☑ Overcast ☐ Rain

LOCATION

Address/Description: *7710 W. Saginaw Highway. Canal/Saginaw*

Latitude/State Plane: *13043642.005*

Longitude/State Plan: *453201.301*

Cross-street: *Administration Drive/Canal*

Receiving Waterbody: *Wetlands - Benjiman Drain*

DRY WEATHER FLOW PRESENT?

☑ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☐ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *NA*

Size (in): *12"*

Flow Direction: *North*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *0.25"*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☐ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☑ Other	**Vegetation** ☐ None ☑ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

_____

_____

_____

COMMENTS:

Slight flow, buildup of algae on the pipe's bottom.

_____

_____

FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#1A Outfall Delta Administration Building*			
Date: *11/16/2022*	Time: *3:00 PM*	Air Temp: *33.1 °F*	Last Rain Date/Time *Oct 31, 2022 (0.46")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short*			☐ Clear/Sunny ☐ Partly Cloudy ☑ Overcast ☐ Rain

LOCATION

Address/Description: *7710 W. Saginaw Highway. Canal/Saginaw*

Latitude/State Plane: *13043642.005*

Longitude/State Plan: *453201.301*

Cross-street: *Administration Drive/Canal*

Receiving Waterbody: *Wetlands - Benjiman Drain*

DRY WEATHER FLOW PRESENT?

☑ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☐ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *NA*

Size (in): *12"*

Flow Direction: *North*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *0.25"*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☐ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☑ Other	**Vegetation** ☐ None ☑ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

_____

_____

_____

COMMENTS:

Slight flow, buildup of algae on the pipe's bottom. Sampling Results: E. coli - 150 MPN/100 mL pH - 7.8, Turbidity - 1.1 NTU, Ammonia - 0.25 mg/L, Surfactant - 0.25 mg/L

_____

FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#1B Fire Station #1*			
Date: *7/19/2022*	Time: *1:09 PM*	Air Temp: *90 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *811 Canal Road (Fire Station #1)*

Latitude/State Plane: *13043761.363*

Longitude/State Plan: *453128.602*

Cross-street: *Canal/Saginaw*

Receiving Waterbody: *Wetlands - Benjiman Drain*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☐ No dry weather flow present

☐ N/A

☑ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *Dual Wall HDPE*

Size (in): *14"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☐ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☑ Other	**Vegetation** ☐ None ☐ Normal ☐ Excessive ☑ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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COMMENTS:

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FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#2A Delta Library (North)*			
Date: *7/19/2022*	Time: *1:47 PM*	Air Temp: *91 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *Delta Library 5130 Davenport Drive*

Latitude/State Plane: *13055203.464*

Longitude/State Plan: *454894.219*

Cross-street: *Elmwood*

Receiving Waterbody: *Bollman Damon Drain*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☐ No dry weather flow present

☐ N/A

☑ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *Round Concrete*

Size (in): *14"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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COMMENTS:

Standing water in pipe, not flowing. May be due to air conditioning condensation.

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FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#2B Delta Library (South)*			
Date: *7/19/2022*	Time: *1:39 PM*	Air Temp: *90 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *Delta Library 5130 Davenport Drive*

Latitude/State Plane: *13055304.894*

Longitude/State Plan: *454560.954*

Cross-street: *Elmwood Drive*

Receiving Waterbody: *Bollman Damon Drain*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *Round Concrete Pipe*

Size (in): *15"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *Damp bottom of pipe*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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COMMENTS:

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FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#5 Snow Road Ground Storage*			
Date: *7/19/2022*	Time: *2:36 PM*	Air Temp: *90 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *495 Snow Road (Snow Road Ground Storage)*

Latitude/State Plane: *13055230.50*

Longitude/State Plan: *449393.43*

Cross-street: *Michigan Avenue/Snow Road*

Receiving Waterbody: *Michigan Avenue Drain*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *PVC*

Size (in): *---*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☐ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☑ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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COMMENTS:

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FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#6 Fire Station #3*			
Date: *7/19/2022*	Time: *2:34 PM*	Air Temp: *91 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *215 Snow Road (Fire Station #3)*

Latitude/State Plane: *13055225.89*

Longitude/State Plan: *449525.12*

Cross-street: *Michigan Avenue/Snow Road*

Receiving Waterbody: *Michigan Avenue Drain*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *PVC*

Size (in): *~ 6"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☐ None ☑ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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COMMENTS:

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FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)

Discharge/Structure ID: *#8 Snow Road Elevated Tank*

Date:	Time:	Air Temp:	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
7/19/2022	*2:43 PM*	*91 °F*	☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain
Screened By: *Emily Short and Meghan Keppler*			

LOCATION

Address/Description: *209 Snow Road (Water Tower at Snow Road)*

Latitude/State Plane: *13055056.59*

Longitude/State Plan: *447860.21*

Cross-street: *Snow Road/St. Joe Highway*

Receiving Waterbody: *Michigan Avenue Drain*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☐ No dry weather flow present

☐ N/A

☑ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *Round Concrete Pipe*

Size (in): *~ 12"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☐ None ☑ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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COMMENTS:

Buildup looks like mineral buildup. Some water was sitting in the bottom of structure and in pipe.

_____

FIELD PHOTO(S):

Outfall #8

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#10 Sharp Park Manhole at Village Green Apartments*			
Date: *7/19/2022*	Time: *2:00 PM*	Air Temp: *91 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *5200 Mall Drive West (Overflow for the pond)*

Latitude/State Plane: *13054085.74*

Longitude/State Plan: *454608.52*

Cross-street: *Elmwood/Mall Drive West*

Receiving Waterbody: *Bollman Damon Drain*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *PVC*

Size (in): *~ 6"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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COMMENTS:

Inspected junction to the south of pond where pipe from pond comes in. No flow from pipe into junction. Other pipes within junction were flowing.

_____

FIELD PHOTO(S):

Outfall #10 (Difficult to see in photo due to shadows. Was not flowing.)

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#14*			
Date: *7/19/2022*	Time: *12:23 PM*	Air Temp: *86 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *7812 W. Willow Highway (Water Operations)*

Latitude/State Plane: *13042858.415*

Longitude/State Plan: *459131.416*

Cross-street: *Willow Highway/Canal Road*

Receiving Waterbody: *Overland 2800+ feet to the Grand River*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *PVC*

Size (in): *12"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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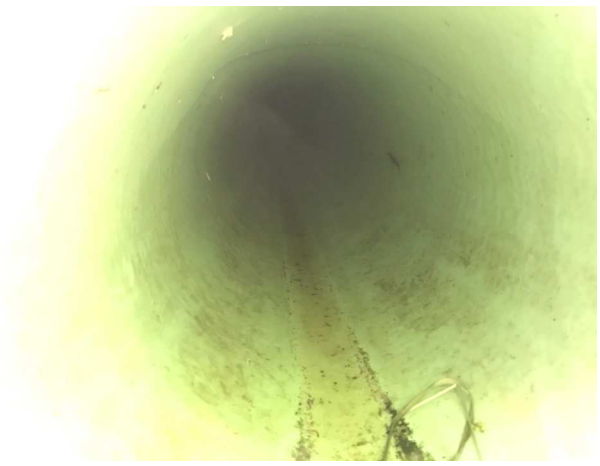
COMMENTS:

Some dampness in bottom of pipe.

_____

_____

FIELD PHOTO(S):



DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#15*			
Date: *7/19/2022*	Time: *12:27 PM*	Air Temp: *86 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *7812 W. Willow Highway (Water Operations)*

Latitude/State Plane: *13042438.043*

Longitude/State Plan: *458450.258*

Cross-street: *Willow Highway/Canal Road*

Receiving Waterbody: *Overland 2800+ feet to the Grand River to MDOT Drainage Ditch*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☐ No dry weather flow present

☐ N/A

☑ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *PVC*

Size (in): *12"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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COMMENTS:

Pipe is in good condition. Some standing water.

_____

_____

FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#16*			
Date: *7/19/2022*	Time: *12:31 PM*	Air Temp: *86 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *7812 W. Willow Highway (Water Operations)*

Latitude/State Plane: *13042990.754*

Longitude/State Plan: *458154.441*

Cross-street: *Willow Highway/Canal Road*

Receiving Waterbody: *Overland 2800+ feet to the Grand River to MDOT Drainage Ditch*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *HDPE*

Size (in): *12"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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COMMENTS:

Pipe is in good condition. Basin is dry.

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FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#17 Community Center*			
Date: *7/19/2022*	Time: *12:01 PM*	Air Temp: *85 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *7550 W. Willow Highway (Delta Community Center/Joe Drolett Center)*

Latitude/State Plane: *13044154.111*

Longitude/State Plan: *457945.098*

Cross-street: *Canal/W. Willow*

Receiving Waterbody: *Carrier Creek*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: ---

Size (in): ---

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

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COMMENTS:

No flow. Standing water in structure.

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FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#18*			
Date: *7/19/2022*	Time: *3:17 PM*	Air Temp: *85 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *5717 Millet Highway*

Latitude/State Plane: *13051857.06*

Longitude/State Plan: *436407.16*

Cross-street: *Millett Highway/Sanders Road*

Receiving Waterbody: *Hunter and Branches Drain*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: ---

Size (in): ---

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

_____

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COMMENTS:

_____

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_____

FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#19 Willow Canoe Launch*			
Date: *7/19/2022*	Time: *12:45 PM*	Air Temp: *90 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *6555 Willow Highway, Grand Ledge, MI (Willow Canoe Launch)*

Latitude/State Plane: *42.756937°*

Longitude/State Plan: *-84.709943°*

Cross-street: *Willow Highway*

Receiving Waterbody: *Grand River*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *HDPE*

Size (in): *12"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

_____

_____

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COMMENTS:

_____

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FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#20 Delta Mills Canoe Launch*			
Date: *7/19/2022*	Time: *11:24 AM*	Air Temp: *85 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *6890 Old River Trail (Delta Mills Canoe Launch)*

Latitude/State Plane: *13047540.038*

Longitude/State Plan: *459663.001*

Cross-street: *Old River Trail/Webster*

Receiving Waterbody: *Grand River*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *Corrugated HDPE*

Size (in): *15"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☐ None ☐ Mineral ☑ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☐ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☑ Settlement ☐ Staining ☐ Other

DESCRIPTION:

_____

_____

_____

COMMENTS:

Sediment is blocking a good part of the outlet pipe. Likely due to the influence of the Grand River.

_____

FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#21*			
Date: *7/19/2022*	Time: *11:37 AM*	Air Temp: *85 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☑ Clear/Sunny ☐ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *7242 Old River Trail/Hunter's Orchard Park*

Latitude/State Plane: *13045621.024*

Longitude/State Plan: *459627.630*

Cross-street: *Old River Trail/Webster*

Receiving Waterbody: *Grand River*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: *HDPE*

Size (in): *8"*

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

No flow in pipe, good condition. Long swale from pipe to river.

COMMENTS:

FIELD PHOTO(S):

DRY WEATHER SCREENING

MS4 (NPDES) PERMIT NO. MI0059725 (PERMIT CYCLE FEB 1, 2020 THRU OCT 1, 2024)			
Discharge/Structure ID: *#22*			
Date: *7/19/2022*	Time: *2:57 PM*	Air Temp: *85 °F*	Last Rain Date/Time *July 15, 2022 (0.48")* (48 – 72 hours of dry weather is required)
Screened By: *Emily Short and Meghan Keppler*			☐ Clear/Sunny ☑ Partly Cloudy ☐ Overcast ☐ Rain

LOCATION

Address/Description: *3110 Creyts Road (Creyts Ground Storage)*

Latitude/State Plane: *13048319.152*

Longitude/State Plan: *437716.326*

Cross-street: *Millett Highway/Creyts Road*

Receiving Waterbody: *Hunter and Branches Drain*

DRY WEATHER FLOW PRESENT?

☐ Yes, dry weather flow present

☐ Trace, insufficient flow to sample

☑ No dry weather flow present

☐ N/A

☐ Standing Water

☐ Submerged

☐ Inundated

FLOW MEASUREMENTS

Pipe Sampled: ---

Size (in): ---

Flow Direction: *NA*

Method:

☐ Area/Velocity

☐ Other

General Data:

Depth (in) *NA*

Dist Traveled (ft) *NA*

Bucket Vol (l) *NA*

Channel Slope (%) *NA*

Channel Material *NA*

Channel, n *NA*

Travel Time Trials:

#1 (sec) *NA*

#2 (sec) *NA*

#3 (sec) *NA*

Avg (sec) *NA*

Vel (fps) *NA*

DISCHARGE OBSERVATIONS				
Odor ☑ None ☐ Musty ☐ Sewage ☐ Rotten Egg ☐ Gas ☐ Oil ☐ Other	**Floatables** ☑ None ☐ Trash ☐ Sewage ☐ Bacterial Sheen ☐ Oil Sheen ☐ Suds ☐ Other	**Deposits/Stains** ☑ None ☐ Mineral ☐ Sediment ☐ Oily ☐ Grease ☐ Suds ☐ Other	**Vegetation** ☑ None ☐ Normal ☐ Excessive ☐ Algae ☐ Slime ☐ Other	**Structural** ☑ Normal ☐ Cracking ☐ Spalling ☐ Corrosion ☐ Settlement ☐ Staining ☐ Other

DESCRIPTION:

_____

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_____

COMMENTS:

_____

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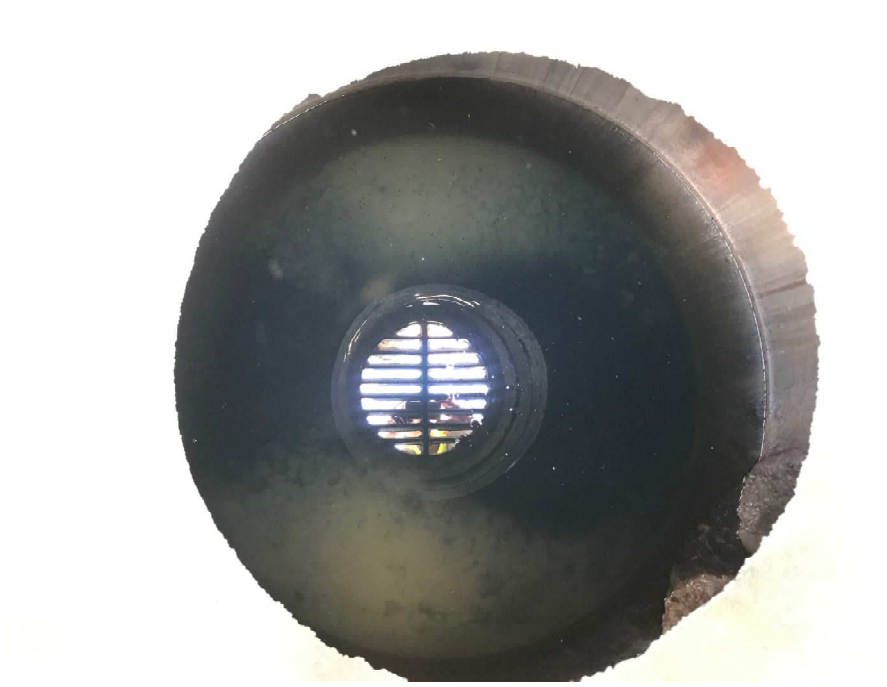
_____

FIELD PHOTO(S):



DELTA TOWNSHIP

Engineering Department

(517) 323-8540

TO: **Supervisor Kenneth R. Fletcher and the Delta Township Board**

FROM: **Ernest A. West, P.E., Township Engineer**

DATE: **March 18, 2022**

SUBJECT: **Authorized Public Agency (APA)**
Soil Erosion and Sedimentation Control
Rescind APA Designation

Background

In January 2007, The Township Board adopted the Soil Erosion and Sedimentation Control and the Michigan Department of Transportation Soil Erosion & Sedimentation Control Measures and authorized the Township Engineer to make an application to Michigan Department of Environmental Quality (now known as Michigan Department of Environmental, Great Lakes, and Energy - EGLE) to designate Delta Township as an Authorized Public Agency (APA). The APA designation allows a governmental organization to design, inspect and enforce the soil erosion control measure on its own projects, but not those of other project owners or developers.

In August 2007, the Township Board approved and adopted the soil erosion and sedimentation control procedures as submitted to EGLE in May 2007, for its own use as described in Part 91, Soil Erosion and Sedimentation Control of the Natural Resources and Environmental Protection Agency Act, PA 451 1994, as amended (NREPA). The actions taken by the Township in 2007 to save the permitting and inspection costs levied by the Eaton County Drain Commissioner's Office (ECDO) to provide this function on the Township's projects and to take advantage available staff resources in the engineering department, who subsequently obtained the appropriate certification from the state.

Moving Forward

Given the current heavy workload of large complex projects, which are anticipated to continue for several years and the pending retirements of the two certified staff in May of this year, I recommend that the Township rescind the APA designation from 2007. While, we could get new staff certified, there is very little benefit to the Township.

The ECDO has a well-established Soil Erosion and Sedimentation Control Program that already performs this function on all private development projects in the Township. Additionally, the ECDO also reviews, at Township's cost, all Township projects involving site development as part of the Township's site plan review process. The cost savings to the Township to keep the APA designation compared to the effort of enforcing these standards on our own projects would be minimal. Larger Township projects would still require us to utilize the Contractor to provide a certified stormwater operator, at Township cost, due to staffing limitations, to complete the required inspections and reports required after each rain event.

Rescinding the APA designation would not have a substantial impact on the design or construction cost of any Township project, as the standards are the same that the ECDO is tasked with enforcing. This change would allow more time for engineering staff to focus on other critical aspects of our projects and avoid duplication of effort or expertise within the established site development project process in the Township.

EGLE has advised the Engineering Department that to rescind the APA designation the Delta Township Board needs to formally rescind the previous Board resolution that created the APA designation originally. If, at a future time, the Township wishes to re-establish this designation, we would simply need to pass another resolution, designate staff to perform this function and obtain the appropriate certifications for those staff.

Staff Recommendation

The following motion is offered for your consideration:

> ***"I move that the Delta Township Board rescind the January 16, 2007 resolution designating the Township as the Authorized Public Agency for Soil Erosion and Sedimentation Control, and that the Delta Township Board rescind the August 6, 2007 resolution adopting the soil erosion and sedimentation control procedures as submitted to the DEQ (now EGLE). I further move that the Soil Erosion and Sedimentation Control compliance on Township projects shall follow the permitting process of the Eaton County Drain Commissioner's Office, and that the Township Manager is authorized to sign any necessary documents on behalf of the Township."***

Staff will attend the March 21, 2022 Township Board Meeting to answer any questions or address any concerns of the Board. If there any questions in the interim, please let us know. Thank you.

PASSAGE OF A RESOLUTION

The following resolution was adopted by the Township Board of the Charter Township of Delta at its regular meeting on March 21, 2022:

6. Authorized Public Agency (APA) Soil Erosion and Sedimentation Control Rescind APA Designation

TRUSTEE CASCARILLA MOVED THAT THE DELTA TOWNSHIP BOARD RESCIND THE JANUARY 16, 2007 RESOLUTION DESIGNATING THE TOWNSHIP AS THE AUTHORIZED PUBLIC AGENCY FOR SOIL EROSION AND SEDIMENTATION CONTROL, AND THAT THE DELTA TOWNSHIP BOARD RESCIND THE AUGUST 6, 2007 RESOLUTION ADOPTING THE SOIL EROSION AND SEDIMENTATION CONTROL PROCEDURES AS SUBMITTED TO THE DEQ (NOW EGLE). I FURTHER MOVE THAT THE SOIL EROSION AND SEDIMENTATION CONTROL COMPLIANCE ON TOWNSHIP PROJECTS SHALL FOLLOW THE PERMITTING PROCESS OF THE EATON COUNTY DRAIN COMMISSIONER'S OFFICE, AND THAT THE TOWNSHIP MANAGER IS AUTHORIZED TO SIGN ANY NECESSARY DOCUMENTS ON BEHALF OF THE TOWNSHIP.

TREASURER FEDEWA SUPPORTED THE MOTION. MOTION PASSED 6-0.

CHARTER TOWNSHIP OF DELTA

Mary R Clark

MARY R. CLARK, TOWNSHIP CLERK

cc: Engineering

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

May 11, 2017

Timothy S. Hogg
6970 Aberdeen Drive
Dimondale, MI 48821

Your certificate of training for the Soil Erosion and Sedimentation (SESC) Plan Review and Design (PRD) has been renewed.

Congratulations on behalf of the Director of the Michigan Department of Environmental Quality.

Your certificate number is SE/C 00824 Please retain the certificate below as your record of training completion.

Please note that this certificate is valid until 7/1/2022.

If you have any questions about this renewal, please call Bruce Lack at (517) 284-5486.

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

This is to certify that

Timothy S. Hogg

is qualified under the statute governing Soil Erosion and Sedimentation Control Training to perform duties under the following classification:

SESC PLAN REVIEW AND DESIGN

CERTIFICATE NO. SE/C 00824 EXPIRES 7/1/2022

Issued by the Director of the Department of Environmental Quality
Under Authority of Act 451 P.A. 1994, Part 91 as amended

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

May 11, 2017

Walter C. Kulasa
12980 Kingsgate Way
Grand Ledge, MI 48837

Your certificate of training for the Soil Erosion and Sedimentation (SESC) Plan Review and Design (PRD) has been renewed.

Congratulations on behalf of the Director of the Michigan Department of Environmental Quality.

Your certificate number is SE/C 00817 Please retain the certificate below as your record of training completion.

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DEPARTMENT OF ENVIRONMENTAL QUALITY

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Issued by the Director of the Department of Environmental Quality
Under Authority of Act 451 P.A. 1994, Part 91 as amended

GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE
May 17, 2022

LIESL EICHLER CLARK
DIRECTOR

VIA E-MAIL

Mary R. Clark, Township Clerk
Delta Charter Township
7710 West Saginaw Highway
Lansing, Michigan 48917

Dear Mary:

SUBJECT: Delta Charter Township Authorized Public Agency
Soil Erosion and Sedimentation Control (SESC) Program Status Change

Delta Charter Township recently rescinded its SESC Program and as a result, its Authorized Public Agency (APA) Program status authorized under the authority of Part 91, SESC, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), has been rescinded. Delta Charter Township no longer has authorization under Part 91 of the NREPA to administer the SESC Program within its jurisdiction.

Please be advised that effective immediately, the County Enforcing Agency housed in the Eaton County Drain Office will be responsible for administering and enforcing Part 91 of the NREPA for all projects managed by Delta Charter Township.

If you have any questions or concerns, please contact me at KorytoE2@michigan.gov; 517-282-6723; or Department of Environment, Great Lakes, and Energy, Water Resources Division, Lansing District Office, 525 West Allegan Street, Constitution Hall, 1st Floor South, P.O. Box 30242, Lansing, Michigan 48909-7742.

Sincerely,

Emily Koryto
Lansing District Office
Water Resources Division

ek/sea

cc: Jennifer Bernardin, Delta Charter Township (electronic)
Eric Deibel, Eaton County Drain Office (electronic)
Cheri Meyer, EGLE, WRD

DELTA TOWNSHIP

Engineering Department

(517) 323-8540

TO: **Supervisor Kenneth R. Fletcher and the Delta Township Board**

FROM: **Ernest A. West, P.E., Township Engineer**

DATE: **March 18, 2022**

SUBJECT: **Authorized Public Agency (APA)**
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Given the current heavy workload of large complex projects, which are anticipated to continue for several years and the pending retirements of the two certified staff in May of this year, I recommend that the Township rescind the APA designation from 2007. While, we could get new staff certified, there is very little benefit to the Township.

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TREASURER FEDEWA SUPPORTED THE MOTION. MOTION PASSED 6-0.

CHARTER TOWNSHIP OF DELTA

Mary R Clark

MARY R. CLARK, TOWNSHIP CLERK

cc: Engineering

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

May 11, 2017

Timothy S. Hogg
6970 Aberdeen Drive
Dimondale, MI 48821

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STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

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SESC PLAN REVIEW AND DESIGN

CERTIFICATE NO. SE/C 00824 EXPIRES 7/1/2022

Issued by the Director of the Department of Environmental Quality
Under Authority of Act 451 P.A. 1994, Part 91 as amended

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

May 11, 2017

Walter C. Kulasa
12980 Kingsgate Way
Grand Ledge, MI 48837

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STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

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SESC PLAN REVIEW AND DESIGN

CERTIFICATE NO. SE/C 00817 EXPIRES 7/1/2022

Issued by the Director of the Department of Environmental Quality
Under Authority of Act 451 P.A. 1994, Part 91 as amended

From:	Gabe Ruiz
To:	Jennifer Bernardin
Subject:	FW: Delta Twp. Aqua Swirls & Oil Separator Manholes
Date:	Thursday, March 9, 2023 2:18:59 PM

From: Gabe Ruiz
Sent: Tuesday, July 19, 2022 2:43 PM
To: Rick Kane <RKane@deltami.gov>
Cc: Mike McKane <MMcKane@deltami.gov>
Subject: Delta Twp. Aqua Swirls & Oil Separator Manholes

Rick,

Quick update-
July 19, 2022 our vactor truck cleaned the aqua swirls manholes at Delta Mills Park and Willow Park. Water. Dirt, sand and organic material (leaves & sticks) were removed from the aqua swirls manholes.
Also, we vactor truck cleaned the oil separator manholes at Fire Station #1, Fire Station #3, and the Delta Parks Dept. garage oil separator manhole. Water, dirt, sand and rocks were removed from the oil separator manholes.
All material removed from manholes at these five locations were taken for disposal to the Delta Twp. Utilities WWTP (7000 W. Willow Hwy.). The vactor truck debris tank was dewatered (approx. 2,000 gal.) into a WWTP sanitary manhole, and solids unloaded (3 yd.) onto our debris drying box.

Thanks.

From: Rick Kane <RKane@deltami.gov>
Sent: Thursday, June 24, 2021 8:16 AM
To: Ernie West <EWest@deltami.gov>
Cc: Jennifer Bernardin <JBernardin@deltami.gov>
Subject: FW: Delta Twp. Aqua Swirls & Oil Separator Manholes

Ernie,

See below for storm water structure cleaning. We can create more detailed reporting if you need going forward.

Thanks,
Rick

From: Gabe Ruiz <GRuiz@deltami.gov>
Sent: Thursday, June 24, 2021 8:08 AM
To: Rick Kane <RKane@deltami.gov>
Subject: Delta Twp. Aqua Swirls & Oil Separator Manholes

Rick,

Quick update - On June 2, 2021 our vactor truck cleaned the aqua swirls manholes at Delta Mills Park and Willow Park. Water, dirt, sand and organic material (leaves & sticks) was removed from the aqua swirls manholes. Also, we vactor truck cleaned the oil separator manholes at Fire Station #1, Fire Station #3, and the Delta Parks Dept. Garage oil separator manhole. Water, dirt, sand and rocks was removed from the oil separator manholes.
All material removed from manholes at these five locations were taken for disposal to the Delta Twp. Utilities WWTP (7000 W. Willow Hwy.). The vactor truck debris tank was dewatered (approx. 2,500 gal.) into a WWTP sanitary manhole, and solids unloaded (3 yd.) onto our debris drying box.

Thanks.

From:	Gabe Ruiz
To:	Jennifer Bernardin
Subject:	FW: Delta Twp. Aqua Swirls & Oil Separator Manholes
Date:	Tuesday, June 14, 2022 2:33:08 PM
Attachments:	image001.png

From: Gabe Ruiz
Sent: Tuesday, June 14, 2022 2:33 PM
To: Rick Kane <RKane@deltami.gov>; Mike McKane <MMcKane@deltami.gov>
Subject: RE: Delta Twp. Aqua Swirls & Oil Separator Manholes

Yes, last year I put on our annual preventative maintenance schedule.

I have paper prints of Fire Stations #1 & #3.
Jennifer, I know the locations of aqua swirls manholes at Delta Mills Park, Willow Park and Delta Parks Garage, but if you have them in PDf please email to me.
Thanks.

From: Rick Kane
Sent: Tuesday, June 14, 2022 1:22 PM
To: Mike McKane <MMcKane@deltami.gov>; Gabe Ruiz <GRuiz@deltami.gov>
Subject: FW: Delta Twp. Aqua Swirls & Oil Separator Manholes

Please see below, this will be an annual cleaning event.

Thanks,
Rick

From: Jennifer Bernardin <JBernardin@deltami.gov>
Sent: Tuesday, June 14, 2022 1:07 PM
To: Rick Kane <RKane@deltami.gov>
Subject: RE: Delta Twp. Aqua Swirls & Oil Separator Manholes

Rick,

I need to do this again in 2022. I don't know what maps Walt sent you but I will find out. It is the same areas to clean, same documentation sent back to us.

Jennifer Bernardin
Engineering Project Coordinator
Delta Township
7710 W. Saginaw Hwy
Lansing, MI 48917

jbernardin@deltami.gov
www.deltami.gov
P: (517) 816-8280

I AM DELTA

From: Rick Kane <RKane@deltami.gov>
Sent: Thursday, June 24, 2021 8:16 AM
To: Ernie West <EWest@deltami.gov>
Cc: Jennifer Bernardin <JBernardin@deltami.gov>
Subject: FW: Delta Twp. Aqua Swirls & Oil Separator Manholes

Ernie,

See below for storm water structure cleaning. We can create more detailed reporting if you need going forward.

Thanks,
Rick

From: Gabe Ruiz <GRuiz@deltami.gov>
Sent: Thursday, June 24, 2021 8:08 AM
To: Rick Kane <RKane@deltami.gov>
Subject: Delta Twp. Aqua Swirls & Oil Separator Manholes

Rick,

Quick update - On June 2, 2021 our vactor truck cleaned the aqua swirls manholes at Delta Mills Park and Willow Park. Water, dirt, sand and organic material (leaves & sticks) was removed from the aqua swirls manholes. Also, we vactor truck cleaned the oil separator manholes at Fire Station #1, Fire Station #3, and the Delta Parks Dept. Garage oil separator manhole. Water, dirt, sand and rocks was removed from the oil separator manholes.
All material removed from manholes at these five locations were taken for disposal to the Delta Twp. Utilities WWTP (7000 W. Willow Hwy.). The vactor truck debris tank was dewatered (approx. 2,500 gal.) into a WWTP sanitary manhole, and solids unloaded (3 yd.) onto our debris drying box.

Thanks.

From:	Gabe Ruiz
To:	Jennifer Bernardin
Subject:	FW: Delta Twp. Aqua Swirls & Oil Separator Manholes
Date:	Thursday, March 9, 2023 2:18:59 PM

From: Gabe Ruiz
Sent: Tuesday, July 19, 2022 2:43 PM
To: Rick Kane <RKane@deltami.gov>
Cc: Mike McKane <MMcKane@deltami.gov>
Subject: Delta Twp. Aqua Swirls & Oil Separator Manholes

Rick,

Quick update-
July 19, 2022 our vactor truck cleaned the aqua swirls manholes at Delta Mills Park and Willow Park. Water. Dirt, sand and organic material (leaves & sticks) were removed from the aqua swirls manholes.
Also, we vactor truck cleaned the oil separator manholes at Fire Station #1, Fire Station #3, and the Delta Parks Dept. garage oil separator manhole. Water, dirt, sand and rocks were removed from the oil separator manholes.
All material removed from manholes at these five locations were taken for disposal to the Delta Twp. Utilities WWTP (7000 W. Willow Hwy.). The vactor truck debris tank was dewatered (approx. 2,000 gal.) into a WWTP sanitary manhole, and solids unloaded (3 yd.) onto our debris drying box.

Thanks.

Catch Basin/Manhole Cleaning 2021-2022

Facility Name	Date
Catch Basin 26155	8/28/2021
Catch Basin 3272	8/28/2021
Catch Basin 3273	8/28/2021
Catch Basin 5532	8/28/2021
Catch Basin 29357	8/28/2021
Catch Basin 2322	8/28/2021
Catch Basin 29354	8/28/2021
Catch Basin 2326	8/28/2021
Catch Basin 2327	8/28/2021
Catch Basin 29358	8/28/2021
Catch Basin 2261	8/28/2021
Catch Basin 2262	8/28/2021
Catch Basin 2261 (925 S. Canal Rd)	8/28/2021

Note: All catch basin contents were disposed of at M & K Jetting and Televising facility at 1044 Toro Dr Jackson, MI 49201. We removed approximately 500 gallons and there were no issues found

Catch Basin 26155	8/12/2022
Catch Basin 3272	8/12/2022
Catch Basin 3273	8/12/2022
Catch Basin 5532	8/12/2022
Catch Basin 29357	8/12/2022
Catch Basin 2322	8/12/2022
Catch Basin 29354	8/12/2022
Catch Basin 2326	8/12/2022
Catch Basin 2327	8/12/2022
Catch Basin 29358	8/12/2022
Catch Basin 2261	8/12/2022
Catch Basin 2262	8/12/2022
Catch Basin 2261 (925 S. Canal Rd)	8/12/2022

Note: All catch basin contents were disposed of at M & K Jetting and Televising facility at 1044 Toro Dr Jackson, MI 49201. We removed approximately 500 gallons and there were no issues found

Parking Lot Sweeping 2021 - 2022

Facility Name	Address	Date
Delta Township Administrative Complex & Delta Fire Station No. 1	7710 W. Saginaw Hwy. & 811 N. Canal Rd.	10/9/2021
Delta Township District Library	5130 Davenport Dr.	10/9/2021
Snow Rd. Ground Storage & Delta Fire Station No. 3	209 Snow Rd. Hwy. & 215 Snow Rd.	10/9/2021
Delta Enrichment Center	4538 Elizabeth Rd.	10/9/2021
Player's Club Park	925 S. Canal Rd.	10/9/2021
Sharp Park	1401 Elwood Rd.	10/9/2021

Note: Sweeping waste was dumped at the landfill per Kyle Harkins, Parking Lot Division Superintendent

Delta Township Administrative Complex & Delta Fire Station No. 1	7710 W. Saginaw Hwy. & 811 N. Canal Rd.	5/27/2022
Delta Township District Library	5130 Davenport Dr.	5/27/2022
Snow Rd. Ground Storage & Delta Fire Station No. 3	209 Snow Rd. Hwy. & 215 Snow Rd.	5/27/2022
Delta Enrichment Center	4538 Elizabeth Rd.	5/27/2022
Player's Club Park	925 S. Canal Rd.	5/27/2022
Sharp Park	1401 Elwood Rd.	5/27/2022

Note: Sweeping waste was dumped at the landfill per Kyle Harkins, Parking Lot Division Superintendent

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #22 Owner Change since last inspection? Y (N)

Location: 42.700758° -84.645834°

Owner Name: Delta Township

Address: 3110 Creyts Road (Creyts Ground Storage) Phone Number NA

Site Status: Site is in good condition.

Date: 7/19/2022 Time: 2:57 PM Site Conditions: Site is in good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☐ Dry Detention Pond ☑ Other Swale with underdrain.

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	Yes, vegetation is healthy.
Erosion on embankment?	Y	N	No erosion.
Animal burrows in embankment?	Y	N	No animal burrows.
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	Drains are functional, not blocked.
Leaks or seeps on embankment?	Y	N	No.
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	*Y*	*N*	*NA*
Erosion in/around emergency spillway?	*Y*	*N*	*NA*
Other (describe)	*Y*	*N*	*NA*
Riser and Principal Spillway			
Low-flow orifice functional?	*Y*	*N*	*NA*
Trash rack (Debris removal needed? Corrosion noted?)	*Y*	*N*	*NA*
Sediment buildup in riser?	*Y*	*N*	*NA*
Concrete/masonry condition (Cracks or displacement? Spalling?)	*Y*	*N*	*NA*
Pipe in good condition?	*Y*	*N*	*NA*
Outfall channel functional, not eroding?	*Y*	*N*	*NA*
Other (describe)	*Y*	*N*	*NA*
Sediment Forebays			
Sedimentation description	*Y*	*N*	*NA*
Sediment cleanout needed (over 50% full)	*Y*	*N*	*NA*
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	*Y*	*N*	*NA*
Visible pollution?	*Y*	*N*	*NA*

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	Y	N	NA
Erosion at outfalls into pond?	Y	N	NA
Headwalls and endwalls in good condition?	Y	N	NA
Encroachment into pond or easement area by other activities?	Y	N	NA
Evidence of sediment accumulation?	Y	N	NA
Dry Pond Areas (if applicable)			
Vegetation adequate?	Y	N	Vegetation growth is adequate.
Undesirable vegetation or woody plant growth?	Y	N	No undesirable growth observed.
Excessive sedimentation?	Y	N	No excessive sediments in swale area.
Hazards			
Have there been complaints from residents?	Y	N	No.
Public hazards noted?	Y	N	No.

PHOTO LOG

Figure 1 - Swale area near water storage area.

Figure 2 - Outlet structure for swale area. Underdrain flows to structure pictured.

Figure 3 - Swale area near water storage facility. Structure is located where dot says "Discharge #22."

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #1A, 1B Outfall Delta Administration Building Owner Change since last inspection? Y (N)

Location: 42.743243° -84.663390°

Owner Name: Delta Township

Address: 7710 W. Saginaw Highway. Canal/Saginaw Phone Number NA

Site Status: Good Condition

Date: 7/19/2022 Time: 1:19 PM Site Conditions: Good Condition

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☐ Dry Detention Pond ☑ Other Wetland Complex

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	Maintenance is healthy. Not causing backups in flow, flooding, etc.
Erosion on embankment?	Y	N	None.
Animal burrows in embankment?	Y	N	None observed.
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	Drains are flowing without blockage.
Leaks or seeps on embankment?	Y	N	None observed.
Slope protection failure functional?	Y	N	Slope is protected.

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	*Y*	*N*	*NA*
Erosion in/around emergency spillway?	*Y*	*N*	*NA*
Other (describe)	*Y*	*N*	*NA*
Riser and Principal Spillway			
Low-flow orifice functional?	*Y*	*N*	*NA*
Trash rack (Debris removal needed? Corrosion noted?)	*Y*	*N*	*Trash rack(s) is clear, No corrosion. No debris buildup.*
Sediment buildup in riser?	*Y*	*N*	*NA*
Concrete/masonry condition (Cracks or displacement? Spalling?)	*Y*	*N*	*NA*
Pipe in good condition?	*Y*	*N*	*NA*
Outfall channel functional, not eroding?	*Y*	*N*	*NA*
Other (describe)	*Y*	*N*	*NA*
Sediment Forebays			
Sedimentation description	*Y*	*N*	*No sediment forebays, but no sediment buildup observed.*
Sediment cleanout needed (over 50% full)	*Y*	*N*	*No.*
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	*Y*	*N*	*Vegetation growth is appropriate. Some invasive species present.*
Visible pollution?	*Y*	*N*	*No pollution observed.*

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	*Y*	*N*	*No erosion observed.*
Erosion at outfalls into pond?	*Y*	*N*	*No erosion observed.*
Headwalls and endwalls in good condition?	*Y*	*N*	*No headwalls or endwalls.*
Encroachment into pond or easement area by other activities?	*Y*	*N*	*No encroachment observed.*
Evidence of sediment accumulation?	*Y*	*N*	*No sediment accumulation observed.*
Dry Pond Areas (if applicable)			
Vegetation adequate?	*Y*	*N*	*"Pond" can dry out at times, is wetland. Vegetation adequate.*
Undesirable vegetation or woody plant growth?	*Y*	*N*	*No undesirable growth in the basin.*
Excessive sedimentation?	*Y*	*N*	*No.*
Hazards			
Have there been complaints from residents?	*Y*	*N*	*No.*
Public hazards noted?	*Y*	*N*	*No.*

PHOTO LOG

Figure 1 - Outlet of pipe 1A.

Figure 2 - Outlet of pipe 1A.

Figure 3 - Outlet of pipe 1B.

Figure 4 - Outlet of pipe 1B.

Figure 5 - Outlet of pipe 1A.

Figure 6 - Outlet of pipe 1B.

Figure 7 - General view of wetland detention basin.

Figure 8 - General aerial view of wetland detention basin.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #2A Delta Library (North) Owner Change since last inspection? Y (N)

Location: 42.747958° -84.620423°

Owner Name: Delta Township

Address: 7710 W. Saginaw Highway. Canal/Saginaw Phone Number NA

Site Status: Good condition.

Date: 7/19/2022 Time: 1:47 PM Site Conditions: Good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☐ Dry Detention Pond ☑ Other Rain garden

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	Vegetation is healthy.
Erosion on embankment?	Y	N	No erosion observed on embankment.
Animal burrows in embankment?	Y	N	No burrowing observed in the embankment.
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	Drains are functioning without blockage.
Leaks or seeps on embankment?	Y	N	No leaks or seeps observed.
Slope protection failure functional?	Y	N	Slope is in good condition.

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	*Y*	*N*	*NA*
Erosion in/around emergency spillway?	*Y*	*N*	*NA*
Other (describe)	*Y*	*N*	*NA*
Riser and Principal Spillway			
Low-flow orifice functional?	*Y*	*N*	*NA*
Trash rack (Debris removal needed? Corrosion noted?)	*Y*	*N*	*No debris is in the rain garden.*
Sediment buildup in riser?	*Y*	*N*	*NA*
Concrete/masonry condition (Cracks or displacement? Spalling?)	*Y*	*N*	*Concrete pipes are in good condition.*
Pipe in good condition?	*Y*	*N*	*Pipes are in good condition.*
Outfall channel functional, not eroding?	*Y*	*N*	*Channel is functional and not eroding.*
Other (describe)	*Y*	*N*	*NA*
Sediment Forebays			
Sedimentation description	*Y*	*N*	*No sediment forebays, but sediment is not building up in the rain garden.*
Sediment cleanout needed (over 50% full)	*Y*	*N*	*No sediment cleanout is necessary.*
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	*Y*	*N*	*Vegetation growth is normal and native species.*
Visible pollution?	*Y*	*N*	*No pollution is visible.*

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	Y	N	No erosion on any banks.
Erosion at outfalls into pond?	Y	N	No erosion around outfalls.
Headwalls and endwalls in good condition?	Y	N	Yes, end sections are in good condition.
Encroachment into pond or easement area by other activities?	Y	N	No encroachment observed.
Evidence of sediment accumulation?	Y	N	No sediment accumulation.
Dry Pond Areas (if applicable)			
Vegetation adequate?	Y	N	Rain garden can dry out in times of drought. Vegetation is adequate.
Undesirable vegetation or woody plant growth?	Y	N	No undesirable growth.
Excessive sedimentation?	Y	N	No.
Hazards			
Have there been complaints from residents?	Y	N	No.
Public hazards noted?	Y	N	No.

PHOTO LOG

Figure 1 - Outlet pipe labeled 2A. Pipe is in good condition.

Figure 2 - Outlet pipe labeled 2B. Pipe is in good condition. Photo was taken during a rain event.

Figure 3 - Outlet pipe labeled 2A. Pipe is in good condition.

Figure 4 - Outlet pipe labeled 2B. Pipe is in good condition. Photo was taken during a rain event.

Figure 5 - Outlet pipe labeled 2B. Pipe is in good condition.

Figure 6 - Outlet pipe labeled 2B.

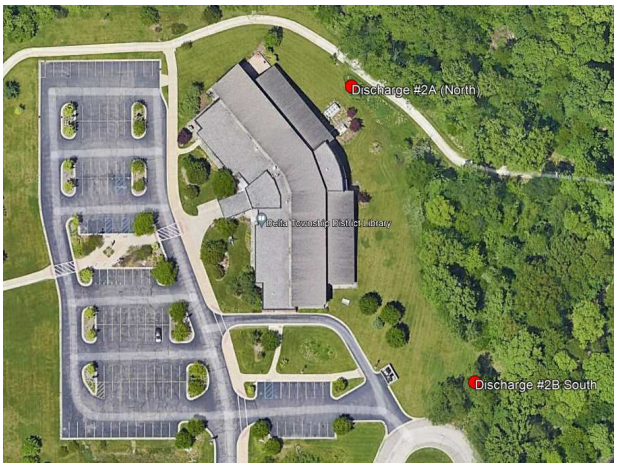

Figure 7 - Location of outlet pipes into rain garden by the Delta Township District Library.

Figure 8 - Outlet pipe labeled 2A. Pipe is in good condition. Note native plant species.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #5 Snow Road Ground Storage Owner Change since last inspection? Y (N)

Location: 42.732879° -84.620270°

Owner Name: Delta Township

Address: 495 Snow Road (Snow Road Ground Storage) Phone Number NA

Site Status: Good condition.

Date: 7/19/2022 Time: 1:19 PM Site Conditions: Good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☐ Dry Detention Pond ☑ Other Vegetated Swale

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	Yes.
Erosion on embankment?	Y	N	No.
Animal burrows in embankment?	Y	N	No animal burrows.
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	Drain is functional, no blockage.
Leaks or seeps on embankment?	Y	N	No leaks or seeps observed.
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	Y	N	NA
Erosion in/around emergency spillway?	Y	N	NA
Other (describe)	Y	N	NA
Riser and Principal Spillway			
Low-flow orifice functional?	Y	N	Yes.
Trash rack (Debris removal needed? Corrosion noted?)	Y	N	NA
Sediment buildup in riser?	Y	N	NA
Concrete/masonry condition (Cracks or displacement? Spalling?)	Y	N	NA, is a PVC outlet pipe, perforated pipe under swale.
Pipe in good condition?	Y	N	Yes pipe is in good condition.
Outfall channel functional, not eroding?	Y	N	NA, is enclosed system.
Other (describe)	Y	N	NA
Sediment Forebays			
Sedimentation description	Y	N	NA
Sediment cleanout needed (over 50% full)	Y	N	NA
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	Y	N	NA
Visible pollution?	Y	N	No pollution was visible.

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	Y	N	NA
Erosion at outfalls into pond?	Y	N	NA
Headwalls and endwalls in good condition?	Y	N	NA
Encroachment into pond or easement area by other activities?	Y	N	NA
Evidence of sediment accumulation?	Y	N	NA
Dry Pond Areas (if applicable)			
Vegetation adequate?	Y	N	Vegetation growth is appropriate for swale.
Undesirable vegetation or woody plant growth?	Y	N	No undesirable vegetation.
Excessive sedimentation?	Y	N	No excessive sedimentation.
Hazards			
Have there been complaints from residents?	Y	N	No
Public hazards noted?	Y	N	No

PHOTO LOG

Figure 1 - PVC outlet pipe for underdrain of swale. Photo was taken during dry weather.

Figure 2 - PVC outlet pipe for underdrain of swale. Photo was taken during dry weather.

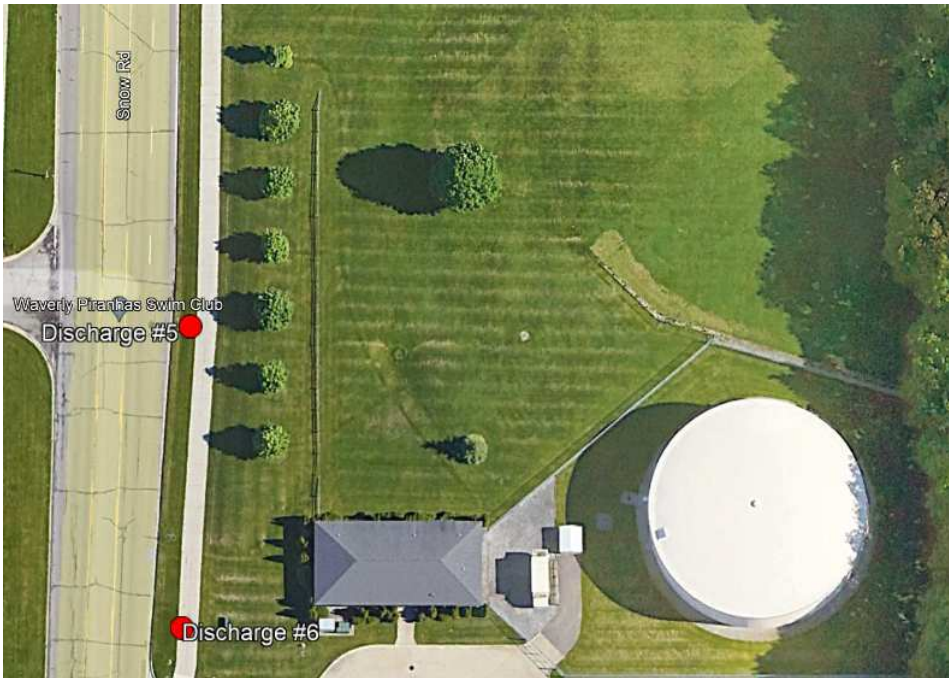

Figure 3 - Swale discharges into location #5 shown on map. The swale services the water storage area next to the fire station.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #6 Fire Station #3 Owner Change since last inspection? Y (N)

Location: 42.732491° -84.620284°

Owner Name: Delta Township

Address: 215 Snow Road (Fire Station #3) Phone Number NA

Site Status: Good condition.

Date: 7/19/2022 Time: 2:34 PM Site Conditions: Good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☐ Dry Detention Pond ☑ Other Vegetated Swale

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	NA
Erosion on embankment?	Y	N	NA
Animal burrows in embankment?	Y	N	NA
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	NA
Leaks or seeps on embankment?	Y	N	NA
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	Y	N	NA
Erosion in/around emergency spillway?	Y	N	NA
Other (describe)	Y	N	NA
Riser and Principal Spillway			
Low-flow orifice functional?	Y	N	Yes, functional.
Trash rack (Debris removal needed? Corrosion noted?)	Y	N	NA
Sediment buildup in riser?	Y	N	No sediment buildup.
Concrete/masonry condition (Cracks or displacement? Spalling?)	Y	N	NA
Pipe in good condition?	Y	N	Pipe is in good condition.
Outfall channel functional, not eroding?	Y	N	Yes functional
Other (describe)	Y	N	NA
Sediment Forebays			
Sedimentation description	Y	N	NA
Sediment cleanout needed (over 50% full)	Y	N	NA
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	Y	N	NA
Visible pollution?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	Y	N	NA
Erosion at outfalls into pond?	Y	N	NA
Headwalls and endwalls in good condition?	Y	N	NA
Encroachment into pond or easement area by other activities?	Y	N	NA
Evidence of sediment accumulation?	Y	N	NA
Dry Pond Areas (if applicable)			
Vegetation adequate?	Y	N	Yes, swale is adequately vegetated.
Undesirable vegetation or woody plant growth?	Y	N	No undesirable vegetation.
Excessive sedimentation?	Y	N	No sedimentation.
Hazards			
Have there been complaints from residents?	Y	N	No complaints.
Public hazards noted?	Y	N	No hazards.

PHOTO LOG

Figure 1 - PVC outlet pipe into storm structure.

Figure 2 - PVC outlet pipe into storm structure.

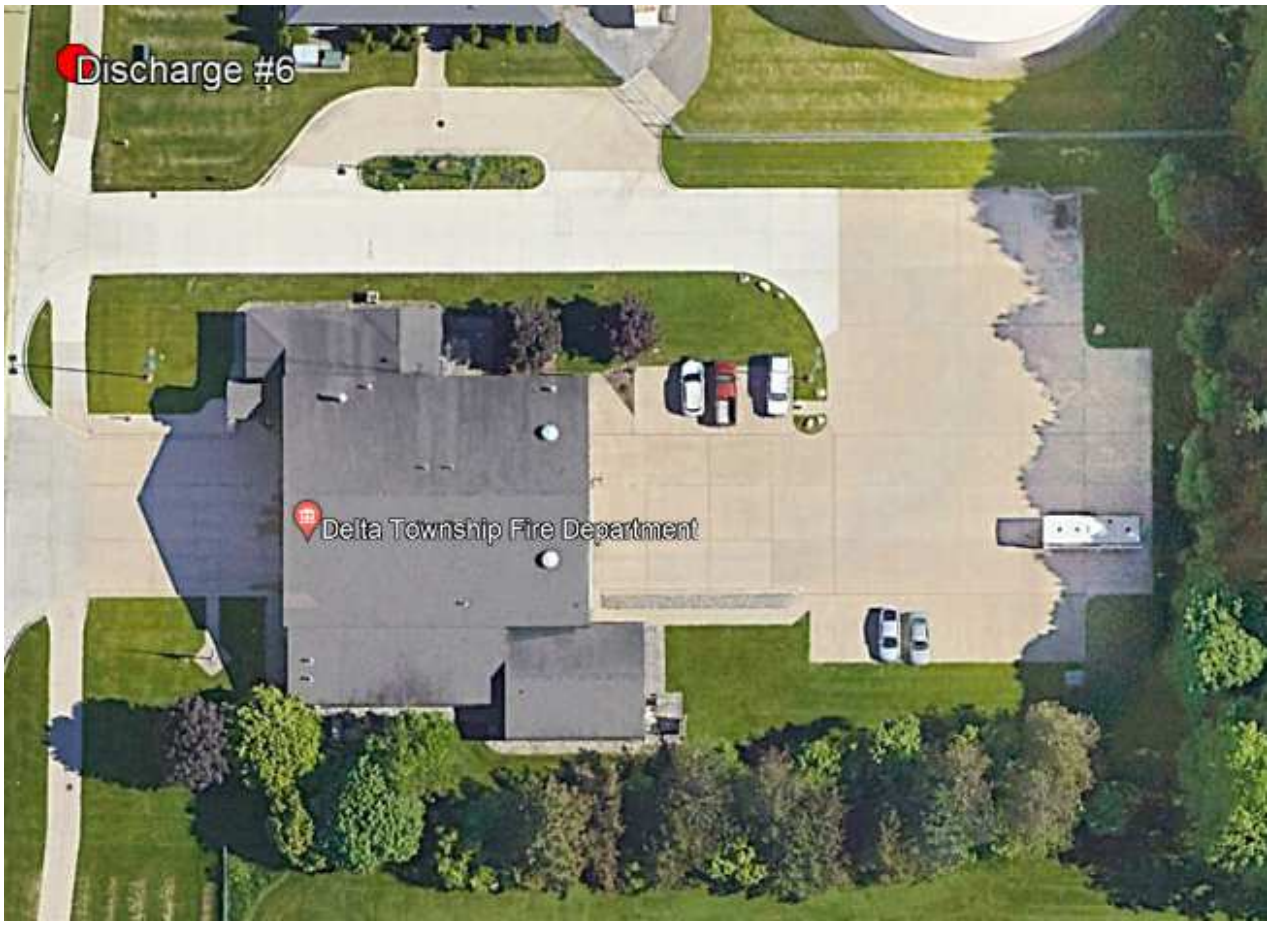

Figure 3 - General aerial image map. Site's stormwater leaves site and goes into system at the red dot on the map.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #8 Snow Road Elevated Tank Owner Change since last inspection? Y (N)

Location: 42.728671° -84.620900°

Owner Name: Delta Township

Address: 209 Snow Road (Water Tower at Snow Road) Phone Number NA

Site Status: Site is in good condition.

Date: 7/19/2022 Time: 2:43 PM Site Conditions: Good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond

☐ Dry Detention Pond ☑ Other Vegetated Swale

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	NA
Erosion on embankment?	Y	N	NA
Animal burrows in embankment?	Y	N	NA
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	NA
Leaks or seeps on embankment?	Y	N	NA
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	Y	N	NA
Erosion in/around emergency spillway?	Y	N	NA
Other (describe)	Y	N	NA
Riser and Principal Spillway			
Low-flow orifice functional?	Y	N	Yes, functional.
Trash rack (Debris removal needed? Corrosion noted?)	Y	N	NA
Sediment buildup in riser?	Y	N	No sediment buildup.
Concrete/masonry condition (Cracks or displacement? Spalling?)	Y	N	No damage.
Pipe in good condition?	Y	N	Good condition.
Outfall channel functional, not eroding?	Y	N	NA
Other (describe)	Y	N	NA
Sediment Forebays			
Sedimentation description	Y	N	NA
Sediment cleanout needed (over 50% full)	Y	N	NA
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	Y	N	NA
Visible pollution?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	*Y*	*N*	*NA*
Erosion at outfalls into pond?	*Y*	*N*	*NA*
Headwalls and endwalls in good condition?	*Y*	*N*	*NA*
Encroachment into pond or easement area by other activities?	*Y*	*N*	*NA*
Evidence of sediment accumulation?	*Y*	*N*	*NA*
Dry Pond Areas (if applicable)			
Vegetation adequate?	*Y*	*N*	*Vegetation healthy.*
Undesirable vegetation or woody plant growth?	*Y*	*N*	*No undesirable vegetation.*
Excessive sedimentation?	*Y*	*N*	*No sedimentation.*
Hazards			
Have there been complaints from residents?	*Y*	*N*	*No complaints.*
Public hazards noted?	*Y*	*N*	*No hazards.*

PHOTO LOG

Figure 1 - Outlet pipe from swale to storm structure.

Figure 2 - Outlet pipe from swale to storm structure.

Figure 3 - General aerial photo.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #10 Sharp Park Manhole at Village Green Apartments Owner Change since last inspection? Y (N)

Location: 42.747181° -84.624590°

Owner Name: Delta Township

Address: 5200 Mall Drive West (Overflow for the pond) Phone Number NA

Site Status: Site is in good condition.

Date: 7/19/2022 Time: 2:00 PM Site Conditions: Good Condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☑ Wet Detention Pond

☐ Dry Detention Pond ☐ Other _____

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	NA
Erosion on embankment?	Y	N	NA
Animal burrows in embankment?	Y	N	NA
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	NA
Leaks or seeps on embankment?	Y	N	NA
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	*Y*	*N*	*NA*
Erosion in/around emergency spillway?	*Y*	*N*	*NA*
Other (describe)	*Y*	*N*	*NA*
Riser and Principal Spillway			
Low-flow orifice functional?	*Y*	*N*	*Yes*
Trash rack (Debris removal needed? Corrosion noted?)	*Y*	*N*	*No debris removal needed.*
Sediment buildup in riser?	*Y*	*N*	*No sediment buildup.*
Concrete/masonry condition (Cracks or displacement? Spalling?)	*Y*	*N*	*NA*
Pipe in good condition?	*Y*	*N*	*Pipe appears to be functional.*
Outfall channel functional, not eroding?	*Y*	*N*	*No erosion.*
Other (describe)	*Y*	*N*	*Outflow is supposed to be from pipe in pond to storm on the southside of pond.*
Sediment Forebays			
Sedimentation description	*Y*	*N*	*Minimal Sediment.*
Sediment cleanout needed (over 50% full)	*Y*	*N*	*None needed.*
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	*Y*	*N*	*No, vegetation is minimal.*
Visible pollution?	*Y*	*N*	*No manmade pollution visible. However, E. coli contamination from all the waterfowl is likely.*

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	*Y*	*N*	*Some areas with minimal sloughing*
Erosion at outfalls into pond?	*Y*	*N*	*No erosion observed.*
Headwalls and endwalls in good condition?	*Y*	*N*	*NA*
Encroachment into pond or easement area by other activities?	*Y*	*N*	*No encroachment.*
Evidence of sediment accumulation?	*Y*	*N*	*No evidence of sediment accumulation.*
Dry Pond Areas (if applicable)			
Vegetation adequate?	*Y*	*N*	*NA*
Undesirable vegetation or woody plant growth?	*Y*	*N*	*NA*
Excessive sedimentation?	*Y*	*N*	*NA*
Hazards			
Have there been complaints from residents?	*Y*	*N*	*No hazards reported.*
Public hazards noted?	*Y*	*N*	*E. coli could be high at times for swimming due to prevalence of waterfowl.*

PHOTO LOG

Figure 1 - Manhole south of pond where outlet pipe flows into storm system.

Figure 2 - Manhole south of pond where outlet pipe flows into storm system.

Figure 3 - Pond located at Sharp Park. Flow leaves the pond on the south side to the storm sewer system.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #14 Owner Change since last inspection? Y (N)

Location: 42.759470° -84.666444°

Owner Name: Delta Township

Address: 7812 W. Willow Highway (Water Operations) Phone Number NA

Site Status: Site is in good condition.

Date: 7/19/2022 Time: 12:23 PM Site Conditions: Good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☐ Dry Detention Pond ☑ Other Vegetated Swale

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	NA
Erosion on embankment?	Y	N	NA
Animal burrows in embankment?	Y	N	NA
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	NA
Leaks or seeps on embankment?	Y	N	NA
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	Y	N	NA
Erosion in/around emergency spillway?	Y	N	NA
Other (describe)	Y	N	NA
Riser and Principal Spillway			
Low-flow orifice functional?	Y	N	Yes, functional.
Trash rack (Debris removal needed? Corrosion noted?)	Y	N	No trash rack - unnecessary. No trash or debris observed.
Sediment buildup in riser?	Y	N	No sediment built up.
Concrete/masonry condition (Cracks or displacement? Spalling?)	Y	N	NA
Pipe in good condition?	Y	N	Yes, pipe is in good condition.
Outfall channel functional, not eroding?	Y	N	No erosion observed.
Other (describe)	Y	N	NA
Sediment Forebays			
Sedimentation description	Y	N	NA
Sediment cleanout needed (over 50% full)	Y	N	NA
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	Y	N	NA
Visible pollution?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	*Y*	*N*	*NA*
Erosion at outfalls into pond?	*Y*	*N*	*NA*
Headwalls and endwalls in good condition?	*Y*	*N*	*NA*
Encroachment into pond or easement area by other activities?	*Y*	*N*	*NA*
Evidence of sediment accumulation?	*Y*	*N*	*NA*
Dry Pond Areas (if applicable)			
Vegetation adequate?	*Y*	*N*	*NA*
Undesirable vegetation or woody plant growth?	*Y*	*N*	*NA*
Excessive sedimentation?	*Y*	*N*	*NA*
Hazards			
Have there been complaints from residents?	*Y*	*N*	*No complaints.*
Public hazards noted?	*Y*	*N*	*No hazards.*

PHOTO LOG

Figure 1 - Outlet pipe of swale.

Figure 2 - Outlet pipe of swale.

Figure 3 - Outlet pipe is shown where red dot is located. General site aerial photo.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #15 Owner Change since last inspection? Y (N)

Location: 42.757221° -84.666539°

Owner Name: Delta Township

Address: 7812 W. Willow Highway (Water Operations) Phone Number NA

Site Status: Good Condition.

Date: 7/19/2022 Time: 12:27 PM Site Conditions: Good Condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☐ Dry Detention Pond ☑ Other Vegetated Swale

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	NA
Erosion on embankment?	Y	N	NA
Animal burrows in embankment?	Y	N	NA
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	NA
Leaks or seeps on embankment?	Y	N	NA
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	*Y*	*N*	*NA*
Erosion in/around emergency spillway?	*Y*	*N*	*NA*
Other (describe)	*Y*	*N*	*NA*
Riser and Principal Spillway			
Low-flow orifice functional?	*Y*	*N*	*NA*
Trash rack (Debris removal needed? Corrosion noted?)	*Y*	*N*	*Some leaf litter buildup, but still functional.*
Sediment buildup in riser?	*Y*	*N*	*NA*
Concrete/masonry condition (Cracks or displacement? Spalling?)	*Y*	*N*	*NA*
Pipe in good condition?	*Y*	*N*	*Pipe is in good condition.*
Outfall channel functional, not eroding?	*Y*	*N*	*Yes, channel is functional.*
Other (describe)	*Y*	*N*	*NA*
Sediment Forebays			
Sedimentation description	*Y*	*N*	*NA*
Sediment cleanout needed (over 50% full)	*Y*	*N*	*NA*
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	*Y*	*N*	*NA*
Visible pollution?	*Y*	*N*	*NA*

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	*Y*	*N*	*NA*
Erosion at outfalls into pond?	*Y*	*N*	*NA*
Headwalls and endwalls in good condition?	*Y*	*N*	*NA*
Encroachment into pond or easement area by other activities?	*Y*	*N*	*NA*
Evidence of sediment accumulation?	*Y*	*N*	*NA*
Dry Pond Areas (if applicable)			
Vegetation adequate?	*Y*	*N*	*NA*
Undesirable vegetation or woody plant growth?	*Y*	*N*	*NA*
Excessive sedimentation?	*Y*	*N*	*NA*
Hazards			
Have there been complaints from residents?	*Y*	*N*	*No complaints.*
Public hazards noted?	*Y*	*N*	*Some poison ivy near the outlet pipe.*

PHOTO LOG

Figure 1 - Outlet pipe of vegetated swale.

Figure 2 - Outlet pipe of vegetated swale.

Figure 3 - Outlet pipe of vegetated swale.

Figure 4 - Wetland area where swale discharges into.

Figure 5 - General site view.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #16 Owner Change since last inspection? Y (N)

Location: 42.756727° -84.665787°

Owner Name: Delta Township

Address: 7812 W. Willow Highway (Water Operations) Phone Number _____

Site Status: Good condition.

Date: 7/19/2022 Time: 12:31 PM Site Conditions: Good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond

☑ Dry Detention Pond ☐ Other _____

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	Yes, vegetation is healthy.
Erosion on embankment?	Y	N	No erosion observed.
Animal burrows in embankment?	Y	N	No animal burrows observed.
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	Drains are functional.
Leaks or seeps on embankment?	Y	N	No leaks or seeps observed. Was also very dry during inspection.
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	Y	N	NA
Erosion in/around emergency spillway?	Y	N	None observed.
Other (describe)	Y	N	NA
Riser and Principal Spillway			
Low-flow orifice functional?	Y	N	Yes, functional.
Trash rack (Debris removal needed? Corrosion noted?)	Y	N	No trash removal needed. Rack is in good condition.
Sediment buildup in riser?	Y	N	No sediment buildup observed.
Concrete/masonry condition (Cracks or displacement? Spalling?)	Y	N	Infrastructure is in good condition.
Pipe in good condition?	Y	N	Pipe is in good condition.
Outfall channel functional, not eroding?	Y	N	No erosion observed.
Other (describe)	Y	N	NA
Sediment Forebays			
Sedimentation description	Y	N	NA
Sediment cleanout needed (over 50% full)	Y	N	NA
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	Y	N	NA
Visible pollution?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	Y	N	NA
Erosion at outfalls into pond?	Y	N	NA
Headwalls and endwalls in good condition?	Y	N	NA
Encroachment into pond or easement area by other activities?	Y	N	No encroachment observed.
Evidence of sediment accumulation?	Y	N	NA
Dry Pond Areas (if applicable)			
Vegetation adequate?	Y	N	Vegetation is in good condition.
Undesirable vegetation or woody plant growth?	Y	N	No undesirable vegetation is growing.
Excessive sedimentation?	Y	N	No sedimentation observed.
Hazards			
Have there been complaints from residents?	Y	N	No complaints from residents.
Public hazards noted?	Y	N	No hazards noted.

PHOTO LOG

Figure 1 - Outlet pipe from dry detention pond and riser pipe.

Figure 2 - Outlet pipe from dry detention pond and riser pipe.

Figure 3 - Riser pipe outlet from the detention system.

Figure 4 - Inside riser pipe outlet. No flow was leaving from the structure.

Figure 5 - General picture of detention system. Site was very dry during the inspection.

Figure 6 - Aerial view of detention system. Where the red dot is located is the discharge location from the system.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #17 Community Center Owner Change since last inspection? Y (N)

Location: 42.756244° -84.661613°

Owner Name: Delta Township

Address: 7710 W. Saginaw Highway. Canal/Saginaw Phone Number NA

Site Status: Site is in good condition.

Date: 7/19/2022 Time: 12:01 PM Site Conditions: Site is in good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☑ Dry Detention Pond ☐ Other _____

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	NA
Erosion on embankment?	Y	N	NA
Animal burrows in embankment?	Y	N	NA
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	NA
Leaks or seeps on embankment?	Y	N	NA
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	Y	N	NA
Erosion in/around emergency spillway?	Y	N	NA
Other (describe)	Y	N	NA
Riser and Principal Spillway			
Low-flow orifice functional?	Y	N	Yes, functional.
Trash rack (Debris removal needed? Corrosion noted?)	Y	N	No trash in beehive inlet or anywhere on site. No corrosion.
Sediment buildup in riser?	Y	N	No sediment built up in riser.
Concrete/masonry condition (Cracks or displacement? Spalling?)	Y	N	Structures are in good condition, no damage.
Pipe in good condition?	Y	N	Pipe is in good condition.
Outfall channel functional, not eroding?	Y	N	NA
Other (describe)	Y	N	Geotextile fabric or an old silt sack appears to be drooping into the inlet structure. Doesn't appear to be hindering flow too much.
Sediment Forebays			
Sedimentation description	Y	N	NA
Sediment cleanout needed (over 50% full)	Y	N	NA
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	Y	N	NA
Visible pollution?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	Y	N	NA
Erosion at outfalls into pond?	Y	N	NA
Headwalls and endwalls in good condition?	Y	N	NA
Encroachment into pond or easement area by other activities?	Y	N	No encroachment observed.
Evidence of sediment accumulation?	Y	N	No sediment accumulation.
Dry Pond Areas (if applicable)			
Vegetation adequate?	Y	N	Vegetation is adequate. Some areas of basin are consistently soggy.
Undesirable vegetation or woody plant growth?	Y	N	Plant growth is acceptable.
Excessive sedimentation?	Y	N	No sedimentation observed.
Hazards			
Have there been complaints from residents?	Y	N	No complaints.
Public hazards noted?	Y	N	No public hazards noted.

PHOTO LOG

Figure 1 - Basin view from south looking north.

Figure 2 - Inside outlet beehive structure. Note the geotextile fabric at left.

Figure 3 - Basin view from east looking west. Some standing water due to rainfall.

Figure 4 - General site view. Discharge location is at the red dot, however there is a ponding area and swale.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #18 Owner Change since last inspection? Y (N)

Location: 42.697220° -84.632670°

Owner Name: Delta Township

Address: 5717 Millet Highway Phone Number NA

Site Status: Good Condition

Date: 7/19/2022 Time: 3:17 PM Site Conditions: Good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond

☑ Dry Detention Pond ☐ Other _____

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	NA
Erosion on embankment?	Y	N	NA
Animal burrows in embankment?	Y	N	NA
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	NA
Leaks or seeps on embankment?	Y	N	NA
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	Y	N	NA
Erosion in/around emergency spillway?	Y	N	NA
Other (describe)	Y	N	NA
Riser and Principal Spillway			
Low-flow orifice functional?	Y	N	Yes, orifice is functional.
Trash rack (Debris removal needed? Corrosion noted?)	Y	N	No trash observed in or around beehive structure or on site.
Sediment buildup in riser?	Y	N	No sediment buildup.
Concrete/masonry condition (Cracks or displacement? Spalling?)	Y	N	Concrete, structures, pipes are all in good condition.
Pipe in good condition?	Y	N	Pipe is in good condition.
Outfall channel functional, not eroding?	Y	N	NA
Other (describe)	Y	N	NA
Sediment Forebays			
Sedimentation description	Y	N	NA
Sediment cleanout needed (over 50% full)	Y	N	NA
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	Y	N	NA
Visible pollution?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	Y	N	NA
Erosion at outfalls into pond?	Y	N	NA
Headwalls and endwalls in good condition?	Y	N	NA
Encroachment into pond or easement area by other activities?	Y	N	NA
Evidence of sediment accumulation?	Y	N	NA
Dry Pond Areas (if applicable)			
Vegetation adequate?	Y	N	Yes vegetation is adequate, healthy.
Undesirable vegetation or woody plant growth?	Y	N	No undesirable vegetation, site is well maintained.
Excessive sedimentation?	Y	N	No sedimentation observed.
Hazards			
Have there been complaints from residents?	Y	N	No complaints.
Public hazards noted?	Y	N	No hazards.

PHOTO LOG

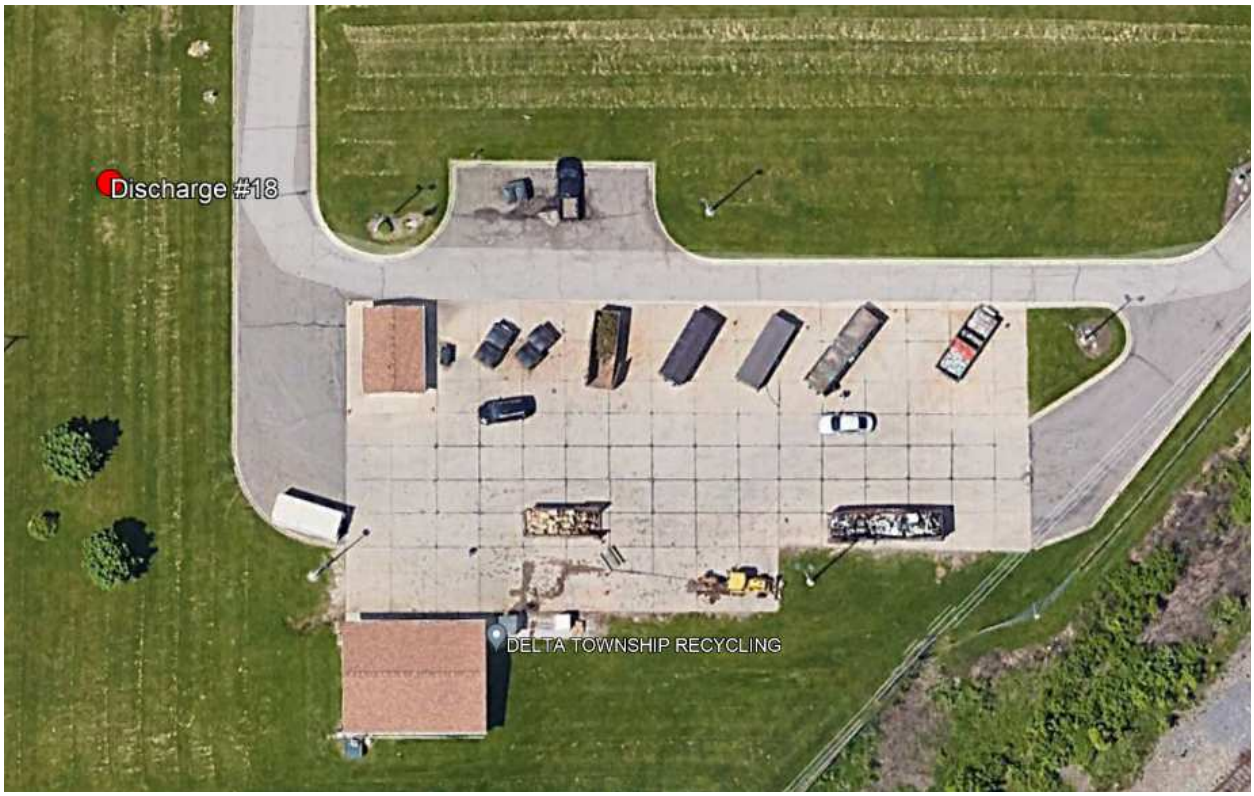

Figure 1 - General project site view. Detention basin is at left of the recycling center, pictured. Each time the site was inspected, the basin was very dry.

Figure 2 - View of basin. Beehive structure is the outlet of the basin.

Figure 3 - View of basin. Beehive structure is the outlet of the basin. Note the slope of the basin at right.

Figure 4 - Interior of beehive outlet. No flow, very dry during each inspection.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #19 Willow Canoe Launch Owner Change since last inspection? Y (N)

Location: 42.756382° -84.711260°

Owner Name: Delta Township

Address: 6555 Willow Highway, Grand Ledge, MI (Willow Canoe Launch) Phone Number NA

Site Status: Site is in good condition.

Date: 7/19/2022 Time: 12:45 PM Site Conditions: Good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☐ Dry Detention Pond ☑ Other BMP treatment train.

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	Yes, vegetation is healthy.
Erosion on embankment?	Y	N	No erosion.
Animal burrows in embankment?	Y	N	No burrows.
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	Drain is functional.
Leaks or seeps on embankment?	Y	N	No leaks or seeps in system.
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	Y	N	NA
Erosion in/around emergency spillway?	Y	N	NA
Other (describe)	Y	N	NA
Riser and Principal Spillway			
Low-flow orifice functional?	Y	N	Yes, functional.
Trash rack (Debris removal needed? Corrosion noted?)	Y	N	No trash has built up around or in the BMP.
Sediment buildup in riser?	Y	N	No sediment buildup.
Concrete/masonry condition (Cracks or displacement? Spalling?)	Y	N	No cracks in masonry or concrete.
Pipe in good condition?	Y	N	Yes pipe is in good condition.
Outfall channel functional, not eroding?	Y	N	Functional and not eroding.
Other (describe)	Y	N	NA
Sediment Forebays			
Sedimentation description	Y	N	NA
Sediment cleanout needed (over 50% full)	Y	N	NA
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	Y	N	NA
Visible pollution?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	Y	N	NA
Erosion at outfalls into pond?	Y	N	NA
Headwalls and endwalls in good condition?	Y	N	NA
Encroachment into pond or easement area by other activities?	Y	N	NA
Evidence of sediment accumulation?	Y	N	NA
Dry Pond Areas (if applicable)			
Vegetation adequate?	Y	N	Yes, vegetation on swale area is adequate.
Undesirable vegetation or woody plant growth?	Y	N	No undesirable growth.
Excessive sedimentation?	Y	N	No sedimentation observed.
Hazards			
Have there been complaints from residents?	Y	N	No complaints.
Public hazards noted?	Y	N	No hazards observed.

PHOTO LOG

Figure 1 - Entrance to Willow Canoe launch. Flow from entire site goes through BMP.

Figure 2 - Outlet pipe to Grand River with rip rap installed.

Figure 3 - Outlet pipe to Grand River with rip rap installed.

Figure 4 - HDPE pipe to Grand River.

Figure 5 - Swale and BMP structure on site. Despite rainfall, no flow was observed through any of the infrastructure.

Figure 6 - Inside one of the beehive structures on site.

Figure 7 - General project site view.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #20 Delta Mills Canoe Launch Owner Change since last inspection? Y (N)

Location: 42.760988° -84.648947°

Owner Name: Delta Township

Address: 6890 Old River Trail (Delta Mills Canoe Launch) Phone Number NA

Site Status: Site is in good condition.

Date: 7/19/2022 Time: 11:24 AM Site Conditions: Good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☐ Dry Detention Pond ☑ Other Vegetated Swale.

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	NA
Erosion on embankment?	Y	N	NA
Animal burrows in embankment?	Y	N	NA
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	NA
Leaks or seeps on embankment?	Y	N	NA
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	*Y*	*N*	*NA*
Erosion in/around emergency spillway?	*Y*	*N*	*NA*
Other (describe)	*Y*	*N*	*NA*
Riser and Principal Spillway			
Low-flow orifice functional?	*Y*	*N*	*Yes*
Trash rack (Debris removal needed? Corrosion noted?)	*Y*	*N*	*No trash near outlet, no trash rack at this location.*
Sediment buildup in riser?	*Y*	*N*	*NA*
Concrete/masonry condition (Cracks or displacement? Spalling?)	*Y*	*N*	*NA, pipe is HDPE.*
Pipe in good condition?	*Y*	*N*	*Yes pipe is in good condition.*
Outfall channel functional, not eroding?	*Y*	*N*	*Yes, channel is functional.*
Other (describe)	*Y*	*N*	*NA*
Sediment Forebays			
Sedimentation description	*Y*	*N*	*NA*
Sediment cleanout needed (over 50% full)	*Y*	*N*	*NA*
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	*Y*	*N*	*NA*
Visible pollution?	*Y*	*N*	*NA*

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	Y	N	NA
Erosion at outfalls into pond?	Y	N	NA
Headwalls and endwalls in good condition?	Y	N	NA
Encroachment into pond or easement area by other activities?	Y	N	NA
Evidence of sediment accumulation?	Y	N	NA
Dry Pond Areas (if applicable)			
Vegetation adequate?	Y	N	Yes
Undesirable vegetation or woody plant growth?	Y	N	No
Excessive sedimentation?	Y	N	No
Hazards			
Have there been complaints from residents?	Y	N	No complaints.
Public hazards noted?	Y	N	No hazards.

PHOTO LOG

Figure 1 - Outlet swale to the Grand River.

Figure 2 - Outlet swale to the Grand River.

Figure 3 - Outlet swale to the Grand River.

Figure 4 - Outlet swale to the Grand River.

DELTA TOWNSHIP
BEST MANAGEMENT PRACTICE AND MAINTENANCE CHECKLIST

Site Name: #21 Owner Change since last inspection? Y (N)

Location: 42.761010° -84.656335°

Owner Name: Delta Township

Address: 7242 Old River Trail/Hunter's Orchard Park Phone Number _____

Site Status: Site is in good condition.

Date: 7/19/2022 Time: 11:37 AM Site Conditions: Site is in good condition.

Stormwater Pond Type: ☐ Wet Retention Pond ☐ Dry Retention Pond ☐ Wet Detention Pond ☐ Dry Detention Pond ☑ Other Vegetated swale.

INSPECTION ITEMS	INSPECTED (Y/N)	MAINTENANCE NEEDED (Y/N)	COMMENTS/DESCRIPTION
Embankment and Emergency Spillway			
Vegetation healthy?	Y	N	Yes
Erosion on embankment?	Y	N	No
Animal burrows in embankment?	Y	N	No animal burrows observed.
Crackling, sliding, bulging of dam?	Y	N	NA
Drains blocked or not functioning?	Y	N	Drains are functional.
Leaks or seeps on embankment?	Y	N	NA
Slope protection failure functional?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Emergency spillway obstructed?	Y	N	NA
Erosion in/around emergency spillway?	Y	N	NA
Other (describe)	Y	N	NA
Riser and Principal Spillway			
Low-flow orifice functional?	Y	N	Yes.
Trash rack (Debris removal needed? Corrosion noted?)	Y	N	No debris in the BMP.
Sediment buildup in riser?	Y	N	No sediment buildup.
Concrete/masonry condition (Cracks or displacement? Spalling?)	Y	N	NA
Pipe in good condition?	Y	N	Yes
Outfall channel functional, not eroding?	Y	N	Outfall channel is functional, no erosion.
Other (describe)	Y	N	NA
Sediment Forebays			
Sedimentation description	Y	N	NA
Sediment cleanout needed (over 50% full)	Y	N	NA
Permanent Pool Areas (if applicable)			
Undesirable vegetation growth?	Y	N	NA
Visible pollution?	Y	N	NA

Inspection Items	Inspected (Y/N)	Maintenance Needed (Y/N)	Comments/Description
Shoreline erosion?	Y	N	NA
Erosion at outfalls into pond?	Y	N	NA
Headwalls and endwalls in good condition?	Y	N	NA
Encroachment into pond or easement area by other activities?	Y	N	NA
Evidence of sediment accumulation?	Y	N	NA
Dry Pond Areas (if applicable)			
Vegetation adequate?	Y	N	Vegetation is adequate.
Undesirable vegetation or woody plant growth?	Y	N	No.
Excessive sedimentation?	Y	N	No sediment buildup.
Hazards			
Have there been complaints from residents?	Y	N	No complaints.
Public hazards noted?	Y	N	No hazards.

PHOTO LOG

Figure 1 - Outlet swale to the Grand River.

Figure 2 - Outlet swale to the Grand River. Despite rainfall, no flow through channel.

Figure 3 - Pipe under path, drainage for parking area, flows to swale.

Figure 4 - Pipe under path, drainage for parking area, flows to swale.

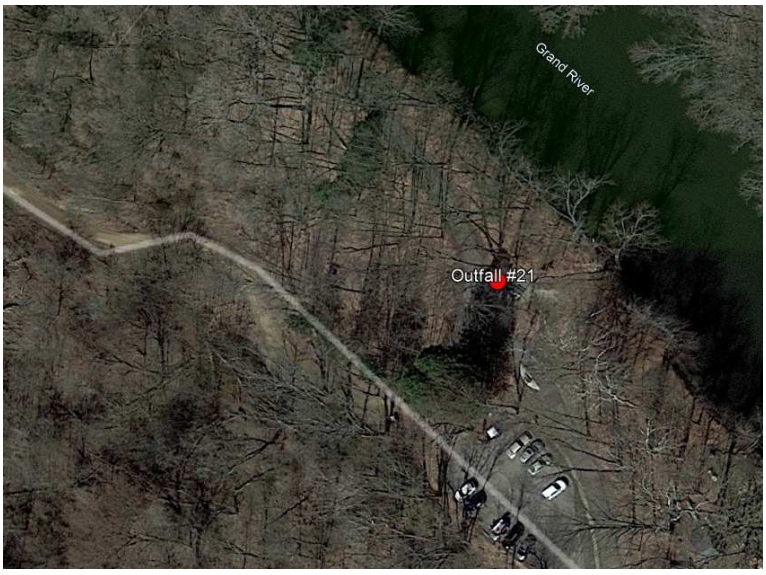

Figure 5 - Location of BMP.

DELTA TOWNSHIP TMDL SAMPLING

DATE: November 17, 2021
CONDITIONS: Steady rainfall, calm, heavy clouds 59°F
RAIN EVENT TOTAL: 0.54 inches (Source: Capital Region International Airport Weather Station)

Figure 1 – Outfall #18, not enough runoff to collect a sample, no flow. 3:09 pm.

Figure 2 – Outfall #18, not enough runoff to collect a sample. 3:09 pm.

Figure 3 – Outfall #18, not enough runoff to collect a sample. 3:09 pm.

Figure 4 – Outfall #22, not enough runoff to collect a sample, no flow. 3:19 pm.

Figure 5 – Outfall #22, not enough runoff to collect a sample. 3:19 pm.

Figure 6 – Outfall #6, runoff present, unable to sample. 3:32 pm.

Figure 7 – Outfall #10, swale, not enough runoff to collect a sample. 3:46 pm.

Figure 8 – Outfall #10, Manhole, runoff flowing through pipe, unable to sample. 3:46 pm.

Figure 9 – Outfall #1B, Sample collected. 3:58 pm.

Figure 10 – Outfall #1B, 3:58 pm. Sample collected.

Figure 11 – Outfall #1A, Sample collected. 4:00 pm.

Figure 12 – Outfall #1A, Sample collected. 4:00 pm.

Figure 13 – Outfall #1A. Sample collected. 4:00 pm.

DELTA TOWNSHIP TMDL SAMPLING

DATE: December 2, 2022
CONDITIONS: Steady rainfall, snowy, heavy clouds 34 °F
RAIN EVENT TOTAL: 0.10 inches (Source: Capital Region International Airport Weather Station)

Figure 1 – Outfall #6, not enough runoff to collect a sample, no flow.

Figure 2 – Outfall #6, not enough runoff to collect a sample.

Figure 3 – Outfall #10, Sample collected in pond.

Figure 4 – Outfall #10, Sample collected in pond, waterfowl present.

Figure 5 – Outfall #10, Sample collected in pond.

Water Tech
A Testing Laboratory
718 S. Michigan Howell, MI 48843 (517) 548-2505 Fax (517) 548-3434
www.watertech-inc.com

ANALYSIS RESULTS

To:
Spicer Group
230 S. Washington
Saginaw, MI 48605

Date Sampled: 12/2/2022 12:30
Date Received: 12/2/2022
Collected By: Emily
Matrix: Water

Sample ID:
Outfall #10
Delta Twp

Lab Sample Number: 165525-01

Test Parameter	Result	Units	RL	Method	Analyst	Date
E. coli	1100	MPN/100ml	1	COLILERT - 18	CTM	12/2/2022 13:45

Released By: _____ **Date:** 12/5/2022

ABBREVIATIONS:
RL = Reporting Limit
CFU = Colony Forming Units/100 milliliter sample volume.
mg/L = Milligrams per liter (= parts per million).
ug/L = Micrograms per liter (= parts per billion).
CL = Analyzed at subcontract laboratory