

# **Stormwater Management Program**

## **for Geauga County**

**(Permit 3GQ00088\*CG)**

Updated December 2022



**Including the Co-Permittees of**

**Bainbridge Township**

**Chester Township**

**Russell Township**

Pursuant to the requirements of the  
Ohio EPA NDPES Small MS4 General Permit (OHQ000004)

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## List of Acronyms

In the preparation of this document, the following acronyms have been used:

BMP	Best Management Practice
DO	Dissolved Oxygen
E&SC	Erosion and Sediment Control
EPA	Environmental Protection Agency
GIS	Geographical Information System
GPS	Global Positioning Satellites
HSTS	Home Sewage Treatment System
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
NEOPIPE	Northeast Ohio Public Involvement and Public Education Committee
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
ORC	Ohio Revised Code
SWMP	Stormwater Management Program
SWMTF	Stormwater Management Taskforce
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TP	Total Phosphorus
TSS	Total Suspended Solids
WMSC	Water Management and Sediment Control

## Executive Summary

On December 27, 2002, Ohio EPA issues an NPDES Small MS4 General Permit (OHQ00001) to authorize small Municipal Separate Storm Sewer Systems (MS4s) to discharge storm water under the National Pollutant Discharge Elimination System (NPDES). The permit was developed as a result of the US EPA's Phase II stormwater program. The Phase II regulations required that MS4s which serve populations less than 100,000 and which are located partially or fully within urbanized areas, as based on US census data, apply for coverage under this permit and submit a Storm Water Management Program to Ohio EPA. The Ohio EPA has issued three renewals to the permit in 2009, 2014 and 2021 with the latest being OHQ000004. Each renewal of the permit has added additional requirements. The SWMP satisfied the appropriate water quality requirements of Ohio Revised Code (ORC) 6111 and the Clean Water Act. This document must provide what best management practices (BMPs) the MS4 has selected to address the six minimum control measures (MCMs) in the permit, why those particular BMPs were selected by the MS4 in light of local water quality issues, and performance standards for BMP implementation. The six MCMs are:

- MCM #1 - Public Education and Outreach
- MCM #2 - Public Participation and Involvement
- MCM #3 - Illicit Discharge Detection and Elimination
- MCM #4 - Construction Site Runoff Control
- MCM #5 - Post-Construction Runoff Control
- MCM #6 - Pollution Prevention/Good Housekeeping for Municipal Operations

The most recent NPDES Small MS4 permit was reissued on April 1, 2021 (OHQ000004) and requires MS4 communities which are renewing coverage under this permit to update their SWMP to be consistent with OHQ000004 and submit to Ohio EPA for review. OHQ000004 requires that where applicable, BMPs shall be selected to address U.S. EPA approved TMDL recommendations for identified water quality problems associated with MS4 discharges within the watersheds within the Phase 2 Areas of the townships of Bainbridge, Chester and Russell and Geauga County. Geauga County and the townships of Bainbridge, Chester and Russell are covered under consolidated facility permit number 3GQ00088\*CG.

## Legal Authorities to Implement the Stormwater Management Program

Bainbridge, Chester, and Russell Townships have the legal authority to implement the following Stormwater Management Program under their governmental authority granted by Title 5, Chapters 501 to 521, Title 15, Chapter 1502, and Title 55, Chapter 5571 of the Ohio Revised Code. In addition, Ohio Attorney General Opinion No. 85-053 holds that a township may enact zoning resolutions which regulate land use in such a manner as to control sediment and stormwater runoff from urban development. In this context, “urban development” may include large-lot housing subdivisions and low density, semi-rural commercial or industrial development, and does not necessarily imply the higher-density type of development associated with cities. Geauga County has the legal authority to implement the following Stormwater Management Program under its governmental authority granted by Title 3, Chapter 307 and 315 and Title 61, Chapter 6117 of the Ohio Revised Code.

## Financial Authorities to Implement the Stormwater Management Program

Bainbridge, Chester, and Russell Townships and Geauga County will fund the activities necessary to implement its SWMP through dollars from their respective general funds. Periodically, these entities will evaluate the SWMP and, if necessary, suggest alternative funding arrangements.

## Overview of Community Stormwater System and TMDLs

The subsequent watersheds in the townships of Bainbridge, Chester, and Russell and Phase 2 areas (Urbanized areas) of Geauga County have had U.S. EPA-approved TMDL reports prepared for the below listed water quality problems and pollutants.

Regulated MS4	TMDL Project	TMDL Pollutants
Bainbridge Township	Chagrin River Cuyahoga River (lower) Cuyahoga River (upper)	TP, Nitrate/Nitrogen, TSS, E. Coli TP, E. Coli TP
Chester Township	Chagrin River	TP, Nitrate/Nitrogen, TSS, E. Coli
Russell Township	Chagrin River	TP, Nitrate/Nitrogen, TSS, E. Coli
Gauga County	Chagrin River Cuyahoga River (lower) Cuyahoga River (upper) Grand River (lower)	TP, Nitrate/Nitrogen, TSS, E. Coli TP, E. Coli TP E. Coli

The Upper and Lower Cuyahoga River listed collectively only applies to 0.27 square miles respectively within the Urbanized Phase 2 area. According to the TMDL reports for these two watersheds, the subdrainage systems of these watersheds that are located within Geauga County indicate full attainment. Likewise, the Grand River that is listed under Geauga County is located within the non-urbanized and non-Phase 2 area of Geauga County so it will not be specifically addressed in this plan. For these reasons, our main focus on addressing TMDLs will be on the Chagrin River; although the TMDLs within the Chagrin River contain the same TMDLs for the Grand and Cuyahoga Rivers.

In order to maintain compliance with OHQ000004, the townships of Bainbridge, Chester, and Russell and the Phase 2 areas of Geauga County will consider the recommendations made pertaining to the TMDLs for the above watersheds to better tailor our BMP selection to address noted water quality problems resulting from MS4 discharges.

## **Description of Program Development and Decision Process**

To develop its SWMP, the townships of Bainbridge, Chester, and Russell and Geauga County followed the steps outlined below:

1. Designation of MS4 Manager – Geauga County Engineer
2. Designation of preparer of SWMP and Annual Report – Geauga SWCD
3. Formation of the Geauga County Stormwater Taskforce
4. Geauga SWCD creates draft SWMP based on input gathered from public and agencies
5. Taskforce meets at least once a year to review formation of SWMP and/or progress on consolidated SWMP
6. SWMP and Annual Report is posted on website for public comment
7. Adoption of Consolidated SWMP and Annual Report by Geauga County

Table of Organization of SWMP provided in the Appendix at the end of this document.

## **MCM #1 - Public Education and Outreach (III.B.1)**

### **Program (Themes, Target Audience and Performance Standards)**

Our MS4 is predominantly located in the Chagrin Watershed, which has TMDLs of TP (total phosphorus), nitrate/nitrogen, TSS (total suspended solids) and E. coli and a very limited portion of our MS4 is located within the Upper Cuyahoga Watershed (0.5 sq. mi.), which has TMDLs of TP (total phosphorus) and the Lower Cuyahoga Watershed (0.2 sq mi), which as TMDLs of TP(total phosphorus) and E.Coli . Because the majority of these pollution problems are caused by increases in impervious cover and the resulting increases in stormwater volume and velocity, we will focus much of our Public Education and Outreach program on increasing public awareness of the links between land use practices and stormwater pollution. We will also focus on septic system maintenance education since the majority of our homeowners have septic systems. We will target pollutant sources identified in our TMDL such as TSS from stream bank erosion and improperly controlled construction sites. Our education and outreach program focuses on addressing these pollutants. During our permit term, we will choose at least five themes. These themes may include but are not limited to the following:

1. Addressing nutrients and habitat degradation through promotion of reducing turfgrass, limiting conventional fertilizer and pesticide use or using alternative organic fertilizer and pesticide products
2. Addressing bacteria and nutrient pollution through septic maintenance education programs and manure nutrient management programs in the agricultural industry
3. Educating developers on construction site erosion and sediment control practices
4. Promoting the benefits of streams, wetlands, and riparian buffers for maintaining a healthy stream corridor and reducing streambank erosion
5. Educating homeowners on watershed awareness to correlate stormwater runoff to its effects on Lake Erie
6. Promoting rain gardens and native plantings to teach residents about infiltrating stormwater on-site and enable them to better manage stormwater on their properties
7. Offering ways to reduce runoff on residential properties (soil amendments, composting, tree planting)
8. Advocating proper disposal of toxic household chemical waste and use of alternative non-toxic products.
9. Promoting “Reduce, Reuse, Recycle” theme for management of solid waste through education programs and activities

Our NPDES Phase 2 community’s population was 28,254 at the 2020 census. Our primary target audience is land being developed for residential or commercial use that comprises over 50% of area within the Phase 2 areas as compared to just over 16% within the entire county. Of these developed areas over 80% have home sewage treatment systems. Based on this information landowner actions or inactions on their properties can contribute significantly to stormwater runoff and the quality of that runoff in our MS4. We will also focus on the development community as they have the potential to contribute significant amounts of sediment pollution to our MS4 if not properly educated. Proper best management practices in the agricultural community will also be addressed as it consists of approximately 7% of the land use within our Phase 2 Area. Fortunately, over 40% of the land within the MS4 is forested and open space which provides natural stormwater benefits that do not require infrastructure; therefore, the benefits that trees and natural areas provide for stormwater will be promoted.

Geauga SWCD is also a member of the Northeast Ohio Public Information and Public Education Work Group (NEOPIPE) who continue to meet regularly and develop annual themes for upcoming years, pool resources to conduct regional workshops on these themes, and produce outreach materials and venues that are available to residents of the townships of Bainbridge, Chester, and Russell.

## Outreach Mechanisms

Our primary mechanisms for delivery are the following:

- A minimum of two articles per year covering a stormwater pollution prevention topic and at least one of those based on the particular theme of the year. These articles will be printed in the newspapers of general circulation in the County, posted on social media, available to the townships to post on their websites and publish in their newsletters. A sample article is included in the Appendix.
- Websites with pages specific to stormwater education, construction sites, NPDES Phase 2 and general landowner resources that include pollution prevention tips will be posted on the SWCD website [www.geaugaswcd.com](http://www.geaugaswcd.com) which is updated at least monthly and receives an average of 1000 visitors per month as well as websites for the communities of Bainbridge, Chester and Russell
- The Geauga SWCD Facebook page which currently has over 645 followers is updated regularly with stormwater information and links to upcoming events.
- Geauga SWCD hosts a minimum of one community workshop a year focused on the stormwater theme of the year. An example of a workshop was a composting workshop where approximately 100 people attended to learn how to compost to improve soil health which increases its stormwater infiltration and cleansing capacity. These programs are advertised on social media, websites and local newspapers and reach over 50% of the population.
- Geauga SWCD will provide youth educational programs highlighting subjects such as healthy streams, watersheds, native plants, stormwater benefits provided by trees, stream monitoring and healthy soils.
- The Geauga SWCD prepares a stormwater display on the annual theme with informational displays and interactive activities at the Geauga County Fair. This event draws in thousands of people over a 5-day period.
- Publications on stormwater pollution prevention are routinely created, updated, and maintained by the Geauga SWCD.
- Geauga SWCD offers rain barrels for sale to the public with information on the benefits these can provide for stormwater.
- Geauga Park District has permanent displays at its West Woods Nature Center on green roof construction, nonpoint source pollution and riparian buffers. All visitors to the park can experience these displays.
- Geauga Park District will continue to provide education programs focusing on the benefits of high-quality streams through their amphibian, stream, and geology programs
- Geauga Trumbull Solid Waste Management District provides educational programs on the 3Rs – reduce, reuse, and recycle
- Banners highlighting various stormwater pollution prevention tips are on display at township offices and Geauga SWCD for viewing.

In addition to these primary mechanisms, we may use other mechanisms such as posters, brochures, flyer mailings, permit inserts or new resident outreach mailings. Information on any additional mechanisms used will be collected and documented by the Geauga SWCD for reach and success and included in the annual reporting to Ohio EPA. Our measurable goal is to reach a minimum of 50% of our MS4 population over five years, using a minimum of five themes with at least two mechanisms of delivery for each theme. If it does not appear that these



objectives are being reached, the program will be re-evaluated, and different mechanisms will be selected to meet our measurable goal.

## Responsibility and Oversight

The persons and departments responsible for management and implementation of this program are as follows:

*Primary:*           **GEAUGA COUNTY ENGINEER/DRAINAGE ENGINEER**  
JOSEPH CATTELL, P.E., P.S.  
440-279-1800  
Email: [jcattell@geauga.oh.gov](mailto:jcattell@geauga.oh.gov)

*Secondary:*       **GEAUGA SOIL AND WATER CONSERVATION DISTRICT**  
CARMELLA SHALE, P.E.  
440-834-1122  
Email: [cshale@geauga.oh.gov](mailto:cshale@geauga.oh.gov)

The Geauga County Engineer/Drainage Engineer is responsible for the overall management and implementation of our public education and outreach plan. To assist in implementing MCM 1 in our SWMP, a Memorandum of Understanding with the Geauga County Soil and Water Conservation District, Geauga County Drainage Engineer and the townships of Bainbridge, Chester and Russell has been adopted. These MOUs are attached in the Appendix. The Director/Engineer of the Geauga SWCD prepares the annual report each year which documents all educational activities completed in the current year as well as the plan for the upcoming year.

## Evaluation and Assessment

Each December/ January the Township Trustees and the SWCD will assemble information gathered from any or all the steps as applicable and listed below to evaluate the progress on the plan.

1. Meetings with key commercial property owners
2. Meetings with homeowner's associations
3. Review of how many printed educational materials were picked up over the course of the year
4. Review number of website hits on topics regarding stormwater
5. Review number of participants or material collected at recycle pickup events
6. Collect number of septic systems pumped over the course of the year
7. Evaluations of education events held
8. Web surveys to gauge public awareness and knowledge and what extent adoption of BMPs has occurred

## Annual Reporting

Gauga Soil and Water Conservation District will assemble the Annual Report for the Geauga County Consolidated Permit utilizing the Ohio EPA form. Each co-permittee and service provider will provide required information to Geauga SWCD annually by January 31. This report will identify both the mechanism used to convey each stormwater theme and audience directed as well as how many people were reached.

## **MCM #2 - Public Involvement and Participation (III.B.2)**

### **Program (Activities, Target Audience and Performance Standards)**

Our MS4 is predominantly located in the Chagrin Watershed, which has TMDLs of TP (total phosphorus), nitrate/nitrogen, TSS (total suspended solids) and E. Coli and a very limited portion of our MS4 is located within the Upper Cuyahoga Watershed (0.5 sq. mi.), which has TMDLs of TP (total phosphorus) and the Lower Cuyahoga Watershed (0.2 sq mi), which has TMDLs of TP (total phosphorus) and E. Coli. Although we acknowledge that the majority of these pollution problems are caused by increases in impervious cover and the resulting increases in stormwater volume and velocity, as well as septic system maintenance issues, we will focus more on the micro scale of what individual homeowners can do to improve TMDL loadings since it is more logistically manageable. Over the previous permit term, we have found that our best participation in events comes from people attending a workshop where they “make and take” or get information that will facilitate a change in behavior or help them maintain something on their own property. With this in mind, we will host events for the public to actively engage them in small activities at their homes that will improve the capturing and filtering of stormwater runoff into the soil or how septic systems work and how to maintain effectively. We will also engage teachers and students in stream quality monitoring that immerses them in the stream to sample streams to determine the water quality. Understanding that effects of construction are a contributing factor of TMDL loadings, we strive to discover a component that can result in a contractor behavioral change. We will look to provide a county certification system for contractors to assess and ensure homeowners as well as the county itself which contractors have been educated and completed the program on better construction Best Management Practices to keep sediment on site and out of stormwater runoff.

During this permit cycle, we will offer a minimum of five public involvement activities. These activities may include but are not limited to the following:

1. Backyard composting to improve soil (TMDLs: nitrate/nitrogen)
2. Tree sales – information about amount of stormwater (including nutrients within the stormwater) captured for each tree purchased by the residents (TMDLs: nitrate/nitrogen/TP)
3. Portable concrete washout handout program (TMDLs: TSS/nitrate/nitrogen/TP)
4. Household Hazardous Waste Collection Events (TMDLs: TSS)
5. Recycling events (TMDLs: TSS)
6. Social Media quizzes/questions to engage the public on pollution prevention (TMDLs: TSS/nitrate/nitrogen/TP/E. Coli)
7. Landowner Assistance on stream and erosion issues (TMDLs: TSS)
8. Public forums/meetings at various townships to assess program and needs of the public (TMDLs: TSS/ TP/ nitrate/nitrogen/E. Coli)
9. Alternative green cleaners “make and take” (TMDLs: nitrate/nitrogen/TP)
10. Poster contests (TMDLs: TSS, nitrate/nitrogen/TP)
11. Stream quality monitoring (TMDLs: TSS, nitrate/nitrogen/TP/E. Coli)
12. Contractor Best Management Practice certification system (TMDLs: nitrate/nitrogen/ TP)

As a member of NEOPIPE, Geauga SWCD will continue to meet regularly to develop activities and pool resources to conduct activities that are relevant and available to residents of the townships of Bainbridge, Chester, and Russell.

## Outreach Mechanisms

The public has been and will be involved in the development, submittal, and annual assessment of our NOI and SWMP description through public meetings, newspaper coverage, email, interactive website, surveys, social media, input by professionals in environmental and ecological fields and at least one private citizen appointment on the Geauga County SWTF. These same venues will be used to get information out about events where the public has the opportunity to participate in various activities and/or projects. Being a government agency and as advertised on website, the SWCD automatically receives calls from the public and other agencies on complaints as well as requests for technical assistance.

## Responsibility and Oversight

The persons and departments responsible for management and implementation of this program are as follows:

*Primary:*           **GEAUGA COUNTY ENGINEER/DRAINAGE ENGINEER**  
*JOSEPH CATTELL, P.E., P.S.*  
*440-279-1800*  
*Email: [jcattell@geauga.oh.gov](mailto:jcattell@geauga.oh.gov)*

*Secondary:*       **GEAUGA SOIL AND WATER CONSERVATION DISTRICT**  
*CARMELLA SHALE, P.E.*  
*440-834-1122*  
*Email: [cshale@geauga.oh.gov](mailto:cshale@geauga.oh.gov)*

The Geauga County Engineer/Drainage Engineer is responsible for the overall management and implementation of our public involvement and participation plan. To assist in implementing our MCM 2 in our SWMP, a Memorandum of Understanding has been entered into with the Geauga County Soil and Water Conservation District, Geauga County Drainage Engineer and the townships of Bainbridge, Chester and Russell has been adopted. These MOUs are attached in the Appendix. The Director/Engineer of the Geauga SWCD prepares the annual report each year which summarizes and documents all educational activities completed in the current year as well as the plan for the upcoming year.

## Evaluation and Assessment

Each December/ January the SWCD will meet with the SWMTF to evaluate whether or not various activities done over the course of the year were successful based on the following (as applicable) and at least one activity occurred each year:

- 1) Participation by the public
- 2) Recognition of products being used in the field that were given out
- 3) Assessment of number of homeowners assisted with stream, erosion or other issues pertaining to pollution prevention
- 4) Assessment of number of complaints received on construction sites
- 5) Amount of recycled items brought to recycling events

## **Annual Reporting**

Geauga Soil and Water Conservation District will assemble the Annual Report for the Geauga County Consolidated Permit utilizing the Ohio EPA form. Each co-permittee and service provider will provide required information to Geauga SWCD annually by January 31.

## **MCM #3 – Illicit Discharge Detection and Elimination (III.B.3)**

### **Adoption of Illicit Discharge Detection and Elimination Ordinance**

Geauga County utilizes their nuisance Geauga County Household Sewage Regulations and Nuisance complaint procedure in ORC 3707.01 to address illicit discharges detected. Since Geauga County's MS4 is primarily roadside ditches and the illicit discharges primarily found are originating from malfunctioning septic system, the County has chosen to utilize their existing regulations and ORC laws to manage these violations. Since the townships have limited authority over septic systems, the procedure to investigate and eliminate an illicit discharge is one of a complaint driven process to the Geauga County Health District.

### **Development and Update of the Storm Sewer Outfalls and Comprehensive Storm Sewer System Maps**

Geauga SWCD has mapped the storm sewer outfalls, storm sewer systems and HSTS locations per available data using GIS mapping as the base map. An outfall database was created and is maintained that links to GIS mapping and provides basic information about the outfalls including type, size, dry weather inspection data, and follow up investigation findings. The receiving waters of our MS4 drainage areas are predominantly (98%) within the Chagrin River watershed. Outfalls were located using existing topography supplemented by field ground truthing of outfall locations by the Geauga SWCD. Although there are minimal traditionally piped storm sewers within the Phase 2 Areas of Geauga County, the storm sewer map is regularly updated as additional storm sewer pipe systems are installed or enclosed ditches are discovered. Copies of both the storm sewer system/outfall map and off-lot discharging HSTS map are included in this SWMP Appendix. Most of the storm sewer systems in Geauga County are open ditches and these drainage patterns are also mapped.

### **Determination of Priority Areas**

Initial dry-weather screening of all outfalls was completed during the #OHQ000001 permit term by the road departments of Geauga County and the townships of Bainbridge, Chester, and Russell. All outfalls that were found wet during a 72-hour period of dry weather were verified within the #OHQ000002 permit period by their respective communities. A list of outfalls was created where dry-weather flow was found. The Geauga County Department of Water Resources conducted sampling of all these outfalls to determine if the total fecal coliform counts exceed 5000 ppm which is the standard set by the Geauga County Health District. If the total fecal coliform count exceeds 5000 ppm, additional investigation is performed by the Geauga County Health District to determine the source of the illicit discharge and then a plan to eliminate is undertaken. Priority for outfalls chosen for testing and elimination is based first on those with the highest total fecal coliform counts, and then those that are located in a clustered area. All outfalls discovered as illicit have been eliminated except for two outstanding outfalls due to the excessive tracing to determine the source and many septic system replacements involved. Work continues to be conducted in this area to finish eliminating the illicit discharge. A second round of dry-weather screening for all outfalls was completed for the #OHQ000004 permit term and will be verified during this permit term utilizing the same method and system as listed above during the previous permit term.

## **Enforcement and Escalation Procedures for Illicit Discharges and Illegal Dumping and Spills**

The Health District is responsible for locating, tracking, and eliminating illicit discharges. When an illicit discharge is detected based on the exceedance of total fecal coliform counts, the Health District as dictated through the ORC ensures that failing septic systems, and in this case illicit discharges, are eliminated either by replacing or repairing the system.

The following general procedure is used for identifying and correcting illicit discharges within Geauga County. A more specific procedure is attached in Appendix:

- Geauga SWCD maps location of all outfalls within the Phase 2 areas of Geauga County and the townships of Bainbridge, Chester, and Russell.
- Geauga SWCD gives listing of all outfalls to the townships of Bainbridge, Chester, and Russell to inspect and document any dry weather flow (at least 72 hours after the last rainfall of 0.10 inches or more).
- The communities document findings and provide reports back to the Geauga SWCD.
- Geauga SWCD updates database with inspection data.
- Geauga SWCD provides a listing of all outfalls with dry weather flow to the Geauga Department of Water Resources to conduct further investigation by testing samples against the standards not to exceed 5000 ppm of total fecal coliform.
- Any outfall with less than 5000 ppm of total fecal coliform is removed from list of potential illicit discharge.
- Outfalls over 5000 ppm of total fecal coliform are forwarded to the Geauga County Health District for further investigation to the source and ultimate correction or elimination.

Gauga Public Health has stopped mandating the For Sale of Property program. The service will be offered as a service to residents. In place of the For Sale of Property program, Geauga Public Health will begin to implement the Ohio Department of Health mandated Operation and Maintenance program. This will begin to bring Geauga County into compliance with Ohio Administrative Code 3701-29. This program will look to ensure that every household sewage treatment system is properly serviced and maintained. Properly maintained systems prolong the life of a household sewage treatment system, reduce the number of costly failures to homeowners and thus reduce bacteria pollutants to ditches, streams, rivers, and wetlands.

The first phase will begin in 2023 with all home sewage treatment systems covered by the Ohio Environmental Protection Agency general permit. These systems directly discharge to ditches, streams or rivers and also known as off-lot home sewage treatment systems. Yearly sampling is required and will be conducted by Geauga Public Health to ensure these systems are meeting the NPDES general permit standards.

In subsequent years, all household sewage treatment systems in Geauga County will be enrolled in the Operation and Maintenance program. Required maintenance will be dependent on the type of system at a home.

The following procedure is used for illegal dumping and spills:

Action will be initiated when a spill or dumping is reported to a staff member within the townships of Bainbridge, Chester, or Russell, the Geauga County Engineer, Geauga Soil and Water Conservation District, Geauga Board of County Commissioners, Geauga County Health District.

Hazardous materials are referred to the Fire Department of the community where it has occurred in and the Geauga County Department of Emergency Services for clean-up in conjunction with the procedures and guidelines in the Ohio EPA's Emergency Response Program, found here:

<https://epa.ohio.gov/divisions-and-offices/emergency-response>This will include notifying the Ohio EPA Northeast District Office within 24 hours at [nedo24hournpdes@epa.ohio.gov](mailto:nedo24hournpdes@epa.ohio.gov) of the location, general description, date and approximate time the illicit discharge was discovered. Additionally, the appropriate Ohio EPA forms and local forms as applicable as included in the Appendix must also be completed.

### **Coordination with MCMs 1 and 6**

The Geauga County Stormwater Management Plan coordinates our MCM 3 program with our MCM 1 and MCM 6 programs. With the pollution prevention education initiatives, as described earlier in MCM 1, education on waste management is included as a topic during the permit term. Through MCM 6, at least one training per permit term covering proper disposal of waste fluids at the township and county road garages will occur.

### **Program Responsibility and Oversight**

The Geauga County Engineer is responsible for the overall management of the illicit discharge detection and elimination program with assistance and specific responsibilities delegated to the Geauga Soil and Water Conservation District, Geauga County Water Resources and Geauga County Health District as outlined in the MOU as included in Appendix.

Procedures specified in carrying out MCM 3 were selected due to the predominance of potential illicit discharges occurring within our storm sewer system (roadside ditches) originating from a failing septic system, staffing capacity and permit requirements while maintaining the rural character of the county. The BMPs selected were chosen to address the watershed TMDLs for TSS, TP, nitrates/nitrogen, and E. Coli. The Geauga County Engineer and Stormwater Taskforce meet once a year in conjunction with the annual reporting to Ohio EPA and evaluate the success of this plan by reviewing progress on annual updates to the storm sewer/outfall map as needed to include catch basins, pipes, ditches, flood control facilities, public and private post-construction water quality BMPs installed to satisfy Ohio EPA's NPDES Construction General Permit. Also, a review of illicit discharge eliminations completed per the list of potential illicit discharges discovered and tested.

Gauga County Water Resources will additionally provide a report at the end of the year to the Geauga SWCD for inclusion into the Annual Report of all sanitary sewer overflows that occurred within the previous year, including time and date of occurrence, where it occurred, reason for overflow and how situation was remedied.

### **Annual Reporting (III.B.3.k)**

Gauga Soil and Water Conservation District will assemble the Annual Report for the Geauga County Consolidated Permit utilizing the Ohio EPA form. Each co-permittee and service provider will provide required information to Geauga SWCD annually by January 31. The annual report will document the following: (1) number of outfalls dry-weather screened, (2) number of dry-weather flows identified, (3) number of illicit discharges identified, (4) number of illicit discharges eliminated, (5) a list of illicit connections have been identified but have yet to be eliminated, including estimated schedules for elimination and (6) summary of any storm sewer system mapping updates.

## MCM #4 - Construction Site Storm Water Runoff Control (III.B.4)

### Program Description

Since 1979, the Geauga County Water Management and Sediment Control (WMSC) Regulations have been in effect to establish technically feasible and economically reasonable standards to achieve a level of management and conservation practices that will abate water erosion of the soil or abate the degradation of the Waters of the State by soil sediment in conjunction with land grading, excavating, filling, or other soil disturbing activities on land used or being developed for nonfarm commercial, industrial, residential or other nonfarm purposes. The Geauga Board of County Commissioners have authorized the Geauga SWCD to administer these regulations. The last update was in 2020 that was compliant with the most recent Ohio EPA NPDES General Storm Water Permit for Construction Activities (#OHC00005). These regulations will be updated within one year of the release of the updated Ohio EPA NPDES General Stormwater Permit for Construction Activities. There is also an MOU between the Geauga Board of County Commissioners, Geauga County Drainage Engineer, Geauga Soil and Water Conservation District and the townships of Bainbridge, Chester and Russell outlining the responsibilities and working agreements and is included in the Appendix. These MOUs will be updated over this permit term to reflect the current permit number as well as any other changes that are applicable to procedures between agencies.

Gaugua SWCD utilizes the Beehive Site Module online tracking system through Ohio Department of Agriculture Department of Soil and Water to track projects, generate plan reviews and site inspections, issue Notices of Violation and Stop Work Orders, track complaints and convert projects with Post Construction Stormwater Controls to a separate database for tracking and annual inspections of these Post Construction BMPS. A copy of the most current set of WMSC regulations is enclosed in the Appendix. In summary, the regulations cover the following:

- **Applicability:** Require operators to submit for review and approval plans that show the implementation of erosion and sediment controls for soil disturbing activities that are proposed that will disturb one (1) acre or more, or less than one (1) acre and part of a larger common plan of development
- **Waste Control:** Plans must contain best management practices such as a dumpster to manage construction waste and a concrete washout for concrete truck rinse outs
- **Review Process:** A review process that requires the applicant to submit for review to the Geauga SWCD the complete WMSC plan (Gaugua County equivalent to SWPPP) along with required review fee for sites subject to review within the WMSC regulations. The Geauga SWCD will review the plan to ensure that plan identifies all required BMPS to minimize pollution and address TMDLs for habitat, sediment, and nutrients. The plan and narrative must also identify the watershed that the project drains to in addition to showing all adjacent streams within 200 feet of the project. Construction may not commence prior to approval of the WMSC plan. There are approximately 200 sites per year within the Phase 2 communities of Bainbridge, Chester and Russell Townships and half of those are actually within the urbanized areas of those communities. Sites range from less than one-acre projects that are part of a larger common plan of development to full commercial or residential subdivision projects. For larger projects we require a contractor certification sheet be submitted so that all site contractors sign off that they are familiar with the WMSC plan and its requirements and will follow the approved plan. Along with this certification sheet, we request a meeting with the project engineer and contractor on site prior to construction to answer questions and ensure all parties understand the requirements of the WMSC. These additional processes are done to address the TMDLs for TSS, TP, and nitrates/nitrogen. In addition, the townships of Bainbridge, Chester and Russell have within their respective zoning resolutions requirements to receive



erosion and sediment control plan review and approval from Geauga SWCD prior to issuance of a zoning certificate. A copy of their zoning resolutions are attached in the Appendix.

- **Site Inspection:** Geauga SWCD reviews all sites at least once per month. Construction sites with soil disturbances of one (1) acre or more are inspected at least twice per month. Inspections on any site may be more frequent based on proximity to critical natural resource areas such as wetlands, streams, or slopes and or lack of responsiveness by owner to corrective items identified. The SWCD generates site inspection reports documenting site conditions noting any deficiencies and approximate time frame to correct. If during subsequent inspections deficiencies are not corrected the following enforcement and escalation procedure takes place to the as permitted and outlined through the ORC:
  - First Notice of Violation issued if deficiencies listed on the site inspection report have not been addressed or corrected at the time of a subsequent inspection.
  - Second Notice of Violation issued if deficiencies cited in First Notice of Violation have not been addressed or corrected within 30 days.
  - If after 15 days deficiencies cited in Second Notice of Violation are not addressed or corrected, the Geauga SWCD shall request concurrence of egregiousness from the Prosecuting Attorney of the violation and written approval to proceed with a Stop Work Order or have the Prosecuting Attorney seek relief in the court of common pleas with an injunction, orders and/or assessment of civil fines.
  - If imminent degradation or damage to property or water quality is occurring, the Geauga SWCD may request, at any time, the Geauga Board of County Commissioners to request the Geauga County Prosecutor to seek an injunction or assess a fine to correct the deficiencies.
  - If the owner, at any time, fails to obtain proper permits, the Geauga SWCD may issue an immediate Stop Work Order after concurrence with the Geauga County Prosecutor.
  - After a Stop Work Order is issued, the Geauga Board of County Commissioners may request the Geauga County Prosecutor to seek relief in the court of common pleas with an injunction, orders, or assessment of fines to correct the deficiencies.
- **Complaints:** The Geauga SWCD tracks all complaints on any site within its USP tracking system. All complaints are investigated, and resolution reported within the tracking system.
- **Applicable TMDLs addressed:** Since lack of proper sediment and erosion control implementation on construction sites is generally known to be a large contributor of TMDL loadings of TSS, TP, and nitrates/nitrogen, Geauga County's Water Management and Sediment Control Regulations and corresponding procedures and tools enable adequate management of these TMDL loadings.

## Annual Reporting

Geauga Soil and Water Conservation District will assemble the Annual Report for the Geauga County Consolidated Permit utilizing the Ohio EPA form. Since Geauga SWCD is the primary entity responsible for this minimum control measure and internally tracks this information, no additional entities are required to submit information for annual reporting. Within the annual report, Geauga SWCD documents the following: (1) number of applicable sites within in the Phase 2 area, (2) number of pre-construction storm water pollution prevention plan reviews, (3) number and frequency of site inspections, (4) number of violation letters issued, (5) number of enforcement actions taken and (6) number of complaints received and number followed up on.

## MCM #5 - Post-Construction Storm Water Management in New Development and Redevelopment (III.B.5)

### Post-Construction Stormwater Management Regulation

Since 1979, the Geauga Board of County Commissioners have adopted and updates periodically the Geauga County Water Management and Sediment Control (WMSC) Regulations which have been in place to serve as erosion and sediment control regulations and standards for construction site runoff as well as manage stormwater quantity and since 2004 updated to also manage post construction stormwater quality. The Geauga BOCC have authorized the Geauga SWCD to administer these regulations. The last update was in 2020 that was compliant with the most recent Ohio EPA NPDES General Storm Water Permit for Construction Activities (#OHC00005) There is also an MOU between the Geauga Board of County Commissioners, Geauga County Drainage Engineer, Geauga Soil and Water Conservation District and the townships of Bainbridge, Chester and Russell outlining the responsibilities and working agreements and is included in the Appendix. These regulations will be updated within one year of the release of the updated Ohio EPA NPDES General Stormwater Permit for Construction Activities.

Gauga County SWCD utilizes the Beehive Site Module online tracking system through Ohio Department of Agriculture Department of Soil and Water to track projects, generate plan reviews and site inspections, issue Notices of Violation and Stop Work Orders, track complaints and convert projects with Post Construction Stormwater Controls to a separate database for tracking and annual inspections of these Post Construction BMPs. All structural stormwater control BMPs are mapped and included in the Appendix (some of these BMPs were not a requirement of the Ohio EPA MS4 permit but are still part of the Geauga County stormwater basins inventory). A copy of the most current set of WMSC regulations is enclosed in the Appendix. In summary, the regulations cover the following:

- **Applicability:** Require operators to submit for review and approval plans that show the proposed design and implementation of post-construction stormwater management best management practices for projects where soil disturbing activities are proposed that will disturb one (1) acre or more, or less than one (1) acre and part of a larger common plan of development.
- **Review Process:** A review process that requires the applicant to submit for review to the Geauga SWCD the complete WMSC plan (Gauga County equivalent to SWPPP) along with the required review fee for sites subject to review within the WMSC regulations. The Geauga SWCD will review the plan to ensure it provides post-construction stormwater quality control practices utilizing the analysis and calculations for water quality volume provided within the WMSC Regulations and Ohio EPA NPDES General Storm Water Permit for Construction Activities (#OHC00004). The designer may choose a BMP from a menu of options such as bioretention, wet extended detention basin and permeable pavement, etc. as provided in the Ohio EPA permit and WMSC Regulations. BMPs for water quality are selected to address the TMDLs for TSS, TP, and nitrates/nitrogen. In addition, the townships of Bainbridge, Chester and Russell have within their respective zoning resolutions requirements to receive erosion and sediment control plan review and approval from Geauga SWCD prior to issuance of a zoning certificate. A copy of their zoning resolutions are attached in the Appendix.
- **Site Inspection:** Geauga SWCD inspects all sites at least once per month. Construction sites with soil disturbances of one (1) acre or more are inspected at least twice per month. Inspections on any site may be more frequent based on proximity to critical natural resource areas such as wetlands, streams, or slopes or due to lack of responsiveness by owner to correct items needed. Once a site is complete and finalized, Geauga SWCD also inspects all facilities that were built after 2003 once per year to ensure they are still functioning per original approved design and installation. The SWCD generates site inspection

reports documenting site conditions noting any deficiencies and approximate time frame to correct and forwards to the owner of the construction project or person responsible for the long-term maintenance of the post-construction stormwater facility. If during subsequent inspections deficiencies are not corrected the following enforcement and escalation procedure takes place as dictated and outlined within the ORC:

- First Notice of Violation issued if deficiencies listed on the site inspection report have not been addressed or corrected at the time of a subsequent inspection.
  - Second Notice of Violation issued if deficiencies cited in First Notice of Violation have not been addressed or corrected within 30 days.
  - If after 15 days deficiencies cited in Second Notice of Violation are not addressed or corrected, the Geauga SWCD shall request concurrence of egregiousness from the Prosecuting Attorney of the violation and written approval to proceed with a Stop Work Order or have the Prosecuting Attorney seek relief in the court of common pleas with an injunction, orders and/or assessment of civil fines.
  - If imminent degradation or damage to property or water quality is occurring, the Geauga SWCD may request, at any time, the Geauga Board of County Commissioners to request the Geauga County Prosecutor to seek an injunction or assess a fine to correct the deficiencies.
  - If the owner, at any time, fails to obtain proper permits, the Geauga SWCD may issue an immediate Stop Work Order after concurrence with the Geauga County Prosecutor.
  - After a Stop Work Order is issued, the Geauga Board of County Commissioners may request the Geauga County Prosecutor to seek relief in the court of common pleas with an injunction, orders, or assessment of fines to correct the deficiencies.
- **As-Built:** Geauga SWCD requires through the WMSC regulations that before a construction project is finalized and closed that an “as-built” be submitted with a certification from the surveyor providing the final elevations and dimensions of the facility as well as certification from the engineer confirming that the final “as-built” structure meets the original approved design requirements per the WMSC regulations.
  - **Long-Term Maintenance:** Geauga SWCD requires, through the WMSC regulations, as part of the plan review process that the applicant submits a long-term maintenance agreement for the post-construction storm water management structures. The document must identify the person responsible for long-term maintenance, maintenance activities required and their frequency, and allows Geauga SWCD access to inspect the facility as needed. This document is also required to be recorded in the County Recorder’s office so it is officially on file and will follow the parcel upon title search. A sample of a document commonly used is located in Appendix. Since 2009, Geauga County created a Drainage Maintenance District where all proposed subdivisions are required to enter into the Drainage Maintenance District with the Geauga County Commissioners. This establishes a funding assessment mechanism for the long-term maintenance, inspection, and repair of post-construction stormwater facilities through the Geauga County Engineer/Drainage Engineer. Geauga County Subdivision Regulations outlining this requirement is enclosed along with sample documents used when entering into these agreements is included in the Appendix.
  - **Applicable TMDLs addressed:** Phase 2 areas within Geauga County are primarily residential communities with well-defined commercial and industrial development areas. Water quality concerns as identified in the Chagrin Watershed TMDL of TSS, TP and nitrates/nitrogen can be attributed to increases in stormwater runoff as impervious cover increases and include sedimentation due to streambank erosion, increased flooding due to increases in stormwater volume, increases in stormwater temperature in detention facilities and habitat loss as riparian and wetland areas are impacted by development. The successful ongoing use of these practices is reflected within the upper reaches of the Chagrin Watershed

within Geauga County where the data for the TMDL loadings are not as severe nor as consistent as they appear within the lower reaches of the Chagrin watershed outside Geauga County.

### **Non-Structural Stormwater BMPs**

Within Geauga County there are multiple tools being implemented to address post-construction runoff from new developments and redevelopments. Within the townships of Bainbridge, Chester and Russell, the zoning resolutions specify a frontage/width requirement, front, rear, and side yard setbacks as well as maximum impervious lot coverage. These setbacks and maximum lot coverage requirements help to ensure vegetation and green space within all developed areas are preserved to the maximum extent resulting in larger lots with more capacity to infiltrate stormwater and reduce the impacts of stormwater runoff. These larger type of subdivision lots promote the desire to keep as much of the natural existing vegetation and/or woodlots intact during construction, and only clearing the areas needed to be disturbed to build the infrastructure in order to retain larger natural stormwater treatment areas.

Russell and Bainbridge Townships also have a conservation type development allowance within their zoning resolutions. Russell Township has what is referred to as “Planned Residential Developments” and Bainbridge Township’s is referred to as “Mixed Use Planned Unit Development District”. Both of these zoning resolutions allow the developer to cluster building lots in return for providing larger conserved open space and preservation of natural resources on the subdivisions and lots thus allowing for better stormwater quality and quantity management and more infiltration. These zoning resolutions are attached and can be found at:

<http://twp.russell.oh.us/departments/zoning>

<http://www.bainbridgetwp.com/Departments/Zoning/Zoning-Resolution>

As with all setbacks, landowners proposing activities in setbacks must request a variance and this request is reviewed, modified, and approved or disapproved by the township. When considering variance requests, the township may consider the extent to which the requested variance impairs flood control, erosion control, water quality protection or other functions of the riparian setback based on technical and scientific data. The resolutions state that soil disturbing activities permitted in the setback through variance should minimize clearing and use BMPs to minimize erosion and control sediment and those variances should not be granted for installations of impervious surfaces. The townships prioritize granting variances where feasible to other setback requirements in order to maintain the riparian setback where applicable.

### **Annual Reporting (III.B.5.f.vi)**

Geauga Soil and Water Conservation District will assemble the Annual Report for the Geauga County Consolidated Permit utilizing the Ohio EPA form. Since Geauga SWCD is the primary entity responsible for this minimum control measure and internally tracks this information, no additional entities are required to submit information for annual reporting. Within the annual report, Geauga SWCD documents the following: (1) number of applicable sites within the Phase 2 area requiring post-construction controls, (2) number of pre-construction storm water pollution prevention plan reviews performed, (3) number of inspections performed to ensure built to requirements, and (4) number of long-term operation and maintenance (O&M) plans developed and agreements in place.

## **MCM #6 - Pollution Prevention/Good Housekeeping for Municipal Operations (III.B.6)**

### **Pollution Prevention/Good Housekeeping Program Overview**

Geauga County's Pollution Prevention/Good Housekeeping Program was created with consideration of the rural nature of stormwater conveyances and its winter climate within the MS4 communities. The Road Superintendents of Geauga County and the townships of Bainbridge, Chester and Russell maintain inventories of township/county activities throughout the MS4 that may impact stormwater and relays any updates to the Geauga SWCD for revisions to the Pollution Prevention/Good Housekeeping Program. These include:

*Vehicle maintenance:* County and township personnel conduct basic vehicle and equipment maintenance such as oil changes at their respective MS4 facilities. All waste oils/liquids are collected in an enclosed container and removed by a third party at least once per year. Proper disposal and containment of waste liquids improves the TSS, TP and nitrate/nitrogen TMDLs.

*Salt application:* Due to our communities' location within the Northeast Ohio Snowbelt, usage of salt is required on roadways for public safety. Minimization of salt usage is done by oftentimes only applying salt on hills, intersections, and curves. Bainbridge Township uses "Beet Heet" and a salt brine mixture to prewet and reduce their salt usage. Chester Township uses a product called "Ice Bite" to decrease the need for reapplication. Geauga County uses a liquid salt brine to pretreat roads also resulting in a reduction in salt usage. Salt at all facilities is stored within an enclosed structure. These salt reduction methods were chosen to improve TSS and nitrate/nitrogen TMDLs.

*Ditch cleaning:* Roadside ditching is conducted as needed to maintain stormwater flow through ditches and prevent the backup of water onto roadways. As a section of ditching is completed it is followed up by hydroseeding. Typically, areas are reseeded within 7 days and within 2 days if within 50 feet of a waterway. Any slopes greater than 2% have turf reinforcement matting installed. Ditch cleaning practices listed above will minimize pollutant runoff and reduce TMDL loadings of TSS, TP and Nitrates/Nitrogen.

*Street sweeping:* Street sweeping is generally not conducted within Geauga County due to the lack of curb and gutter streets. When it is necessary to sweep on the few roads that have a curb and gutter those materials collected by the street sweeper are picked up by a refuse company and taken to a landfill. By proper pickup and disposal of sweepings, TMDL loadings of TSS, TP and nitrates/nitrogen can be addressed.

*Fertilizer/Herbicide/Pesticide usage:* Fertilizer is used on Geauga County Road projects as needed only to encourage vegetation growth from roadside construction projects. Bainbridge Township only utilizes fertilizer/herbicides on ballfields. Chester Township does not use any fertilizers/herbicides and Russell Township contracts all fertilizer/herbicide usage out to a landscaping firm. All applications of fertilizer/herbicide may only be completed by licensed applicators. None of the communities use any pesticides. Minimization and outsourcing of fertilizer and herbicides application has been selected to ensure proper application by licensed applicators and avoid improper application rates to minimize pollutant runoff and reduce TP, nitrate/nitrogen TMDL loadings.

## Facilities Subject to Pollution Prevention/Good Housekeeping Program

Facilities subject to the Geauga County Pollution Prevention/Good Housekeeping Program include the following:

### Bainbridge Township

ROAD DEPARTMENT AND SETTLERS PARK, 17800 Haskins Road, Chagrin Falls, OH 44022

- Road Department
  - Main Building – Offices, storage of trucks, equipment, parts, signs and equipment fluids such as oils, cleaners, etc. and maintenance of road equipment
  - Road Department Salt Dome – Salt storage only
  - Road Department Secondary Salt and Cinder storage – Storage of salt, cinders, topsoil, and sand
  - Road Department Cold Storage – Storage of equipment, herbicides, and crack sealer
  - Cell Towers and Building of Towers – Towers and electrical equipment for towers
  - Recycle Area – Roll off containers for residents to recycle paper, cardboard, etc.
  - Waste Oil Tank – 300 gallon above ground waste oil tank
  - Fuel Tanks (Above Ground) – (1) 2500-gallon diesel fuel tank and (1) 1000-gallon gasoline fuel tank
  - Cold Storage – Storage of equipment
- Settlers Park – Soccer and baseball fields, outdoor pavilion, basketball court, sand volleyball court, gazebo, and playground

### Chester Township

TOWN HALL AND ROAD DEPARTMENT, 12701 Chillicothe Road, Chesterland, OH 44026

FIRE STATION ONE, 8552 Parkside Drive, Chesterland, OH 44026

POLICE STATION, 12696 Opalocka Drive Chesterland, OH 44026

- Town Hall – Housing of personnel and administrative offices. There are no vehicles or raw materials stored or maintained at this location.
- Road Department – Offices, equipment storage, cleaning, and maintenance.
  - Road Department Cold Storage Building – Storage of trucks, off road equipment. One service bay for equipment maintenance. Floor drains are directed to an oil/water separator first and then directed to the sanitary sewer.
  - Salt Barn – Storage of salt, #9 gravel, topsoil, mulch, and cold mix.
  - Storage Tank (Above Ground) - 2 Chamber 10,000-gallon storage tank contained within a concrete trough. Stores 3000 gallons of “beet juice” used for ice control and 7000 gallons of “dust bond” used for dust control.
  - Fuel Tanks (Underground) – (1) underground 10,000-gallon gas fuel tank, (1) underground 10,000-gallon diesel fuel tank
- Fire Station One – Housing of personnel and administrative offices, storage of fire and EMS vehicles. Maintenance is done by a third party offsite. There is no storage of raw materials. All floor drains are directed to an inground collection system that is pumped out and removed by a third party at least once per year
- Police Station – Primarily houses personnel and administrative offices. Vehicles are kept outside on the parking lot. There is no storage of any materials and vehicle maintenance and vehicle washing is done by third party offsite. There is no storage of raw materials.

- Police Car Garage – Cold storage of police cars only. No maintenance or washing of vehicles and no storage of raw materials.
- Used Oil Tanks - Two (2) above ground tanks to store used oil.

Russell Township

POLICE STATION: 14820 Chillicothe Road, Novelty, OH 44072

FIRE STATION: 14810 Chillicothe Road, Novelty, OH 44072

ROAD DEPARTMENT: 15635 Chillicothe Road, Chagrin Falls, OH 44022

TOWN HALL: 14890 Chillicothe Road, Novelty, OH 44072

- Police Station - Administrative and employee facility for police officers and staff. Police cruiser vehicles are stored inside the structure in garage bays. Cleaning of vehicles such as car washing is done within the garage bay facility with proper drainage installed to storm sewer system. There is no storage of raw materials on-site.
- Fire Station - Administrative offices and employee facility for EMS, Paramedics, and Fire fighters. Sleeping, kitchen, shower, washer and dryer areas for gear and conference room are on site. Ambulance, Fire and Rescue vehicles are stored inside the structure in garage bays. Any vehicle washing is done within garage facilities and enters storm sewer system after passing through an oil/water separator.
- Road Department - There is a cement pad where fueling of vehicles is done. An EcoVault is present for storage of fuels, i.e., oil, diesel, and gasoline.
  - Houses administrative office and employee facility for road crew personnel. All vehicles are stored inside the structure in garage bays. Washing of trucks and road vehicles is done within the garage area where the floor drains are connected to an oil separation system to catch any pollutants discharged to drains. Limited vehicle and equipment maintenance and repair service is conducted on-site such as oil change and lubrication services. Any paints, solvents or other HazMat materials are stored in fireproof safes designed for these materials. All major vehicle maintenance is done off-site at specialized garage facilities.
  - Salt/storage barn and is used to store salt, cinders, and crack sealer.
  - Cold Storage Sheds – Storage of road signs and mulching materials
- Historic Town Hall - The historic town hall is used as a community meeting facility for homeowner associations, the Russell Historical Society, and other community township functions, meetings, and gatherings. There are no vehicles or raw materials stored, fueled, or maintained at this location.

A Pollution Prevention/Good Housekeeping Program is prepared for all facilities listed above and was last updated December 2022. A copy is kept on file at each facility and is included in the Appendix. There are no Industrial Facilities within the permit area.

## Evaluation of Flood Management Projects

For any flood management projects undertaken by Geauga County or the townships, all related construction and maintenance activities within jurisdictional waters of the United States are done in compliance with Sections 402 and 404 of the Clean Water Act. Plans and specifications of such activities requiring permits and NOI would be forwarded to the Ohio EPA and the US Army Corps of Engineers when appropriate. The use of sediment and erosion control measures on all projects is required per the Geauga County WMSC Regulations. The Geauga SWCD

would review these projects to determine that water quality practices are implemented where applicable. At this time, Geauga County does not have any MS4 owned regional flood control projects.

## **Training**

Geauga SWCD and Geauga County Engineer coordinate annual training for the Road Departments of Geauga County and the townships of Bainbridge, Chester and Russell that are up to date and relevant to their daily operations as it pertains to stormwater management and pollution prevention. Trainings conducted in the past and could be conducted again in the future include: Review of the Pollution Prevention and Good Housekeeping Manual, stormwater pollution prevention, onsite compliance walk-thru and review of facilities, road salt spreading and calibration, and spill prevention. The Geauga County Engineer is responsible for the scheduling and organization of the training.

A field manual of Erosion and Sediment Control for roadside construction BMPs was created by Geauga SWCD and provided to Geauga County and the townships of Bainbridge, Chester, and Russell to be utilized as a quick reference tool by members of their respective road departments. This handbook directly addresses TMDLs of TSS by minimization of erosion and sediment. This book will be reviewed annually. A copy of this manual is included in the Appendix.

## **Program Evaluation and Oversight**

The Road Superintendents of Geauga County and the townships of Bainbridge, Chester and Russell are responsible for the overall management and implementation of the Pollution Prevention/Good Housekeeping program as it pertains to their facility. To assist in implementing MCM 6 in our SWMP, a Memorandum of Understanding with the Geauga County Soil and Water Conservation District, Geauga County Drainage Engineer and the townships of Bainbridge, Chester and Russell has been adopted. These MOUs are attached in the Appendix. The road superintendents communicate with the Geauga SWCD and Stormwater Committee annually in conjunction with the annual reporting required by Ohio EPA to evaluate whether BMPs need to be adjusted or if conditions at their facilities need to be updated. A copy of the Annual Facility Inspection Reports used by the communities is included in the Appendix at the end of the Geauga County Pollution Prevention/Good Housekeeping Plan. BMPs are selected to improve TMDL loadings of TSS, TP, Nitrate/Nitrogen and E. Coli.

## **Annual Reporting (III.B.6.vii)**

Geauga Soil and Water Conservation District will assemble the Annual Report for the Geauga County Consolidated Permit utilizing the Ohio EPA form. Each co-permittee and service provider will provide required information to Geauga SWCD annually by January 31 which shall include their annual self-inspection reports of their facilities. The Geauga County Consolidated Annual Report shall document the following: (1) summary of employee training program(s) implemented with number of employees that attended and (2) summary of activities and procedures implemented for your operation and maintenance program.



## **Review and Update of the Stormwater Management Program**

An annual review of our SWMP in conjunction with preparation of the Annual Report to Ohio EPA required under Part IV.C of the MS4 Permit #OHQ000004 is conducted. Any proposed additions to the SWMP during the life of the permit are made upon written notification to Ohio EPA and through the Annual Report. Changes replacing an ineffective or infeasible BMP specifically identified in the SWMP with an alternate BMP are requested of Ohio EPA according to the procedure outlined in accordance with Part III.D.2.b of the MS4 Permit #OHQ000004 and include the following information:

- An analysis of why the BMP is ineffective or infeasible (including cost prohibitive),
- Expectations on the effectiveness of the replacement BMP,
- An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.
- Unless specifically denied by Ohio EPA, the requested changes proposed in accordance with the criteria above shall be deemed approved and may be implemented 60 days from submittal of the request.

## **Evaluating, Record Keeping and Reporting**

Through the procedures established in each MCM rationale, Geauga County Engineer and SWCD evaluates program compliance, appropriateness of identified BMPs, progress towards achieving identified measurable goals and satisfying the performance standards. Geauga County SWCD retains copies of all reports and documentation required by Part IV.B.1 of the MS4 Permit #OHQ000004 and will retain and make our required documentation accessible to the public if requested to do so in writing according to Part IV.B.2 of the MS4 Permit OHQ000004. For the 5-year term of the permit, yearly reports are prepared detailing the progress of our community in meeting the measurable goals of the program using the reporting forms provided by Ohio EPA. Reports are filed annually in accordance with the requirements of Part IV.C of the MS4 Permit #OHQ000004.

## Appendix

- A-1 Table of Organization
- A-2 Sample Education News Article
- A-3 MOU's
- A-4 Storm Sewer/Outfall Map
- A-5 Off-Lot Discharging HSTS Map
- A-6 Illicit Discharge Procedures
- A-7 Water Management and Sediment Control Regulations
- A-8 Township WMSC Zoning Resolutions
- A-9 Structural Stormwater Control BMP Map
- A-10 Sample Long Term Maintenance Agreement
- A-11 Geauga County Subdivision Regulations – Drainage Maintenance District
- A-12 Sample Drainage Maintenance District Agreements
- A-13 Universal Illicit Discharge and Spill Reporting Forms (County and Ohio EPA)
- A-14 Best Management Practices – Erosion and Sediment Control Field Manual for Local Government Highway and Public Utility Departments
- A-15 Geauga County Pollution Prevention/Good Housekeeping Program

## **Appendix A-1 Table of Organization**

**GEAUGA COUNTY BOARD OF COMMISSIONERS**

JIM DVORAK  
TIMOTHY LENNON  
RALPH SPIDALIERI  
12611 Ravenwood Drive  
Chardon, OH 44024  
440-279-1660

**GEAUGA COUNTY ENGINEER/DRAINAGE ENGINEER**

JOSEPH CATTELL, P.E., P.S.  
12665 Merritt Road  
Chardon, OH 44024  
440-279-1800

**GEAUGA SOIL AND WATER  
CONSERVATION DISTRICT**

CARMELLA SHALE, P.E.  
12611 Ravenwood Drive, Suite #240  
Chardon, OH 44024  
440-834-1122

**CHESTER TOWNSHIP  
CO-PERMITTEES**

KEN RADTKE  
JOE MAZZURCO  
CRAIG RICHTER  
12701 Chillicothe Road  
Chesterland, Oh 44026  
440-729-7058

**RUSSELL TOWNSHIP  
CO-PERMITTEES**

KRISTINA PORT  
JAMES MUELLER  
MATT RAMBO  
8501 Kinsman, PO Box 522  
Novelty, OH 44072  
440-338-8912

**BAINBRIDGE TOWNSHIP  
CO-PERMITTEES**

MICHAEL BATES  
KRISTINA O'BRIEN  
JEFFREY MARKLEY  
17826 Chillicothe Road  
Chagrin Falls, OH 44023  
440-543-9871

**PUBLIC EDUCATION & OUTREACH (MCM#1)**  
**PUBLIC INVOLVEMENT & PARTICIPATION (MCM#2)**

**GEAUGA COUNTY ENGINEER/DRAINAGE ENGINEER**  
JOSEPH CATTELL, P.E., P.S.  
440-279-1800  
Email: jcattell@co.geauga.oh.us

**GEAUGA SOIL AND WATER CONSERVATION DISTRICT**  
CARMELLA SHALE, P.E.  
440-834-1122  
Email: CShale@Gauga.oh.gov

**GEAUGA PARK DISTRICT**  
JOHN OROS  
440-286-7496  
Email: joros@geaugaparkdistrict.org

**GEAUGA COUNTY HEALTH DISTRICT**  
DAN LARK - Interim Director  
440-279-1900  
Email: DLark@geaugacountyhealth.org

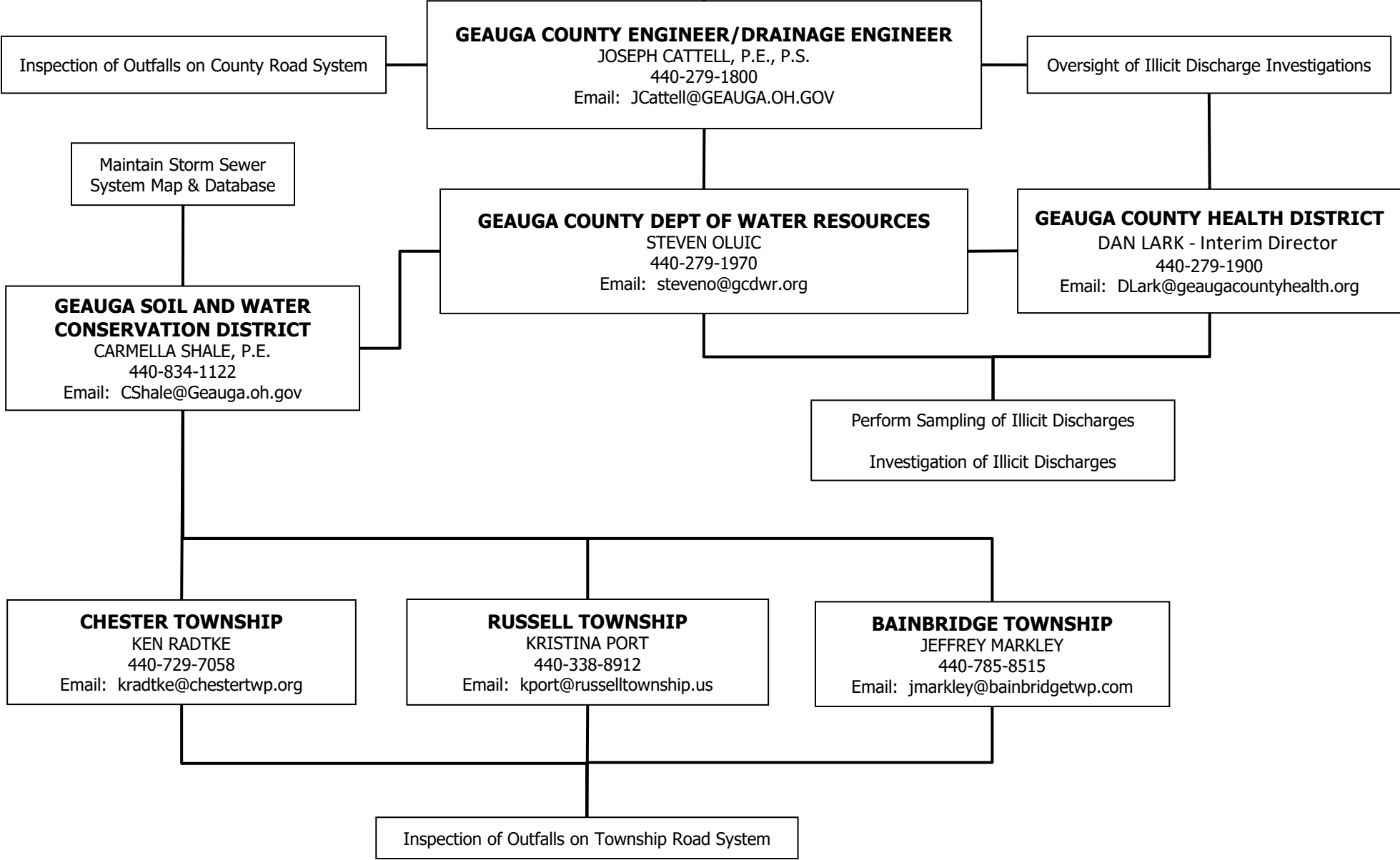
- Educational Brochures & Fact Sheets
- Educational Displays
- Public Presentations for Groups
- Newsprint Articles
- Classroom Education Programs for Schools
- Volunteer & Community Service Opportunities

**CHESTER TOWNSHIP**  
KEN RADTKE  
440-729-7058  
Email: kratke@chestertwp.org

**RUSSELL TOWNSHIP**  
KRISTINA PORT  
440-338-8912  
Email: kport@russelltownship.us

**BAINBRIDGE TOWNSHIP**  
JEFFREY MARKLEY  
440-785-8515  
Email: jmarkley@bainbridgetwp.com

**ILLCIT DISCHARGE DETECTION & ELIMINATION (MCM#3)**



**CONSTRUCTION SITE STORM WATER RUNOFF CONTROL (MCM #4)**

**GEAUGA SOIL AND WATER  
CONSERVATION DISTRICT**  
CARMELLA SHALE, P.E.  
440-834-1122  
Email: CShale@Geauga.oh.gov

- Oversight of "Erosion and Sediment Control" for all Projects within Geauga County
- Regulatory Plan Review and Site Inspections of SWP3 for all Construction Projects within Geauga County

**GEAUGA COUNTY ENGINEER/DRAINAGE ENGINEER**  
JOSEPH CATTELL, P.E., P.S.  
440-279-1800  
Email: JCattell@GEAUGA.OH.GOV

- Oversight of Drainage Maintenance Districts within Geauga County
- Design of SWP3s for County and Township Road & Drainage Construction Projects
- SWP3 Monitoring Inspections for County and Township Road & Drainage Projects

**POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT (MCM #5)**

**GEAUGA SOIL AND WATER CONSERVATION DISTRICT**

CARMELLA SHALE, P.E.  
440-834-1122

Email: CShale@Geauga.oh.gov

- Review and Approval of Storm Water Management Plans & SWP3s for All Construction Sites in Geauga County
- Construction Inspection of all Post-Construction BMPs
- Annual Maintenance Inspection & Tracking of all Post Construction BMPs

**GEAUGA COUNTY ENGINEER/DRAINAGE ENGINEER**

JOSEPH CATTELL, P.E., P.S.  
440-279-1800

Email: JCattell@GEAUGA.OH.GOV

- Review and Approval of Drainage Maintenance Districts (DMDs)
- Oversight of Annual Maintenance Inspections of Drainage Maintenance Districts (DMD)s
- Oversight of "Storm Water Management"
- Design of Storm Water Management Plans & SWP3s for County and Township Road & Drainage Projects



**POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS (MCM #6)**

**GEAUGA SOIL AND WATER CONSERVATION DISTRICT**  
CARMELLA SHALE, P.E.  
440-834-1122  
Email: CShale@Geauga.oh.gov

**GEAUGA COUNTY ENGINEER/DRAINAGE ENGINEER**  
JOSEPH CATTELL, P.E., P.S.  
440-279-1800  
Email: JCattell@GEAUGA.OH.GOV

- Develop and Maintain SWP3 for County and Township Facilities and Operations
- Day to Day Maintenance of County Facilities
- Implement SWP3 for County Facilities

**CHESTER TOWNSHIP**  
KEN RADKTE  
440-729-7058  
Email: kradtke@chestertwp.org

**RUSSELL TOWNSHIP**  
KRISTINA PORT  
440-338-8912  
Email: kport@russelltownship.us

**BAINBRIDGE TOWNSHIP**  
JEFFREY MARKLEY  
440-785-8515  
Email: jmarkley@bainbridgetwp.com

- Day-to-Day Maintenance of Township Owned Facilities
- Implement SWP3 for Township Facilities



# Keeping Your Yard Green and Our Water Clean!

The recent surge of long-awaited warm weather has brought some of us back to a long-lost, yet oh so familiar place... our yard! In the weeks ahead we will joyfully watch spring bring our yard back to life. This sacred space surrounding our home hopefully brings feelings of comfort, relaxation, pride, and security. Whether we are lounging with a book in the hammock, playing ball with our children, enjoying a cookout with friends, or tending to a flowerbed, our lawn is an essential space to our family and an extension of our home. We love our lawns! Oh, those great swaths of luxuriant green! We love them so much, in fact, that today the United States is covered with approximately 30 million acres of turf, making grass a bigger agricultural crop than corn and soybeans combined. And our love of green brings in the green, as lawn care is now a lucrative multimillion dollar industry.

The green is here indeed! Since the average size of a home lawn is 1/3 of an acre, all of that yearly mowing, blowing, watering, weeding, and fertilizing require resources and create consequences. Since the post-war era, the notion of the perfect lawn became an integral part of our suburbia status and thousands of new chemicals, including synthetic lawn care products, entered our stores, our homes, our yards, and inadvertently, our waterways. Over the last 50 years the amount of nitrogen and phosphorus entering our waters has escalated dramatically and nutrient pollution is becoming one of America's costliest and most challenging environmental problems. This pollution now threatens our drinking water, our fishing and tourism industries, our property values, our freshwater habitats, and our health. Recent large scale algal blooms fed by the increased presence of nutrients have reached unprecedented numbers in Lake Erie and nearby waterways. Though these harmful algal blooms are the cumulative effect of many different sources, we cannot overlook the 80 million tons of synthetic lawn fertilizers Americans apply each year to our beloved lawns.

## **From the Ground Up: Building Healthy Soil**

The good news is that we can have both - healthy, green lawns and clean, blue water! This year the Geauga Soil and Water Conservation District (SWCD) is enabling homeowners to break their addictions to lawn care chemicals starting from the ground up. Through educational opportunities and resources, the District is promoting soil health through natural lawn care and helping residents evaluate their old habits, access the needs of their lawn, and apply newly-learned natural lawn care practices that build organic matter, improve soil health, and create a self-sustaining, low-maintenance lawn.

By collaborating with our storm water partners, Good Nature Organic Lawn Care, and other SWCDs and agencies, Geauga SWCD has already hosted one soil health workshop and another regional event is in the works for this fall. These workshops provide an overview of soil health and management, along with ways to implement a natural lawn care system. Topics include soil tests, grass types, organic fertilizers, proper mowing and watering techniques, and ways to control weeds and pests. Free soil testing kits and resources are provided to participants with assistance from the ODNR Division of Soil and Water Resources Healthy Soils Mini-Grant.

## **Start with a Soil Test**

An easy and essential first step to any lawn care program is to test your soil. Just like us, soil needs adequate food, air, and water to function properly and stay healthy. Soil should be considered a living, dynamic body and only healthy soil can produce healthy plants. Anything done to the yard or plants that does not consider the needs of the soil is simply a waste of time and can often cause more harm than good. In fact, many synthetic fertilizers and pesticides actually destroy the beneficial organisms in a lawn's ecosystem. Organic lawn care focuses instead on soil management techniques by building up the nutrients, organisms, and life in the soil over time. These long term results ultimately improve the quality of the soil, increase its ability to hold water and nutrients, and reduce yard maintenance and the money and resources needed for such maintenance - like fuel, water, products, and time. If you haven't already, contact your SWCD or Ohio State University Extension office to obtain a soil testing kit. Test results will provide solid, scientific, and reliable guidance for improving your soil and greening your lawn. Now is the time to make a difference... beginning in your own backyard!





**MEMORANDUM OF UNDERSTANDING  
REGARDING OHIO EPA NPDES PHASE 2 PROGRAM AND COORDINATION BY  
AND BETWEEN  
Geauga Board of County Commissioners, Geauga County Drainage Engineer, Geauga Soil  
and Water Conservation District, Geauga County Health District, BAINBRIDGE  
Township, & Geauga County Department of Water Resources**

This Memorandum of Understanding (MOU) is entered into this 28 day of July, 2020, between BAINBRIDGE Township (Township), by its Trustees, the Geauga County Soil and Water Conservation District (SWCD), by its Supervisors, the Geauga County Drainage Engineer (Engineer), the Geauga County Health District (Health Department), Geauga County Department of Water Resources (GCDWR) and the Geauga Board of County Commissioners (County).

**Section A**

The purpose of this memorandum is to acknowledge certain duties undertaken by the County in fulfillment of a permit from the Ohio Environmental Protection Agency (EPA) authorizing discharges of storm water from a municipal separate storm sewer system, and to define the role of the Townships as co-permittees and the SWCD, Health Department, GCDWR and Drainage Engineer in assisting the County to fulfill those duties. The parties to this MOU recognize the following:

1. The County is a community required to obtain a permit from EPA under the Ohio EPA General NPDES Permit No.: OHQ000003 for storm water discharges from its "municipal" separate storm sewer system (MS4), as defined in the permit and referred to herein as "permit".
2. The Township is a co-permittee of the County's Ohio EPA General NPDES Permit No. OHQ 000003
3. The Geauga County Drainage Engineer has been appointed by the Geauga Board of County Commissioners as the Drainage Engineer for the County and has taken on the role to coordinate County compliance with the Ohio EPA General NPDES Permit No. OHQ000003
4. SWCD is the Agency, by agreement with the Geauga County Commissioners under rules duly adopted pursuant to Section 307.79 of the Ohio Revised Code, which has jurisdiction to administer regulations pertaining to storm water management and sediment control in Geauga County.
5. The Township is not within the limits of a municipal corporation and is located in Geauga County. Therefore, the Township is under the jurisdiction of the County Commissioners under Section 307.79 with respect to storm water management and sediment control issues in Geauga County.

6. The Geauga County Health District is the entity within Geauga County that has the legal authority to regulate and enforce discharges from septic systems.
7. GCDWR is responsible for management and oversight of the County's sanitary sewer district, County owned wastewater/water infrastructure, and ensuring compliance with relevant regulatory agencies. GCDWR operates an EPA certified environmental laboratory that conducts routine chemical analysis on water and wastewater samples.
8. Any additional costs for specific materials, consulting, or programs will be negotiated and accepted by mutual agreement at the time such materials or services are provided. Nothing in the MOU shall be construed to commit the County, Engineer, Health District, GCDWR or Township to any specific expenditure.

### **Section B**

Under this MOU, the Township agrees to the following:

1. It will use its best faith efforts to provide the County, Health Department, GCDWR, Engineer and SWCD information about its obligations under the permit, issues pertinent to storm water management, and plans, programs, and resources that it has committed to fulfilling its obligations under the permit.
2. Its co-permittee obligations are solely its responsibility and will continue in accordance with the terms of the permit whether or not the Township receives services or advice from SWCD, County, Health Department, GCDWR or County in fulfillment of its permit obligations.
3. It understands that certain services and materials contained within this MOU may require that a reasonable fee be charged by the SWCD, County, GCDWR, Health Department, and Engineer.
4. Summarize activities related to permit on an annual basis by January 31 and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

### **Section C**

Under this MOU, the SWCD agrees to the following:

1. It will use best faith efforts to collect information, consult with the Township, County and Engineer on its program and plans, and assist all in fulfilling its obligations under the permit.
2. Gather, assemble and compile necessary information from the County, Engineer, Health Department, GCDWR, Township and any other entity who provides activities or services that meet the County NPDES Phase 2 requirements into the Ohio EPA Annual Report.
3. Cooperate with other providers of services to the County and Township in fulfillment of permit requirements, including but not limited to the Chagrin River Watershed Partners, Inc.

4. Advise the Township and Engineer on suggested changes and improvements in the Storm Water Management Program.
5. Assist the County, Engineer, Health Department, GCDWR or Township as appropriate in the preparation of grant requests to meet the requirements of its Storm Water Management Program.
6. Provide other services, as appropriate, as requested by the County, Engineer, Health Department, GCDWR or Township.

#### Section D

Under this MOU, the Engineer agrees to the following:

1. Hold regular meetings with the County, Township, SWCD, GCDWR, Health Department and any other stakeholders providing services to the County on a regular basis to discuss annual progress, changes in the Storm Water Plan, and any other coordination efforts that may be necessary for the overall success of meeting the requirements of the permit.
2. Host Household Hazardous Waste days annually in coordination with the Geauga-Trumbull Solid Waste District.
3. Summarize activities related to permit on an annual basis and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

#### Section E

Under this MOU, the Health Department agrees to the following:

1. Follow-up on all wet outfalls where test results indicate the limits set for effluent from off-lot household sewage treatment systems from Health Department has been exceeded.
2. Implement Point of Sale Program where all household sewage treatment systems are tested and if deficient brought up to current standards upon the sale of a home. The Health Department will break this information into lots within the Urbanized Area and Non-Urbanized Area.
3. *Review all submitted annual test results of*  
~~Ensure all~~ off-lot household sewage treatment systems within Urbanized Areas ~~have submitted annual tests~~. The Health Department will follow-up with those lots ~~that have not submitted or~~ that do not meet current Health Department standards and take the necessary measures to ensure the systems are brought up to current Health Department standards. A summary list showing the lots and results of tests shall be provided to the SWCD for inclusion in the Ohio EPA Annual report for said permit.
4. Summarize activities related to permit on an annual basis and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

*DSage  
EH Director  
6/26/2020*

**Section F**

Under this MOU, GCDWR agrees to the following:

1. Upon request, assist/support the SWCD in sampling and testing wet outfalls and submit results to Engineer, SWCD and Health District. GCDWR will bill the Township \$50.00 per sample for the sampling and testing of each wet outfall
2. Upon request, summarize activities related to permit on an annual basis and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

**Section G**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #1 & #2 - Public Education and Outreach and Public Involvement and Participation of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Create two newsletter-ready articles related to NPDES Phase 2, non-point source pollution, storm water and/or watershed management for inclusion as news releases in local newspapers, publication in township newsletters and posting on various entities websites.
2. Create and maintain brochures, flyers, booklets, and other readily available printed materials from time to time, as needed.
3. Participate in the Northeast Ohio Storm Water Training Council to assist in creating training opportunities related to NPDES Phase 2 Minimum Control Measures that are available for Geauga County government entities.
4. Provide at least one local workshop for residents related to NPDES Phase 2, non-point source pollution, storm water and/or watershed management.
5. Technical advice and participation, as appropriate, in stream clean-ups, stream monitoring activities, household hazardous waste collection days, township days and similar public events.
6. Provide educational programs related to non-point source pollution, storm water and/or watershed management to local schools.

The Township will:

1. Assist in the advertisement of all educational and public involvement programs.

The Engineer will:

1. Assist in the advertisement of all educational and public involvement programs.



**Section H**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #3 - Illicit Discharge Detection and Elimination of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Develop and maintain Storm Sewer Outfall database and GIS map for NPDES Phase 2 Urbanized Area
2. Develop and maintain municipal separate storm sewer system (MS4) database and GIS map for NPDES Phase 2 Urbanized Area
3. Develop and maintain database and GIS map of Off-Lot Home Sewage Treatment Systems within the NPDES Phase 2 Urbanized Area.

The Township will:

1. Inspect all storm sewer outfalls within the township road right of way as inventoried and provided by SWCD as often as required by the Permit and forward data to the SWCD for tracking purposes.

The Engineer will:

1. Inspect all storm sewer outfalls within the county road right of way as inventoried and provided by SWCD as often as required by the Permit and forward data to the SWCD for tracking purposes.

The Health Department will:

1. Regularly provide information on any off-lot Home Sewage Treatment Systems to the SWCD to maintain in County database and GIS map.
2. Investigate all wet storm sewer outfalls confirmed to exceed limits as tested by Water Resources.

GCDWR will:

1. Assist SWCD to test wet storm sewer outfalls.
2. Report any Sanitary Sewer Overflow from County owned Wastewater Treatment Plants to Geauga County Engineer, Township Trustees where overflow occurred, and Geauga SWCD.

**Section I**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measures #4 - Construction Site Storm Water Runoff Control of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Review construction plans and inspect construction sites covered under the *Geauga County Water Management and Sediment Control Regulations* as adopted by the Geauga County Commissioners to be administered by the SWCD.
2. Provide materials and training sessions to the Township zoning inspector and other designated personnel on methods and practices of erosion and sediment control, and the application and enforcement of township regulations already in place, as needed.
3. Assist the Township, as needed, in the review of development plans.
4. Advise landowners in the application of erosion and sediment control practices.
5. Assist the Township in field inspection and verification of compliance with plans, as needed.

The Township will:

1. Instruct all proposed applicants of zoning permits to obtain appropriate Water Management and Sediment Control Plan approval from Geauga SWCD, as applicable, prior to issuance of a zoning permit.

The Engineer will:

1. Develop and maintain Storm Water Pollution Prevention Plans for County and Township owned facilities.
2. Provide and design proper Storm Water Pollution Prevention Plans for all Township and County owned road improvement projects where earth disturbing activities are proposed.
3. Provide construction inspection of all Township and County owned road improvement projects where earth disturbing activities are proposed to ensure Storm Water Pollution Prevention Plans are being implemented.

### **Section J**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #5 - Post-Construction Storm Water Runoff Control on New Development and Redevelopment of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Continue to review plans and inspect construction sites covered under the *Geauga County Water Management and Sediment Control Regulations* as adopted by the Geauga County Commissioners to be administered by the SWCD to ensure proper Post-Construction Storm Water Best Management Practices are designed and installed.

2. Ensure all Post-Construction Storm Water Best Management Practices installed have an "as-built" and long-term management document recorded.
3. Regularly inspect, track, and map on GIS all post-construction storm water runoff control structures previously reviewed and approved for installation by the Geauga SWCD under the *Geauga County Water Management and Sediment Control Regulations*

The Township will:

1. Instruct all proposed applicants of zoning permits to obtain appropriate Water Management and Sediment Control Plan approval from Geauga SWCD, as applicable, prior to issuance of a zoning permit.

The Engineer will:

1. Review and approve all Drainage Maintenance District Requests for long-term management of post-construction storm water systems in proposed subdivisions.

### **Section K**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #6 - Pollution Prevention/Good Housekeeping for Municipal Operations of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Assist the Engineer with updates to the Geauga County Storm Water Pollution Prevention Plan for County and Township Facilities, as necessary
2. Assist the Engineer in planning training opportunities for county and township personnel.

The Township will:

1. Implement the Storm Water Pollution Prevention Plan for all Township owned facilities and day-to-day operations within the NPDES Phase 2 Urbanized Areas.

The Engineer will:

1. Maintain and update the Geauga County Storm Water Pollution Prevention Plan for County and Township Facilities, as necessary.
2. Implement the Storm Water Pollution Prevention Plan for County owned facilities and day-to-day operations within the NPDES Phase 2 Urbanized Areas.
3. Plan training opportunities for county and township personnel.

### **Section L**

It is intended by the parties that this MOU clearly express the intentions and understandings of the parties that will govern their best faith efforts to cooperate in the fulfillment of the County's obligations under the EPA Permit. Nothing herein shall be considered a contractual commitment by either party. The County's binding obligations shall be limited to the terms of the permit and

to decisions that may be made from time to time by the appropriate officials, in accordance with Ohio law.

**Section M**

This MOU shall be reviewed on an annual basis and shall be modified to the extent necessary each year to effectively meet the goals of each of the parties. Any party may terminate this agreement upon 30 days written notice. Upon termination, the parties will seek to fulfill pending projects and commitments based upon mutual agreement.


This memorandum and the understandings contained herein are hereby voluntarily accepted by the County, Engineer, Health Department, GCDWR, Township and SWCD.

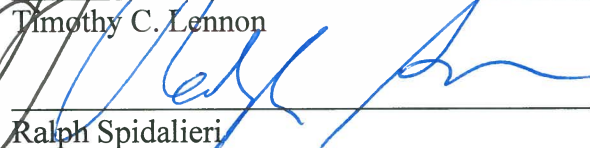
**Section N**

Funding for any items listed within this MOU without a specific funding mechanism shall be discussed by applicable parties on an as needed basis.

**Geauga Board of County Commissioners**


  
James W. Dvorak

  
Timothy C. Lennon

  
Ralph Spidalieri

**Bainbridge Township Board of Trustees**

  
Lorrie Sass Benza

  
Jeffrey S. Markley

  
Kristina O'Brien

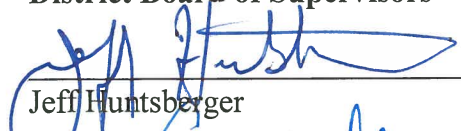
**Geauga County Drainage Engineer**

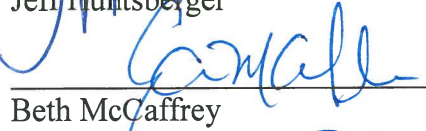
  
Joseph Cattell, PE, PS

**Geauga County Department of Water Resources**


  
Steven Oluic, Ph.D

**Geauga Soil and Water Conservation  
District Board of Supervisors**

  
\_\_\_\_\_  
Jeff Huntsberger

  
\_\_\_\_\_  
Beth McCaffrey

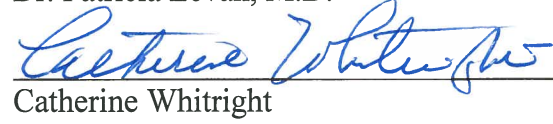
  
\_\_\_\_\_  
Mary Slingsluff

  
\_\_\_\_\_  
Dee Belew

  
\_\_\_\_\_  
Tracy Engle

**Geauga County Health District**

\_\_\_\_\_  
Dr. Patricia Levan, M.D.

  
\_\_\_\_\_  
Catherine Whitright

  
\_\_\_\_\_  
Lynn Roman

  
\_\_\_\_\_  
David Gragg

  
\_\_\_\_\_  
Richard Piraino

APPROVED AS TO FORM  
  
\_\_\_\_\_  
GEAUGA CO. PROSECUTOR'S OFFICE

**MEMORANDUM OF UNDERSTANDING  
REGARDING OHIO EPA NPDES PHASE 2 PROGRAM AND COORDINATION BY  
AND BETWEEN**

**Geauga Board of County Commissioners, Geauga County Drainage Engineer, Geauga Soil  
and Water Conservation District, Geauga County Health District, Chester Township, &  
Geauga County Department of Water Resources**

This Memorandum of Understanding (MOU) is entered into this 27<sup>th</sup> day of February, 2020 between Chester Township (Township), by its Trustees, the Geauga County Soil and Water Conservation District (SWCD), by its Supervisors, the Geauga County Drainage Engineer (Engineer), the Geauga County Health District (Health Department), Geauga County Department of Water Resources (GCDWR) and the Geauga Board of County Commissioners (County).

**Section A**

The purpose of this memorandum is to acknowledge certain duties undertaken by the County in fulfillment of a permit from the Ohio Environmental Protection Agency (EPA) authorizing discharges of storm water from a municipal separate storm sewer system, and to define the role of the Townships as co-permittees and the SWCD, Health Department, GCDWR and Drainage Engineer in assisting the County to fulfill those duties. The parties to this MOU recognize the following:

1. The County is a community required to obtain a permit from EPA under the Ohio EPA General NPDES Permit No.: OHQ000003 for storm water discharges from its “municipal” separate storm sewer system (MS4), as defined in the permit and referred to herein as “permit”.
2. The Township is a co-permittee of the County’s Ohio EPA General NPDES Permit No. OHQ 000003
3. The Geauga County Drainage Engineer has been appointed by the Geauga Board of County Commissioners as the Drainage Engineer for the County and has taken on the role to coordinate County compliance with the Ohio EPA General NPDES Permit No. OHQ000003
4. SWCD is the Agency, by agreement with the Geauga County Commissioners under rules duly adopted pursuant to Section 307.79 of the Ohio Revised Code, which has jurisdiction to administer regulations pertaining to storm water management and sediment control in Geauga County.
5. The Township is not within the limits of a municipal corporation and is located in Geauga County. Therefore, the Township is under the jurisdiction of the County Commissioners under Section 307.79 with respect to storm water management and sediment control issues in Geauga County.

6. The Geauga County Health District is the entity within Geauga County that has the legal authority to regulate and enforce discharges from septic systems.
7. GCDWR is responsible for management and oversight of the County's sanitary sewer district, County owned wastewater/water infrastructure, and ensuring compliance with relevant regulatory agencies. GCDWR operates an EPA certified environmental laboratory that conducts routine chemical analysis on water and wastewater samples.
8. Any additional costs for specific materials, consulting, or programs will be negotiated and accepted by mutual agreement at the time such materials or services are provided. Nothing in the MOU shall be construed to commit the County, Engineer, Health District, GCDWR or Township to any specific expenditure.

### **Section B**

Under this MOU, the Township agrees to the following:

1. It will use its best faith efforts to provide the County, Health Department, GCDWR, Engineer and SWCD information about its obligations under the permit, issues pertinent to storm water management, and plans, programs, and resources that it has committed to fulfilling its obligations under the permit.
2. Its co-permittee obligations are solely its responsibility and will continue in accordance with the terms of the permit whether or not the Township receives services or advice from SWCD, County, Health Department, GCDWR or County in fulfillment of its permit obligations.
3. It understands that certain services and materials contained within this MOU may require that a reasonable fee be charged by the SWCD, County, GCDWR, Health Department, and Engineer.
4. Summarize activities related to permit on an annual basis by January 31 and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

### **Section C**

Under this MOU, the SWCD agrees to the following:

1. It will use best faith efforts to collect information, consult with the Township, County and Engineer on its program and plans, and assist all in fulfilling its obligations under the permit.
2. Gather, assemble and compile necessary information from the County, Engineer, Health Department, GCDWR, Township and any other entity who provides activities or services that meet the County NPDES Phase 2 requirements into the Ohio EPA Annual Report.
3. Cooperate with other providers of services to the County and Township in fulfillment of permit requirements, including but not limited to the Chagrin River Watershed Partners, Inc.

4. Advise the Township and Engineer on suggested changes and improvements in the Storm Water Management Program.
5. Assist the County, Engineer, Health Department, GCDWR or Township as appropriate in the preparation of grant requests to meet the requirements of its Storm Water Management Program.
6. Provide other services, as appropriate, as requested by the County, Engineer, Health Department, GCDWR or Township.

#### Section D

Under this MOU, the Engineer agrees to the following:

1. Hold regular meetings with the County, Township, SWCD, GCDWR, Health Department and any other stakeholders providing services to the County on a regular basis to discuss annual progress, changes in the Storm Water Plan, and any other coordination efforts that may be necessary for the overall success of meeting the requirements of the permit.
2. Host Household Hazardous Waste days annually in coordination with the Geauga-Trumbull Solid Waste District.
3. Summarize activities related to permit on an annual basis and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

#### Section E

Under this MOU, the Health Department agrees to the following:

1. Follow-up on all wet outfalls where test results indicate the limits set for effluent from off-lot household sewage treatment systems from Health Department has been exceeded.
2. Implement Point of Sale Program where all household sewage treatment systems are tested and if deficient brought up to current standards upon the sale of a home. The Health Department will break this information into lots within the Urbanized Area and Non-Urbanized Area.

*DSage  
EH Director  
6/26/2020*

*Review all submitted annual test results of*

3. ~~Ensure all~~ off-lot household sewage treatment systems within Urbanized Areas ~~have~~ ~~submitted annual tests.~~ The Health Department will follow-up with those lots ~~that have not~~ ~~submitted or~~ that do not meet current Health Department standards and take the necessary measures to ensure the systems are brought up to current Health Department standards. A summary list showing the lots and results of tests shall be provided to the SWCD for inclusion in the Ohio EPA Annual report for said permit.

4. Summarize activities related to permit on an annual basis and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.



**Section F**

Under this MOU, GCDWR agrees to the following:

1. Upon request, assist/support the SWCD in sampling and testing wet outfalls and submit results to Engineer, SWCD and Health District. GCDWR will bill the Township \$50.00 per sample for the sampling and testing of each wet outfall
2. Upon request, summarize activities related to permit on an annual basis and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

**Section G**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #1 & #2 - Public Education and Outreach and Public Involvement and Participation of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Create two newsletter-ready articles related to NPDES Phase 2, non-point source pollution, storm water and/or watershed management for inclusion as news releases in local newspapers, publication in township newsletters and posting on various entities websites.
2. Create and maintain brochures, flyers, booklets, and other readily available printed materials from time to time, as needed.
3. Participate in the Northeast Ohio Storm Water Training Council to assist in creating training opportunities related to NPDES Phase 2 Minimum Control Measures that are available for Geauga County government entities.
4. Provide at least one local workshop for residents related to NPDES Phase 2, non-point source pollution, storm water and/or watershed management.
5. Technical advice and participation, as appropriate, in stream clean-ups, stream monitoring activities, household hazardous waste collection days, township days and similar public events.
6. Provide educational programs related to non-point source pollution, storm water and/or watershed management to local schools.

The Township will:

1. Assist in the advertisement of all educational and public involvement programs.

The Engineer will:

1. Assist in the advertisement of all educational and public involvement programs.

**Section H**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #3 - Illicit Discharge Detection and Elimination of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Develop and maintain Storm Sewer Outfall database and GIS map for NPDES Phase 2 Urbanized Area
2. Develop and maintain municipal separate storm sewer system (MS4) database and GIS map for NPDES Phase 2 Urbanized Area
3. Develop and maintain database and GIS map of Off-Lot Home Sewage Treatment Systems within the NPDES Phase 2 Urbanized Area.

The Township will:

1. Inspect all storm sewer outfalls within the township road right of way as inventoried and provided by SWCD as often as required by the Permit and forward data to the SWCD for tracking purposes.

The Engineer will:

1. Inspect all storm sewer outfalls within the county road right of way as inventoried and provided by SWCD as often as required by the Permit and forward data to the SWCD for tracking purposes.

The Health Department will:

1. Regularly provide information on any off-lot Home Sewage Treatment Systems to the SWCD to maintain in County database and GIS map.
2. Investigate all wet storm sewer outfalls confirmed to exceed limits as tested by Water Resources.

GCDWR will:

1. Assist SWCD to test wet storm sewer outfalls.
2. Report any Sanitary Sewer Overflow from County owned Wastewater Treatment Plants to Geauga County Engineer, Township Trustees where overflow occurred, and Geauga SWCD.

**Section I**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measures #4 - Construction Site Storm Water Runoff Control of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Review construction plans and inspect construction sites covered under the *Geauga County Water Management and Sediment Control Regulations* as adopted by the Geauga County Commissioners to be administered by the SWCD.
2. Provide materials and training sessions to the Township zoning inspector and other designated personnel on methods and practices of erosion and sediment control, and the application and enforcement of township regulations already in place, as needed.
3. Assist the Township, as needed, in the review of development plans.
4. Advise landowners in the application of erosion and sediment control practices.
5. Assist the Township in field inspection and verification of compliance with plans, as needed.

The Township will:

1. Instruct all proposed applicants of zoning permits to obtain appropriate Water Management and Sediment Control Plan approval from Geauga SWCD, as applicable, prior to issuance of a zoning permit.

The Engineer will:

1. Develop and maintain Storm Water Pollution Prevention Plans for County and Township owned facilities.
2. Provide and design proper Storm Water Pollution Prevention Plans for all Township and County owned road improvement projects where earth disturbing activities are proposed.
3. Provide construction inspection of all Township and County owned road improvement projects where earth disturbing activities are proposed to ensure Storm Water Pollution Prevention Plans are being implemented.

### **Section J**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #5 - Post-Construction Storm Water Runoff Control on New Development and Redevelopment of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Continue to review plans and inspect construction sites covered under the *Geauga County Water Management and Sediment Control Regulations* as adopted by the Geauga County Commissioners to be administered by the SWCD to ensure proper Post-Construction Storm Water Best Management Practices are designed and installed.

2. Ensure all Post-Construction Storm Water Best Management Practices installed have an "as-built" and long-term management document recorded.
3. Regularly inspect, track, and map on GIS all post-construction storm water runoff control structures previously reviewed and approved for installation by the Geauga SWCD under the *Geauga County Water Management and Sediment Control Regulations*

The Township will:

1. Instruct all proposed applicants of zoning permits to obtain appropriate Water Management and Sediment Control Plan approval from Geauga SWCD, as applicable, prior to issuance of a zoning permit.

The Engineer will:

1. Review and approve all Drainage Maintenance District Requests for long-term management of post-construction storm water systems in proposed subdivisions.

### **Section K**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #6 - Pollution Prevention/Good Housekeeping for Municipal Operations of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Assist the Engineer with updates to the Geauga County Storm Water Pollution Prevention Plan for County and Township Facilities, as necessary
2. Assist the Engineer in planning training opportunities for county and township personnel.

The Township will:

1. Implement the Storm Water Pollution Prevention Plan for all Township owned facilities and day-to-day operations within the NPDES Phase 2 Urbanized Areas.

The Engineer will:

1. Maintain and update the Geauga County Storm Water Pollution Prevention Plan for County and Township Facilities, as necessary.
2. Implement the Storm Water Pollution Prevention Plan for County owned facilities and day-to-day operations within the NPDES Phase 2 Urbanized Areas.
3. Plan training opportunities for county and township personnel.

### **Section L**

It is intended by the parties that this MOU clearly express the intentions and understandings of the parties that will govern their best faith efforts to cooperate in the fulfillment of the County's obligations under the EPA Permit. Nothing herein shall be considered a contractual commitment by either party. The County's binding obligations shall be limited to the terms of the permit and

to decisions that may be made from time to time by the appropriate officials, in accordance with Ohio law.

**Section M**


This MOU shall be reviewed on an annual basis and shall be modified to the extent necessary each year to effectively meet the goals of each of the parties. Any party may terminate this agreement upon 30 days written notice. Upon termination, the parties will seek to fulfill pending projects and commitments based upon mutual agreement.


This memorandum and the understandings contained herein are hereby voluntarily accepted by the County, Engineer, Health Department, GCDWR, Township and SWCD.

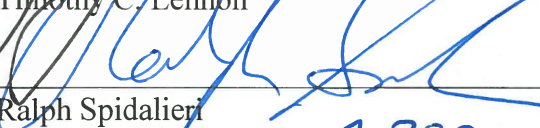
**Section N**

Funding for any items listed within this MOU without a specific funding mechanism shall be discussed by applicable parties on an as needed basis.

**Geauga Board of County Commissioners**

  
\_\_\_\_\_  
James W. Dorak


  
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Timothy C. Lennon

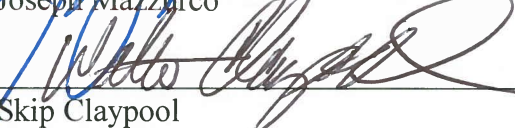
  
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Ralph Spidalieri

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**Chester Township Board of Trustees**

  
\_\_\_\_\_  
Ken Radtke, Jr.


  
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Joseph Mazzurco

  
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Skip Claypool


**Geauga County Drainage Engineer**


  
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Joseph Cattell, PE, PS

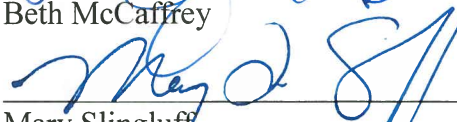
**Geauga County Department of Water Resources**

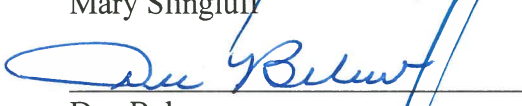
  
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Steven Oluic, Ph.D


**Geauga Soil and Water Conservation  
District Board of Supervisors**

  
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Jeff Huntsberger

  
\_\_\_\_\_  
Beth McCaffrey

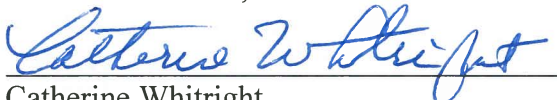
  
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Mary Slingluff

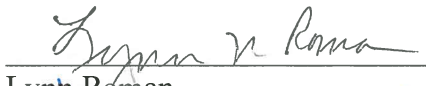
  
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Dee Belew

  
\_\_\_\_\_  
Tracy Engle

**Geauga County Health District**

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Dr. Patricia Levan, M.D.

  
\_\_\_\_\_  
Catherine Whitright

  
\_\_\_\_\_  
Lynn Roman

  
\_\_\_\_\_  
David Gragg

  
\_\_\_\_\_  
Richard Piraino

APPROVED AS TO FORM

  
\_\_\_\_\_  
GEAUGA CO. PROSECUTOR'S OFFICE

**MEMORANDUM OF UNDERSTANDING  
REGARDING OHIO EPA NPDES PHASE 2 PROGRAM AND COORDINATION BY  
AND BETWEEN**

**Geauga Board of County Commissioners, Geauga County Drainage Engineer, Geauga Soil  
and Water Conservation District, Geauga County Health District, Russell Township, &  
Gauga County Department of Water Resources**

This Memorandum of Understanding (MOU) is entered into this 18th day of March, 2020, between Russell Township (Township), by its Trustees, the Geauga County Soil and Water Conservation District (SWCD), by its Supervisors, the Geauga County Drainage Engineer (Engineer), the Geauga County Health District (Health Department), Geauga County Department of Water Resources (GCDWR) and the Geauga Board of County Commissioners (County).

**Section A**

The purpose of this memorandum is to acknowledge certain duties undertaken by the County in fulfillment of a permit from the Ohio Environmental Protection Agency (EPA) authorizing discharges of storm water from a municipal separate storm sewer system, and to define the role of the Townships as co-permittees and the SWCD, Health Department, GCDWR and Drainage Engineer in assisting the County to fulfill those duties. The parties to this MOU recognize the following:

1. The County is a community required to obtain a permit from EPA under the Ohio EPA General NPDES Permit No.: OHQ000003 for storm water discharges from its "municipal" separate storm sewer system (MS4), as defined in the permit and referred to herein as "permit".
2. The Township is a co-permittee of the County's Ohio EPA General NPDES Permit No. OHQ 000003
3. The Geauga County Drainage Engineer has been appointed by the Geauga Board of County Commissioners as the Drainage Engineer for the County and has taken on the role to coordinate County compliance with the Ohio EPA General NPDES Permit No. OHQ000003
4. SWCD is the Agency, by agreement with the Geauga County Commissioners under rules duly adopted pursuant to Section 307.79 of the Ohio Revised Code, which has jurisdiction to administer regulations pertaining to storm water management and sediment control in Geauga County.
5. The Township is not within the limits of a municipal corporation and is located in Geauga County. Therefore, the Township is under the jurisdiction of the County Commissioners under Section 307.79 with respect to storm water management and sediment control issues in Geauga County.

6. The Geauga County Health District is the entity within Geauga County that has the legal authority to regulate and enforce discharges from septic systems.
7. GCDWR is responsible for management and oversight of the County's sanitary sewer district, County owned wastewater/water infrastructure, and ensuring compliance with relevant regulatory agencies. GCDWR operates an EPA certified environmental laboratory that conducts routine chemical analysis on water and wastewater samples.
8. Any additional costs for specific materials, consulting, or programs will be negotiated and accepted by mutual agreement at the time such materials or services are provided. Nothing in the MOU shall be construed to commit the County, Engineer, Health District, GCDWR or Township to any specific expenditure.

### **Section B**

Under this MOU, the Township agrees to the following:

1. It will use its best faith efforts to provide the County, Health Department, GCDWR, Engineer and SWCD information about its obligations under the permit, issues pertinent to storm water management, and plans, programs, and resources that it has committed to fulfilling its obligations under the permit.
2. Its co-permittee obligations are solely its responsibility and will continue in accordance with the terms of the permit whether or not the Township receives services or advice from SWCD, County, Health Department, GCDWR or County in fulfillment of its permit obligations.
3. It understands that certain services and materials contained within this MOU may require that a reasonable fee be charged by the SWCD, County, GCDWR, Health Department, and Engineer.
4. Summarize activities related to permit on an annual basis by January 31 and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

### **Section C**

Under this MOU, the SWCD agrees to the following:

1. It will use best faith efforts to collect information, consult with the Township, County and Engineer on its program and plans, and assist all in fulfilling its obligations under the permit.
2. Gather, assemble and compile necessary information from the County, Engineer, Health Department, GCDWR, Township and any other entity who provides activities or services that meet the County NPDES Phase 2 requirements into the Ohio EPA Annual Report.
3. Cooperate with other providers of services to the County and Township in fulfillment of permit requirements, including but not limited to the Chagrin River Watershed Partners, Inc.



4. Advise the Township and Engineer on suggested changes and improvements in the Storm Water Management Program.
5. Assist the County, Engineer, Health Department, GCDWR or Township as appropriate in the preparation of grant requests to meet the requirements of its Storm Water Management Program.
6. Provide other services, as appropriate, as requested by the County, Engineer, Health Department, GCDWR or Township.

#### Section D

Under this MOU, the Engineer agrees to the following:

1. Hold regular meetings with the County, Township, SWCD, GCDWR, Health Department and any other stakeholders providing services to the County on a regular basis to discuss annual progress, changes in the Storm Water Plan, and any other coordination efforts that may be necessary for the overall success of meeting the requirements of the permit.
2. Host Household Hazardous Waste days annually in coordination with the Geauga-Trumbull Solid Waste District.
3. Summarize activities related to permit on an annual basis and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

#### Section E

Under this MOU, the Health Department agrees to the following:

1. Follow-up on all wet outfalls where test results indicate the limits set for effluent from off-lot household sewage treatment systems from Health Department has been exceeded.
2. Implement Point of Sale Program where all household sewage treatment systems are tested and if deficient brought up to current standards upon the sale of a home. The Health Department will break this information into lots within the Urbanized Area and Non-Urbanized Area.
3. *Review all submitted annual test results of*  
~~Ensure all~~ off-lot household sewage treatment systems within Urbanized Areas ~~have submitted annual tests.~~ The Health Department will follow-up with those lots ~~that have not submitted or~~ that do not meet current Health Department standards and take the necessary measures to ensure the systems are brought up to current Health Department standards. A summary list showing the lots and results of tests shall be provided to the SWCD for inclusion in the Ohio EPA Annual report for said permit.
4. Summarize activities related to permit on an annual basis and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

*D Sage  
EH Director  
6/26/2020*

**Section F**

Under this MOU, GCDWR agrees to the following:

1. Upon request, assist/support the SWCD in sampling and testing wet outfalls and submit results to Engineer, SWCD and Health District. GCDWR will bill the Township \$50.00 per sample for the sampling and testing of each wet outfall
2. Upon request, summarize activities related to permit on an annual basis and provide to the SWCD for inclusion in the Ohio EPA Annual Report for said permit.

**Section G**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #1 & #2 - Public Education and Outreach and Public Involvement and Participation of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Create two newsletter-ready articles related to NPDES Phase 2, non-point source pollution, storm water and/or watershed management for inclusion as news releases in local newspapers, publication in township newsletters and posting on various entities websites.
2. Create and maintain brochures, flyers, booklets, and other readily available printed materials from time to time, as needed.
3. Participate in the Northeast Ohio Storm Water Training Council to assist in creating training opportunities related to NPDES Phase 2 Minimum Control Measures that are available for Geauga County government entities.
4. Provide at least one local workshop for residents related to NPDES Phase 2, non-point source pollution, storm water and/or watershed management.
5. Technical advice and participation, as appropriate, in stream clean-ups, stream monitoring activities, household hazardous waste collection days, township days and similar public events.
6. Provide educational programs related to non-point source pollution, storm water and/or watershed management to local schools.

The Township will:

1. Assist in the advertisement of all educational and public involvement programs.

The Engineer will:

1. Assist in the advertisement of all educational and public involvement programs.

**Section H**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #3 - Illicit Discharge Detection and Elimination of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Develop and maintain Storm Sewer Outfall database and GIS map for NPDES Phase 2 Urbanized Area
2. Develop and maintain municipal separate storm sewer system (MS4) database and GIS map for NPDES Phase 2 Urbanized Area
3. Develop and maintain database and GIS map of Off-Lot Home Sewage Treatment Systems within the NPDES Phase 2 Urbanized Area.

The Township will:

1. Inspect all storm sewer outfalls within the township road right of way as inventoried and provided by SWCD as often as required by the Permit and forward data to the SWCD for tracking purposes.

The Engineer will:

1. Inspect all storm sewer outfalls within the county road right of way as inventoried and provided by SWCD as often as required by the Permit and forward data to the SWCD for tracking purposes.

The Health Department will:

1. Regularly provide information on any off-lot Home Sewage Treatment Systems to the SWCD to maintain in County database and GIS map.
2. Investigate all wet storm sewer outfalls confirmed to exceed limits as tested by Water Resources.

GCDWR will:

1. Assist SWCD to test wet storm sewer outfalls.
2. Report any Sanitary Sewer Overflow from County owned Wastewater Treatment Plants to Geauga County Engineer, Township Trustees where overflow occurred, and Geauga SWCD.

**Section I**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measures #4 - Construction Site Storm Water Runoff Control of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Review construction plans and inspect construction sites covered under the *Geauga County Water Management and Sediment Control Regulations* as adopted by the Geauga County Commissioners to be administered by the SWCD.
2. Provide materials and training sessions to the Township zoning inspector and other designated personnel on methods and practices of erosion and sediment control, and the application and enforcement of township regulations already in place, as needed.
3. Assist the Township, as needed, in the review of development plans.
4. Advise landowners in the application of erosion and sediment control practices.
5. Assist the Township in field inspection and verification of compliance with plans, as needed.

The Township will:

1. Instruct all proposed applicants of zoning permits to obtain appropriate Water Management and Sediment Control Plan approval from Geauga SWCD, as applicable, prior to issuance of a zoning permit.

The Engineer will:

1. Develop and maintain Storm Water Pollution Prevention Plans for County and Township owned facilities.
2. Provide and design proper Storm Water Pollution Prevention Plans for all Township and County owned road improvement projects where earth disturbing activities are proposed.
3. Provide construction inspection of all Township and County owned road improvement projects where earth disturbing activities are proposed to ensure Storm Water Pollution Prevention Plans are being implemented.

## **Section J**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #5 - Post-Construction Storm Water Runoff Control on New Development and Redevelopment of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Continue to review plans and inspect construction sites covered under the *Geauga County Water Management and Sediment Control Regulations* as adopted by the Geauga County Commissioners to be administered by the SWCD to ensure proper Post-Construction Storm Water Best Management Practices are designed and installed.

2. Ensure all Post-Construction Storm Water Best Management Practices installed have an "as-built" and long-term management document recorded.
3. Regularly inspect, track, and map on GIS all post-construction storm water runoff control structures previously reviewed and approved for installation by the Geauga SWCD under the *Gauga County Water Management and Sediment Control Regulations*

The Township will:

1. Instruct all proposed applicants of zoning permits to obtain appropriate Water Management and Sediment Control Plan approval from Geauga SWCD, as applicable, prior to issuance of a zoning permit.

The Engineer will:

1. Review and approve all Drainage Maintenance District Requests for long-term management of post-construction storm water systems in proposed subdivisions.

### **Section K**

Under this MOU, the following services will be carried out by the various entities as follows pertaining to **Minimum Control Measure #6 - Pollution Prevention/Good Housekeeping for Municipal Operations of the Ohio EPA NPDES EPA General NPDES Permit No. OHQ000003:**

The SWCD will:

1. Assist the Engineer with updates to the Geauga County Storm Water Pollution Prevention Plan for County and Township Facilities, as necessary
2. Assist the Engineer in planning training opportunities for county and township personnel.

The Township will:

1. Implement the Storm Water Pollution Prevention Plan for all Township owned facilities and day-to-day operations within the NPDES Phase 2 Urbanized Areas.

The Engineer will:

1. Maintain and update the Geauga County Storm Water Pollution Prevention Plan for County and Township Facilities, as necessary.
2. Implement the Storm Water Pollution Prevention Plan for County owned facilities and day-to-day operations within the NPDES Phase 2 Urbanized Areas.
3. Plan training opportunities for county and township personnel.

### **Section L**

It is intended by the parties that this MOU clearly express the intentions and understandings of the parties that will govern their best faith efforts to cooperate in the fulfillment of the County's obligations under the EPA Permit. Nothing herein shall be considered a contractual commitment by either party. The County's binding obligations shall be limited to the terms of the permit and

to decisions that may be made from time to time by the appropriate officials, in accordance with Ohio law.

**Section M**


This MOU shall be reviewed on an annual basis and shall be modified to the extent necessary each year to effectively meet the goals of each of the parties. Any party may terminate this agreement upon 30 days written notice. Upon termination, the parties will seek to fulfill pending projects and commitments based upon mutual agreement.


This memorandum and the understandings contained herein are hereby voluntarily accepted by the County, Engineer, Health Department, GCDWR, Township and SWCD.

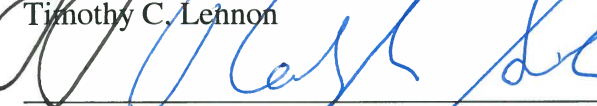
**Section N**

Funding for any items listed within this MOU without a specific funding mechanism shall be discussed by applicable parties on an as needed basis.

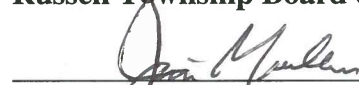
**Geauga Board of County Commissioners**

  
James W. Dyorak

  
Timothy C. Lennon

  
Ralph Spidalieri  
7-28-2020

**Russell Township Board of Trustees**

  
Jim Mueller

  
Gary Gabram

  
Kristina Port


**Geauga County Drainage Engineer**

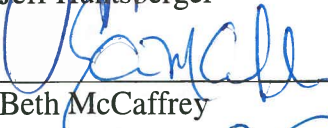
  
Joseph Cattell , PE, PS

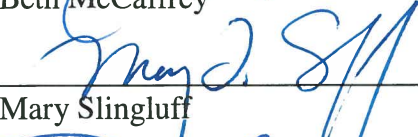
**Geauga County Department of Water Resources**

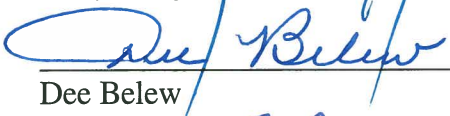
  
Steven Oluic, Ph.D

**Geauga Soil and Water Conservation  
District Board of Supervisors**

  
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Jeff Huntsberger

  
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Beth McCaffrey

  
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Mary Slingsluff

  
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Dee Belew

  
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Tracy Engle

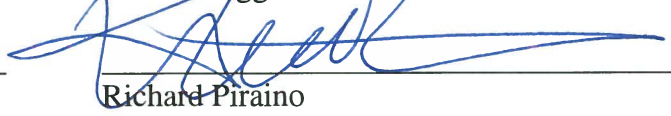
**Geauga County Health District**

\_\_\_\_\_  
Dr. Patricia Levan, M.D.

  
\_\_\_\_\_  
Catherine Whitright

  
\_\_\_\_\_  
Lynn Roman

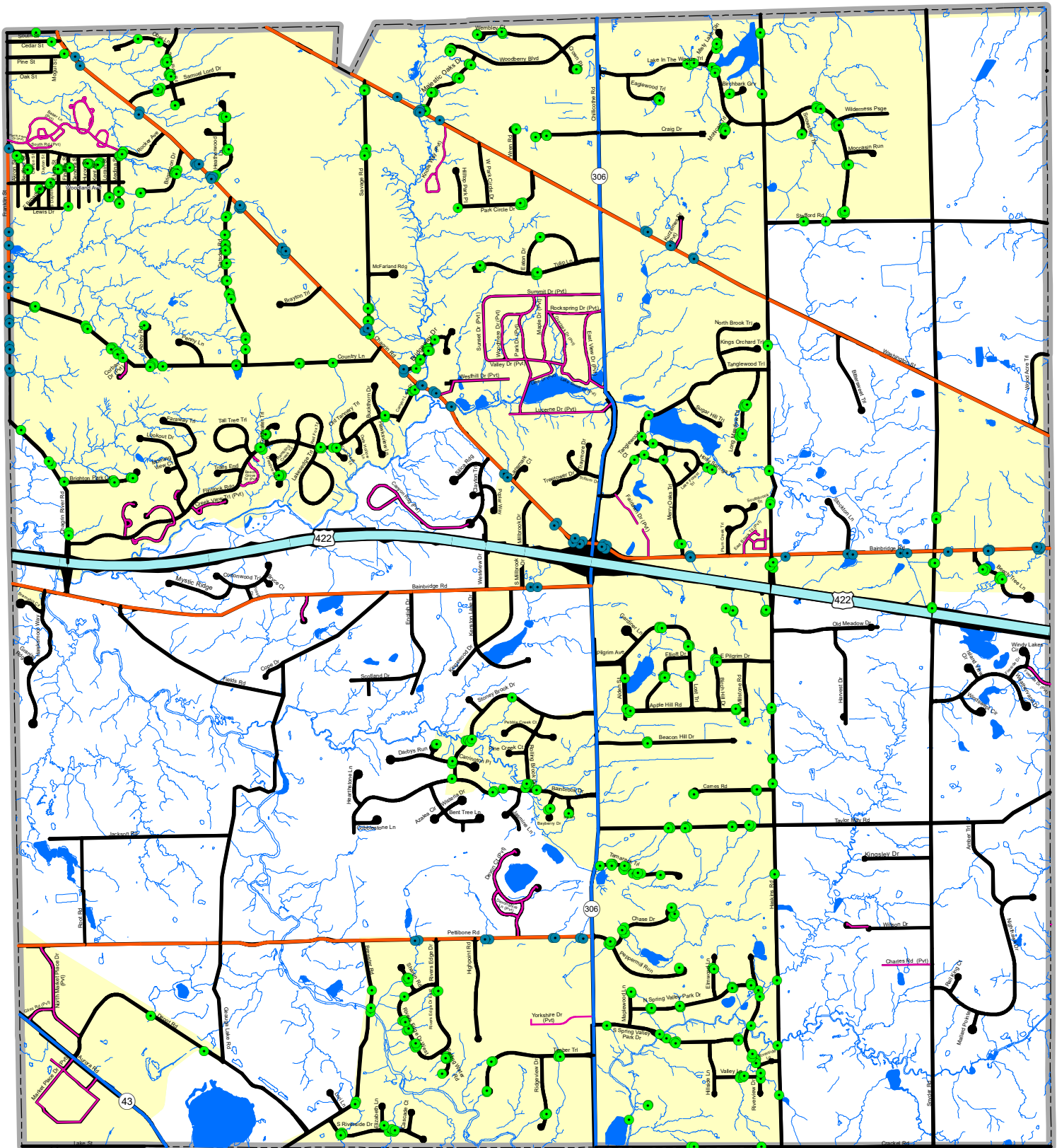
  
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David Gragg

  
\_\_\_\_\_  
Richard Piraino

APPROVED AS TO FORM  
  
\_\_\_\_\_  
GEAUGA CO. PROSECUTOR'S OFFICE

**Appendix A-4 Storm Sewer/Outfall Map**





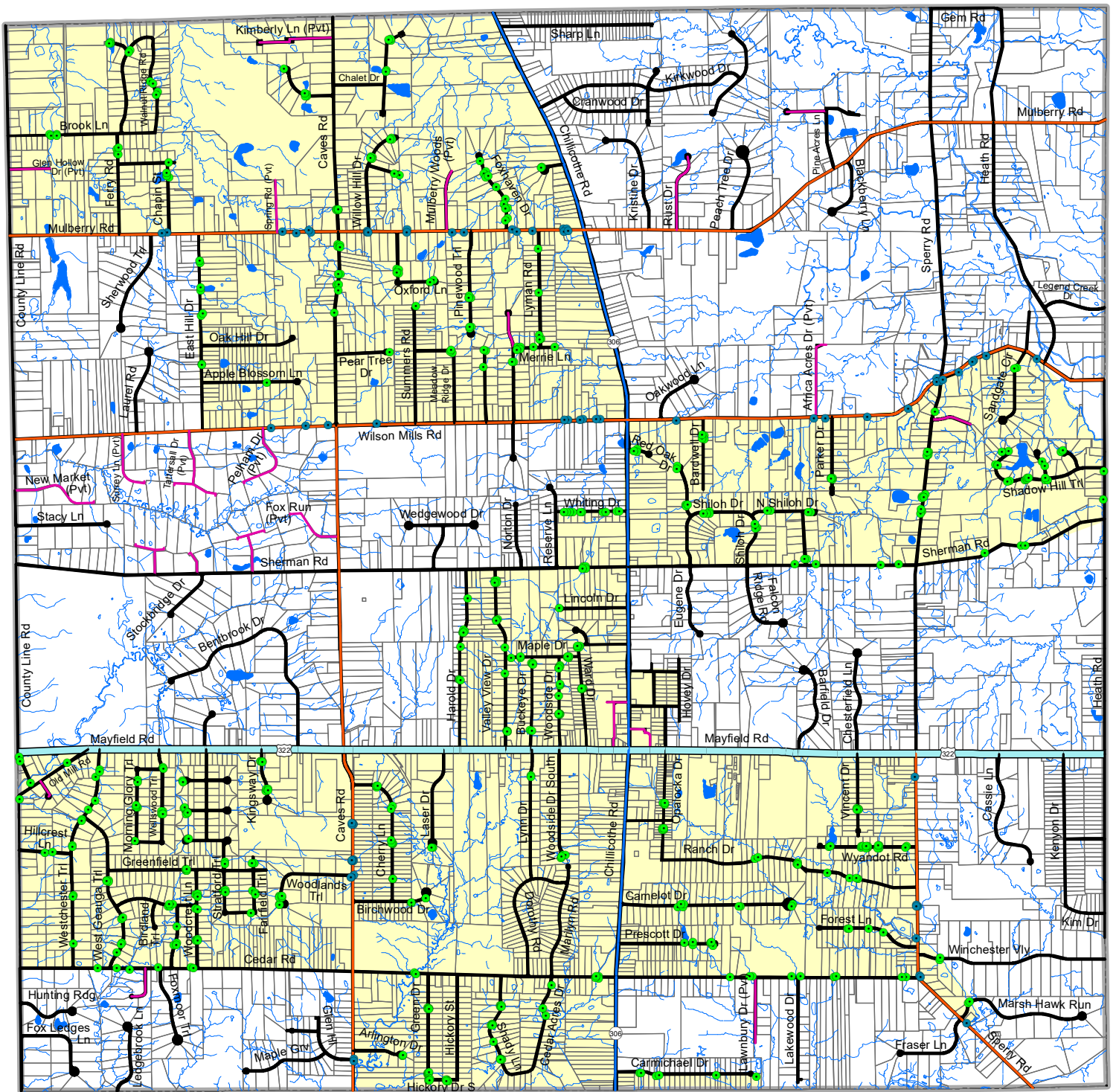
# Bainbridge Township Outfalls 2000-2010 Urban Area

- Private Road
- Township Road
- County Road
- State Road
- US Road
- Township Outfalls (569)
- County Outfalls (92)
- Urban Area



Updated January 21, 2022

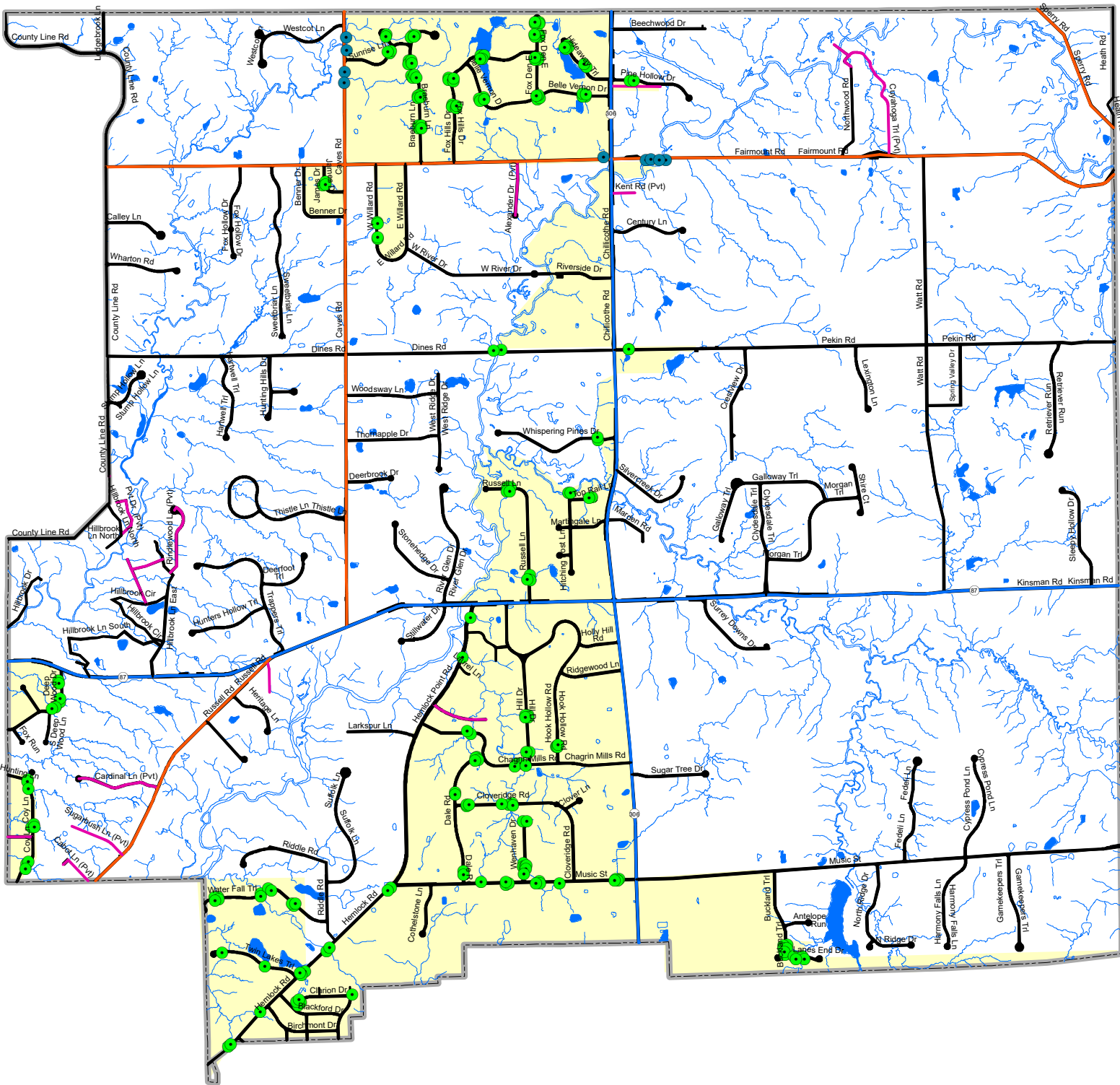
F:\DISTRICT\NPDES-Phase II\Outfalls\Bainbridg\2022\Maps



# Chester Township Outfalls 2000-2010 Urban Area

- Private Road
- Township Road
- County Road
- State Road
- US Road
- Township Outfalls (484)
- County Outfalls (65)
- Urban Area



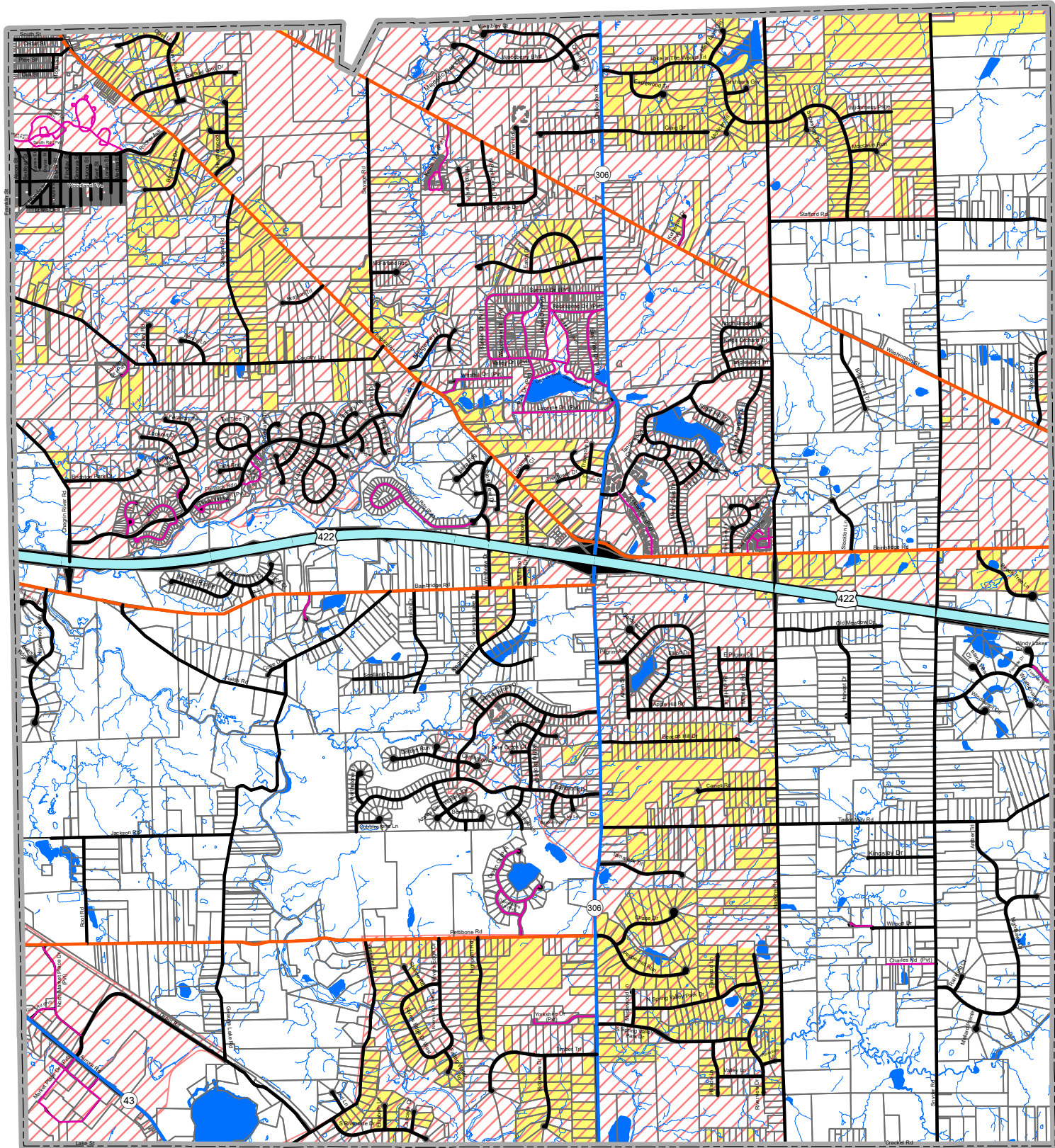


# Russell Township Outfalls 2000-2010 Urban Area

- Private Road
- Township Road
- County Road
- State Road
- Township Outfalls (199)
- County Outfalls (9)
- Urban Area



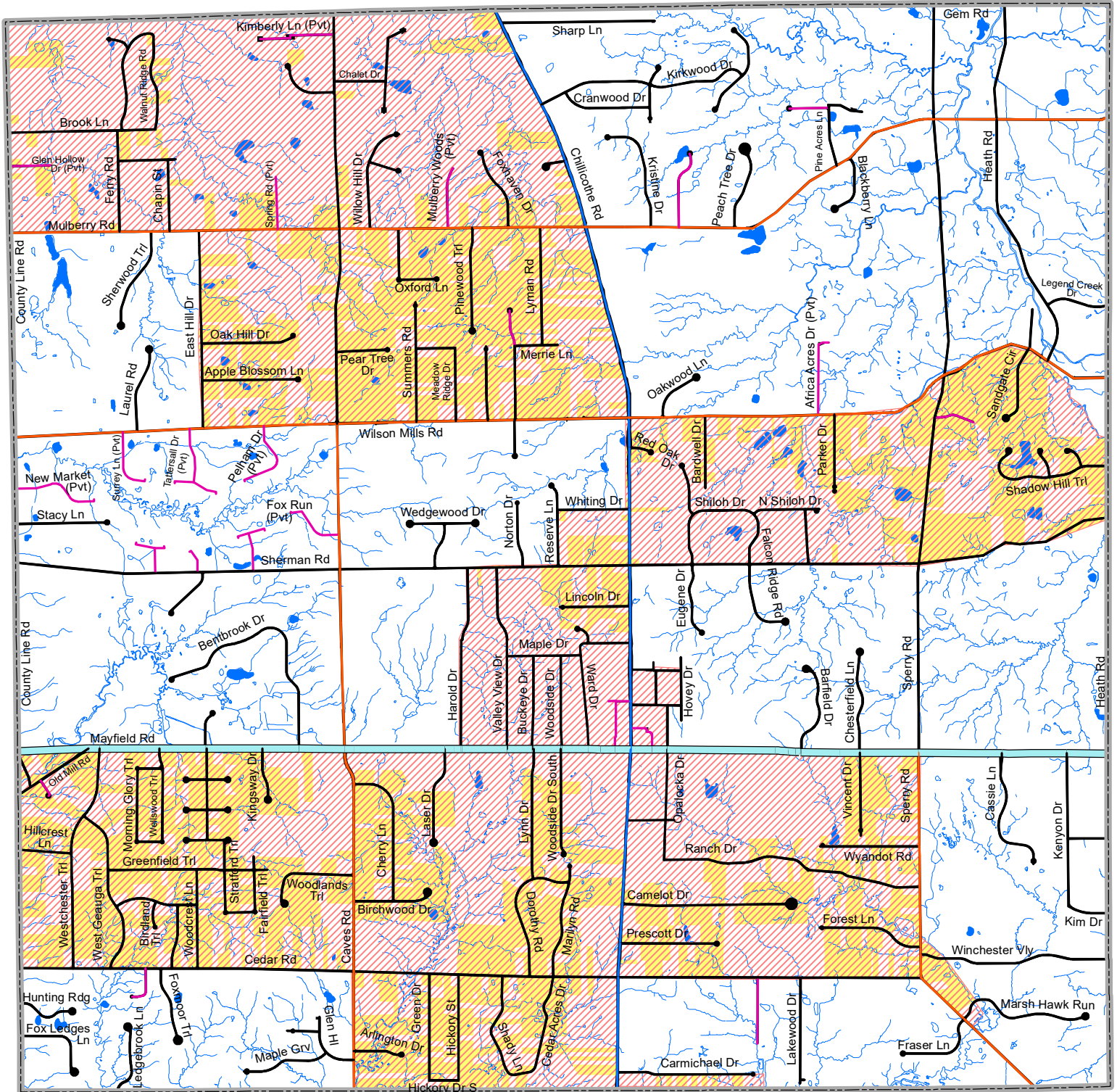
**Appendix A-5      Off-Lot Discharging HSTS Map**







## Bainbridge Township Off-Lot HSTS 2000-2021 Urban Area

- 2000/2010 Urban Area
- Parcels
- Off-Lots Through 12/31/2021 (843)
- Natural Water Feature

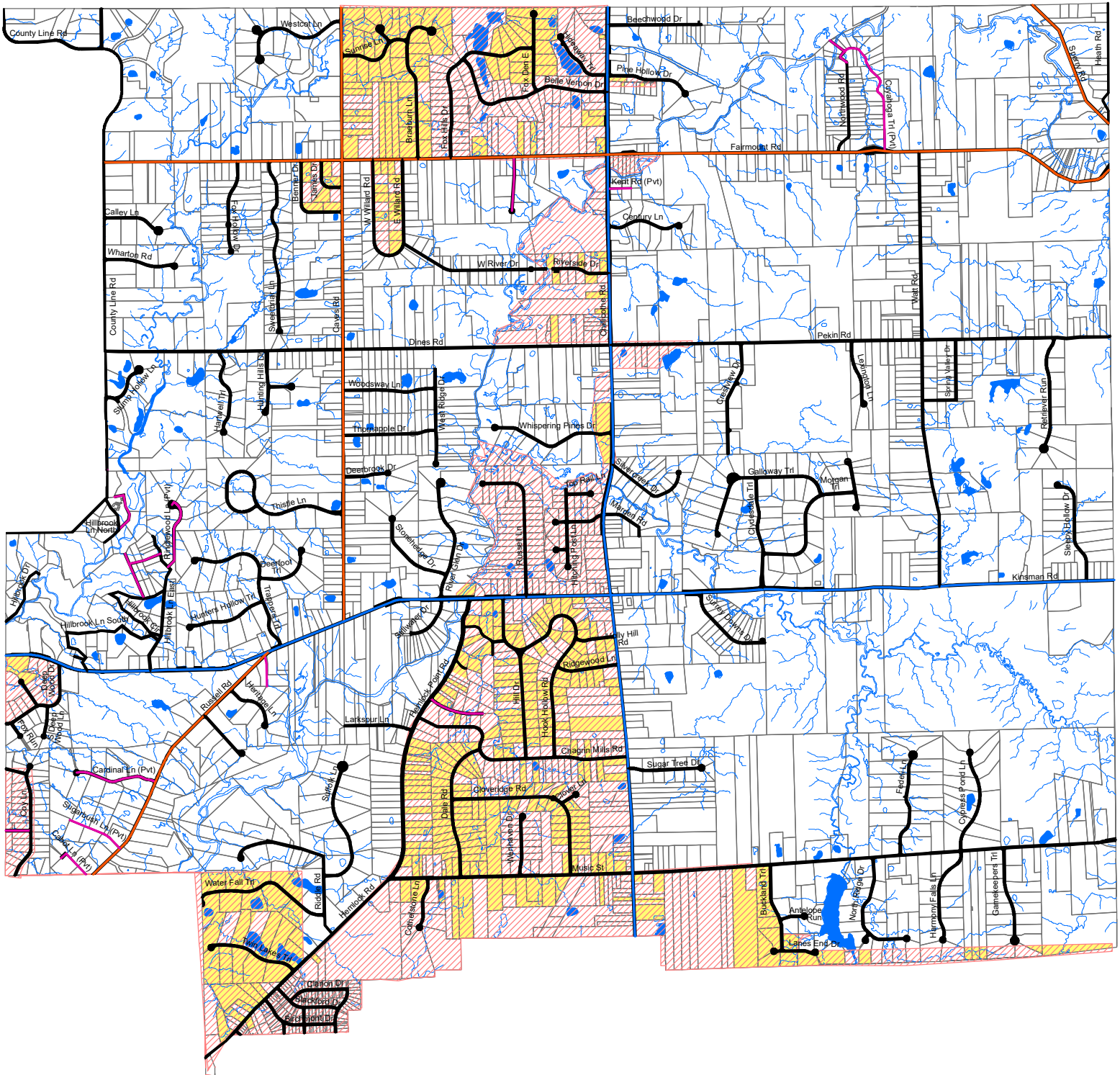








# Chester Township Off-Lot HSTS 2000-2010 Urban Area

-  2000/2010 Urban Area
-  Parcels
-  Off-Lots Through 12/31/2021 (1,791)
-  Natural Water Feature





# Russell Township Off-Lot HSTS 2000-2010 Urban Area

-  2000/2010 Urban Area
-  Parcels
-  Off-Lots Through 12/31/21 (367)
-  Natural Water Feature







## Procedure for Illicit Discharge Testing and Elimination in Geauga County

1. Utilize the list of dry weather (no rain for 72 hours) MS4 outfalls that were identified during the dry weather inspections in Geauga County from the Geauga Soil and Water Conservation District.
2. Begin by going to an identified dry weather outfall. Evaluate and determine the flow observed.
  - a. If there is no flow observed
    - i. Take photo of outfall, record the time and date, and indicate on testing form that that the outfall is no longer a dry weather outfall.
    - ii. Go back to procedure #2 at next dry weather outfall.
  - b. If there is only a wetness of the area and no flow
    - i. Since an accurate sample cannot be obtained – take a photo of outfall, record the time and date and indicate on testing form – Valid sample cannot be taken - no flow.
    - ii. Go back to procedure #2 at next dry weather outfall.
  - c. If there is flow observed
    - i. Take a photo of outfall, record the time and date
    - ii. Collect a water sample in Geauga County Department of Water Resources container.
    - iii. Put sample collected for lab testing in cooler with ice.
    - iv. Return to lab and test sample for amount of fecal coliform. (It was determined by the Geauga County Stormwater Taskforce that due to the nature of potential pollutant sources in the MS4s in Geauga County this was the most likely source of pollutant to trace for and therefore the most practical test to perform.)
    - v. Determine if sample exceeds the 5000 ppm tolerance set by Geauga County Health Department . Indicate test results on testing form.
    - vi. If the test is negative (<5000 ppm Fecal coliform) – Indicate such on testing form. Go back to procedure #2 at next dry weather outfall.
    - vii. If the test is positive (> 5000 ppm Fecal coliform) – Indicate such on testing form. Forward a nuisance complaint with the Geauga County Board of Health. The Geauga County Board of Health will then follow their procedures for a nuisance complaint to eliminate the discharge. Go back to procedure #2 at next dry weather outfall.
3. Once all dry weather outfalls have been completed, send all test result forms, and photos to Geauga Soil and Water Conservation District so the results can be recorded in the Geauga County Comprehensive Outfall Database.



**Geauga Soil and Water  
Conservation District**

14269 Claridon Troy Road  
PO Box 410  
Burton, OH 44021

Phone (440) 834-1122  
Fax (440) 834-0316  
[www.geaugaswcd.com](http://www.geaugaswcd.com)

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# **Geauga County Water Management and Sediment Control Regulations**

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Amended 2020

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*Adopted October 6, 2020 by the Geauga County Board of Commissioners*

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## Section

# 1

# General Provisions

## **SECTION 1.01 TITLE**

These Regulations shall be cited as the Geauga County Water Management and Sediment Control Regulations and are hereinafter referred to as "these Regulations."

## **SECTION 1.02 STATUTORY AUTHORIZATION**

These Regulations of Geauga County are promulgated pursuant to the Ohio Revised Code (O.R.C.) 307.79 and thereafter as amended, whereby a board of county commissioners may adopt rules to abate soil erosion and water pollution by soil sediment by land development.

## **SECTION 1.03 ADMINISTRATION**

The Geauga Soil and Water Conservation District (hereinafter referred to as "Gaugua SWCD"), acting as the Geauga County Board of Commissioner's duly authorized representative, shall administer these Regulations. Geauga SWCD Board of Supervisors authorizes its staff on behalf of the Geauga County Board of Commissioners to determine compliance with these Regulations and shall issue such notices and orders as may be necessary.

## **SECTION 1.04 PURPOSE**

The Geauga County Board of Commissioners, hereinafter referred to as "Commissioners," adopts these Regulations to establish technically feasible and economically reasonable standards to achieve a level of management and conservation practices that will abate water erosion of the soil or abate the degradation of the Waters of the State by soil sediment in conjunction with land grading, excavating, filling, or other soil disturbing activities on land used or being developed for nonfarm commercial, industrial, residential or other nonfarm purposes. The Commissioners additionally adopt these Regulations to establish criteria for determination of the acceptability of such management and conservation practices, and to continue to implement Phase II of the storm water program of the National Pollutant Discharge Elimination System (NPDES) established in 40 CFR Part 122.

These Regulations further intend, but are not limited to:

- A) Permit development while keeping downstream flooding, erosion, and sedimentation at existing levels.
- B) Reduce damage to receiving watercourses that may be caused by increases in the quantity and/or rate of water discharged and impairment of their capacity that may be caused by sedimentation.

- C) Establish a basis for the design of all storm drainage systems that will preserve the rights and options of both the dominant and servient property owners and help ensure the long-term adequacy of storm drainage systems.

## **SECTION 1.05      SCOPE**

These Regulations shall require persons to file plans governing erosion control, sediment control, and water management and receive a permit for soil-disturbing activities on land used or being developed for nonfarm commercial, industrial, residential, or other nonfarm uses as additionally regulated by the Ohio EPA including, but not limited to, individual or multiple lots, subdivisions, multi-family developments, commercial and industrial developments, recreational projects, general clearing and grading projects, underground utilities, private highways, other building activities on any lands, redevelopment of urban areas, and all other uses unless expressly excluded by any of the following:

- A) Land being used in a strip mining operation as defined in O.R.C. 1513.01
- B) Land being used in a surface mining operation as defined in O.R.C. 1514.01
- C) Activities related to the production and/or cultivation of agricultural crops and related activities whose activities are regulated under the Agricultural Pollution Abatement Rules and Standards (Ohio Administrative Code 901:13)
- D) Activities related to silviculture operations whose activities are regulated under Agricultural Pollution Abatement Rules and Standards (Ohio Administrative Code 1501:3)
- E) Maintenance and construction of public highways, transportation, or drainage projects undertaken by a government agency or political subdivision provided that its standard sediment control policies are compliant with the latest Ohio EPA NPDES Construction General Permit and/or have been approved by the Commissioners and that the applicable sediment control policies are no less restrictive than these Regulations.

## **SECTION 1.06      DISCLAIMER OF LIABILITY**

Neither submission of a plan under provisions of these Regulations, nor compliance with provisions of these Regulations, shall relieve any person or other entity from responsibility for damage to any person or property otherwise imposed by law; nor shall it create a duty by the Commissioners, or by the Geauga SWCD, to those damaged by soil sediment pollution.

## **SECTION 1.07      SEVERABILITY**

If any clause, section, or provision of these Regulations is declared invalid or unconstitutional by a court of competent jurisdiction, validity of the remainder shall not be affected thereby.

## **SECTION 1.08      NUISANCES**

These Regulations shall not be construed as authorizing any person to maintain a private or public nuisance on his property, and compliance with the provisions of these Regulations shall not be a defense in any action to abate such a nuisance.

**SECTION 1.09      RESPONSIBILITY**

Failure of the Geauga SWCD to observe or recognize hazardous or unsightly conditions or to recommend corrective measures shall not relieve the owner from the responsibility for the condition or damage resulting therefrom, and shall not result in the Commissioners or Geauga SWCD, its officers, employees, or agents being responsible from any conditions or damage resulting therefrom.

**SECTION 1.10      EFFECTIVE DATE**

These Regulations shall replace the existing regulations on the 31st day after adoption by the Commissioners.

## Section

# 2

# Definitions

## SECTION 2.01 INTERPRETATION OF TERMS AND WORDS

For the purpose of these Regulations certain rules or word usage apply to the text as follows:

- A) Words used in the present tense include the future tense, and the singular includes the plural, unless the context clearly indicates the contrary.
- B) The term "shall" is always mandatory and not discretionary; the word "may" is permissive. The term "should" is permissive, but indicates strong suggestion.
- C) Any word or term not interpreted or defined by this Section shall be construed according to the rules of grammar and common usage so as to give these Regulations their most reasonable application.

## SECTION 2.02 WORDS AND TERMS DEFINED

**ABBREVIATED WATER MANAGEMENT AND SEDIMENT CONTROL (WMSC) PLAN:** A plan prepared, designed, and approved in accordance with the specific requirements as contained in these Regulations, Section 5. This plan will provide for erosion and sediment control and management of construction debris and pollutants by utilizing BMP's to minimize erosion and prevent off-site sedimentation by containing sediment on site, or bypassing sediment-laden runoff through a sediment control measure and properly contain non-sediment debris during construction.

**ACRE:** A measurement of area equaling 43,560 square feet.

**APPROVED:** Compliant with these Regulations.

**BEST MANAGEMENT PRACTICES (BMP's):** Structural or nonstructural facilities or activities that control soil erosion and/or storm water runoff at a development site. This includes treatment requirements, operating and maintenance procedures, and other practices to control site runoff, leaks, or waste disposal.

**CRITICAL STORM:** That storm which is calculated by means of the percentage increase in volume of runoff by a proposed development. The critical storm is used to calculate the maximum allowable storm water discharge rate from a developed site.

**CUT:** An excavation that reduces an existing elevation, as in road or foundation construction.

**DETENTION STRUCTURE:** A permanent storm water management facility for the temporary storage of runoff, which is designed to delay and attenuate flow.

**DEVELOPMENT AREA:** A lot or contiguous lots owned by a person or persons, or operated as one development unit, and used or being developed for commercial, industrial, residential,



institutional, or other nonfarm construction or alternative that changes runoff characteristics, upon which soil-disturbing activities occur.

**DEVELOPMENT DRAINAGE AREA:** A combination of each hydraulically unique drainage areas with individual outlet points on the development area.

**DISTURBED AREA:** An area of land subject to erosion due to the removal of vegetative cover and/or soil disturbing activities by means of clearing, grading, excavating, filling, or other land surface alteration that exposes underlying soil.

**DITCH:** A manmade channel for the purpose of drainage or irrigation with intermittent flow.

**DRAINAGE:** The removal of excess surface water or groundwater from land by surface or subsurface drains.

**DRAINAGE IMPROVEMENT:** As defined in O.R.C. 6131.01 (C), and/or conservation works of improvement, pursuant to O.R.C. 1511 and 1515.

**ENGINEER:** A Professional Engineer registered in the State of Ohio.

**EROSION:** The process by which the land surface is worn away by the action of wind, water, ice, gravity, or any combination of those forces.

**EROSION AND SEDIMENT CONTROL:** The control of soil material, both mineral and organic, to minimize the removal of soil from the land surface and to prevent its transport out of a disturbed area by means of wind, water, ice, gravity, or any combination of those forces.

**FARM:** Land, water, or buildings primarily devoted to growing and/or cultivating crops in connection with any of the following: 1) Raising or harvesting of an agricultural, horticultural, or viticultural commodity and 2) Raising, shearing, feeding, caring for, training, and management of livestock and poultry.

**FINAL STABILIZATION:** All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover (i.e. evenly distributed without large bare areas) with a density of at least 80% cover for the area has been established on all unpaved areas not covered by a permanent structure, or aggregate or equivalent stabilization measures, such as the use of mulches or geotextiles, have been employed.

**FLOOD PLAIN:** The designated areas shown on the flood hazard boundary maps of the county prepared by the United States Department of Housing and Urban Development, Federal Insurance Administration, and the Federal Emergency Management Agency, which are subject to periodic flooding from a 100-year frequency storm.

**HYDRIC SOILS:** Soils that are saturated, flooded, or ponded for a long enough time period during the growing season that anaerobic conditions develop in the upper part of the soil or soils that are considered "wetland" soils.

**HYDROPHYTIC VEGETATION:** Plants that are found in wetland areas. These plants are classified by their frequency of occurrence in wetlands.

**IMPERVIOUS:** Not allowing infiltration which means any paved, hardened, or structural surface regardless of its composition including (but not limited to) buildings, roads, driveways, parking lots, loading/unloading spaces, decks, patios, and swimming pools.

LANDSCAPE ARCHITECT: A Professional Landscape Architect registered in the State of Ohio.

LARGER COMMON PLAN OF DEVELOPMENT: A contiguous area where multiple separate and distinct construction activities may take place at different times on different schedules under one development area.

LOT: A tract of land occupied or intended to be occupied by a use, building, or group of buildings and their accessory uses and buildings as a unit, together with such open spaces and driveways as are provided and required. A lot may contain more than one contiguous lot.

LOW IMPACT DEVELOPMENT TECHNIQUE: An alternative site design strategy that uses or mimics natural and engineered processes that result in infiltration, evapotranspiration and storage techniques to control storm water where it is generated. The objective is to disperse these techniques as a network uniformly across a site to minimize runoff.

MAJOR SUBDIVISION: As defined in the most current version of the Subdivision Regulations of Geauga County.

MAXIMUM EXTENT PRACTICABLE: The level of pollutant reduction that site owners of small municipal separate storm sewer systems regulated under 50 C.F.R. Parts 9, 122, 123, and 124, referred to as NPDES Storm Water Phase II, must meet.

MS4: Municipal Separate Storm Sewer System. A conveyance or system of conveyances (including roadside ditches, catch basins, curbs, gutters, storm sewers) that are:

- A) Owned or operated by the federal government, state, municipality, township, county, district(s), or other public body (created by or pursuant to state or federal law) including special districts under state law such as a sewer district, flood control district, drainage district or similar entity, or a designated and approved management agency under section 208 of the act that discharges into surface waters of the State; and
- B) Designed or used for collecting or conveying solely storm water, which is not a combined sewer and is not a part of a publicly owned treatment works.

MULTI-FAMILY DEVELOPMENT: Apartments, condominiums, townhouses, duplexes, or other similar buildings housing more than one family.

NONFARM: Land, water, or buildings that are not primarily devoted to the uses specified in the definition of "farm" herein.

NPDES: National Pollutant Discharge Elimination System. A regulatory program in the Federal Clean Water Act that prohibits the discharge of pollutants into surface water of the United States without a permit.

NOI: Notice of Intent obtained from the Ohio EPA under the NPDES Phase 2 Program.

NOT: Notice of Termination obtained from the Ohio EPA under NPDES Phase 2 Program.

OHIO EPA: Ohio Environmental Protection Agency.

PERMANENT SOIL STABILIZATION: All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of at least 80% cover for the area has been established or equivalent stabilization measures, such as the use of mulches, or geotextiles, have been employed.

**PERSON:** Any individual, corporation, firm, trust, commission, board, public or private partnership, joint venture, agency, unincorporated association, municipal corporation, county or state agency, the federal government, other legal entity, or an agent or combination thereof.

**PHASING:** Clearing/grubbing/excavating a parcel of land in distinct sections, with the stabilization of each section occurring before clearing the next.

**PUD:** Planned Unit Development.

**RAINWATER AND LAND DEVELOPMENT MANUAL:** Ohio's standards developed by ODNR-DSWC for storm water management, land development, and urban watercourse protection. The most current edition of these standards shall be used with this regulation.

**RETENTION STRUCTURE:** A permanent storm water management facility that provides for the storage of storm water runoff while maintaining a permanent pool of water. These facilities are designed to delay and may have the ability to remove sediments and other pollutants.

**RIPARIAN SETBACK:** An area of naturally vegetated land adjacent to designated watercourses that, if appropriately sized, helps to stabilize stream banks, limit erosion, reduce flood size flows and/or filters and settles-out runoff pollutants. This area shall be a designated distance from a watercourse as set by applicable local or county regulations.

**RUNOFF:** The portion of rainfall, melted snow, or irrigation water that flows across the ground surface and is eventually returned to groundwater, streams, watercourses, ponds, lakes, or wetlands.

**RUNOFF REDUCTION:** Reduce the increase in runoff through the use of management practices that effectively reduce runoff volume through practices such as infiltration, extended filtration, soil amendments, rainwater harvesting and reuse, evapotranspiration, etc.;

**SEDIMENT:** Soils or other surface materials that are or have been transported or deposited by the action of wind, water, ice, gravity, or any combination of those forces, as a product of erosion.

**SEDIMENTATION:** The deposition or settling of sediment.

**SEDIMENT BASIN:** A barrier or other suitable retention structure built across an area of water flow to intercept runoff and allow transported sediment to settle and be retained prior to discharge into waters of the state.

**SEDIMENT POLLUTION:** Degradation of waters of the state by sediment as a result of failure to apply management or conservation practices to abate wind or water soil erosion, specifically in conjunction with soil-disturbing activities on land used or being developed for commercial, institutional, industrial, residential, or other nonfarm purposes.

**SOIL AND WATER CONSERVATION DISTRICT:** An entity organized under Chapter 940 of the Ohio Revised Code; referring either to the Soil and Water Conservation District Board, or its designated employee(s), hereinafter referred to as the SWCD.

**SOIL DISTURBING ACTIVITIES:** Clearing, grubbing, grading, excavating, filling, dumping, or stripping, or other alteration of the earth's surface where natural or human made ground cover is destroyed and which may result in, or contribute, to erosion and sediment pollution. This may also include construction of buildings, structures, utilities, roadways, parking areas, and septic systems that will involve soil disturbance or altering of the existing ground cover.

**SOIL LOSS:** Soil moved from a given site by the forces of erosion, measured using the Revised Universal Soil Loss Equation "RUSLE."

**STABILIZATION:** The use of Best Management Practices, such as seeding and mulching, that reduce or prevent soil erosion by water, wind, ice, gravity, or a combination of those forces.

**STORM WATER:** Storm water runoff, snowmelt, surface runoff, and drainage.

**STORM WATER MANAGEMENT:** A system of structural and nonstructural practices used to safely convey, temporarily store, improve quality, release at an allowable rate, and/or minimize erosion and flooding from storm water runoff.

**STREAM:** See definition for "Watercourse."

**SUBSOIL:** That portion of the soil below the topsoil or plow layer, typically beginning 6-12" below the surface, but can also extend to 48" or deeper in the case of prime farmland soils, down to bedrock parent material.

**SWP3:** Storm Water Pollution Prevention Plan as defined and required by the Ohio EPA.

**TEMPORARY SOIL STABILIZATION:** Establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation, and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.

**TOPSOIL:** The upper layer of soil that is usually darker in color and richer in organic matter and nutrients than the subsoil.

**WATERCOURSE:** A natural channel with defined bed and banks within which concentrated water flows, either continuously or intermittently, (i.e., brooks, creeks, rivers or streams).

**WATER MANAGEMENT AND SEDIMENT CONTROL (WMSC) PLAN:** A plan prepared, designed, and approved in accordance with the specific requirements as contained in these Regulations, Section 4. This plan will provide for storm water management to address the increase in storm water created by the proposed development as well as illustrating the means and methods to minimize erosion and prevent off-site sedimentation by containing sediment on site, or bypassing sediment-laden runoff through a sediment control measure. Equivalent to a SWP3.

**WATERSHED:** The total drainage area contributing surface runoff to a single point.

**WETLAND:** Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and contain a predominance of hydric soils and that under normal circumstances do support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas (40 CFR 232, as amended).

**WQv (Water Quality Volume):** The volume of storm water runoff which must be captured and treated prior to discharge from the developed site after construction is complete. WQv is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.

## Section

# 3

# APPLICABILITY

## **SECTION 3.01 GENERAL APPLICABILITY CRITERIA FOR STORM WATER MANAGEMENT AND SEDIMENT CONTROL**

No person shall cause or allow soil disturbing activities to occur on a contiguous Development area without full compliance with the criteria established by these Regulations.

- A) A Water Management and Sediment Control (WMSC) Plan, in accordance with these Regulations, must be submitted to, and approved by, the Geauga SWCD when soil disturbing activities are proposed that will disturb one (1) acre or more, or less than one (1) acre and part of a larger common plan of development.
- B) An Abbreviated (WMSC) Plan, in accordance with these Regulations, is recommended to be developed and approved by the Geauga SWCD when soil disturbing activities are proposed that will disturb less than one (1) acre and not part of a larger common plan of development.
- C) A clearing plan must be submitted if a landowner desires to begin parcel clearing operations by mechanized means prior to receiving approval of a WMSC Plan for soil-disturbing activities for the site by the Geauga SWCD. The clearing plan submittal shall minimally consist of the requirements for an Abbreviated Water Management and Sediment Control Plan and appropriate fees as listed in Section 6.02.
- D) Specific site conditions (i.e., date original development was built, centralized storm water management, additions, residential lot construction, redevelopment, etc.) may dictate the requirement of different components to be included on the WMSC Plan as indicated in Section 4 of these Regulations
- E) All soil disturbing activities must comply with the intent and all other provisions of these Regulations even if a WMSC Plan may not be required to be submitted for approval.
- F) Submittal of a WMSC Plan or an Abbreviated WMSC Plan that has been approved by the Geauga SWCD does not relieve the owner from complying with the full requirements of the most recent version of the Ohio EPA NPDES Authorization for Storm Water Discharges Associated with Construction Activities Under the National Pollutant Discharge Elimination System Permit if applicable for the site.
- G) A WMSC Plan that does not include the requirements of Section 4.04, in accordance with these Regulations, must be submitted to, and approved by, the Geauga SWCD when soil disturbing activities are proposed that will disturb one (1) acre or more, or less than one (1) acre and part of a larger common plan of development for a utility line project.
- H) Any proposed construction that is not within the applicability of these Regulations as listed above, but storm water runoff generated due to the proposed construction is directed toward an existing storm water quality and/or quantity management facility, applicant must provide engineering documentation to ensure the facility can accommodate the additional

runoff and still meet its original intended volumes and drawdowns for water quantity and quality management.

**Section**

**4 WATER MANAGEMENT AND  
SEDIMENT CONTROL PLAN  
CONTENT**

**SECTION 4.01 GENERAL REQUIREMENTS**

- A) The WMSC Plan shall incorporate measures as recommended by the most current edition of the Rainwater and Land Development Manual.
- B) A Registered Professional Engineer must certify storm water and sediment and erosion control calculations, designs, and plan sheets. To the extent necessary, a Registered Professional Surveyor may be required to certify boundary lines, measurements, or land surfaces.

**SECTION 4.02 APPLICATION, NARRATIVE, AND SITE DESCRIPTION**

The WMSC Plan must contain an application, narrative report and site description together with the information listed below.

- A) Site Type (e.g., residential, commercial, subdivision, industrial, institutional, multi-family, apartment, condominium, mobile home park, or manufactured home park), number of sublots, and phase number, if applicable;
- B) Total acreage of entire site, total acreage of soil disturbance (including areas where clearing, grubbing, excavating, filling, and grading will occur including off-site borrow and material disposal areas), and percentage of soil disturbance in relation to the entire site. Explanation of locations of offsite borrow and disposal areas must be provided including whether or not these areas are or will be covered under the project permit or an additional permit/plan will be provided. If an additional permit/plan will be provided it must be submitted simultaneously with the main project;
- C) An estimate of the impervious area and percent imperviousness created by the soil-disturbing activity;
- D) Summary of storm water information as calculated and required in Section 4.04 of these Regulations including;
  - 1. Pre- and post-developed drainage maps clearly identifying the time of concentration routes on each;
  - 2. Critical Storm calculations;

3. Storm water runoff estimations and calculations (including runoff coefficients) for pre- and post-development;
  4. Summary of allowable pre- and post-development peak discharges;
  5. Calculations and summary of the water quality volume and drawdown time;
- E) Description of soils and, if available, the quality of any discharge from the site;
- F) A description of prior land uses at the site;
- G) A description of the condition of any on-site streams (e.g. prior channelization, bed instability or headcuts, channels on public maintenance, or natural channels);
- H) An implementation schedule which describes in detail the sequence of major construction operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;
- I) The name and/or location of the immediate and first subsequent receiving stream or surface water(s) and the description of any wetlands (including area and Ohio EPA category if on site) or other special aquatic sites at or near the site that will be disturbed or will receive discharges from the disturbed areas of the project. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface waters of the State must be identified. If a FEMA designated 100-year flood plain exists on any watercourses, this shall additionally be listed;
- J) For subdivided developments where the WMSC Plan does not call for a centralized sediment control structure capable of controlling multiple individual lots sediment runoff as they are developed after construction of the subdivision infrastructure, a detail drawing of a typical individual lot showing standard erosion and sediment control practice including designation of specific erosion and sediment control practices for critical areas such as steep slopes, watercourse banks, channels, and riparian setbacks;
- K) Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;
- L) Ohio EPA NPDES Permit Number and/or a copy of the applicable Ohio EPA Notice of Intent (NOI) for Construction Activities as applicable for the site;
- M) Cover page (Application must also provide this information) that includes the following:
1. Name and Location of the site – including address and subplot number if applicable;
  2. Name and Contact information including company name, individual name, address, individual email, and individual phone number for the following, as applicable:
    - a. Owner of Site
    - b. Owner of Project (if different from the site owner)
    - c. Person responsible for authorizing and amending the WMSC Plan



- d. Professional Engineer certifying plans and calculation and other preparer, if applicable, of the Erosion and Sediment Control portion of the submittal. The Professional Engineer must additionally sign, seal, and date all plans and calculations
  - 3. Preparation date of WMSC Plan;
  - 4. Estimated dates that construction will commence and be completed;
  - 5. Watershed where project is located (i.e., Chagrin, Grand, Cuyahoga, Mahoning);
  - 6. Geographic Coordinates (i.e., latitude and longitude) for site and each storm water management facility for the project;
- N) A log documenting grading and stabilization activities as well as amendments to the WMSC Plan, which occur after construction activities commence;
- O) List of any conservation easements or other restrictive uses of the property on record;
- P) An inspection and maintenance agreement binding the owner and all subsequent owners of lands where a storm water management facility is to be constructed. Such agreements/deed restrictions/restrictive covenants shall designate and minimally provide the following and be recorded with the deed of the property: 1) Identify the party(s) responsible for long-term maintenance including repairs as necessary for all storm water facilities; 2) Prohibit unauthorized alteration of all storm water facilities without prior written approval from the Geauga SWCD; 3) Allow the Geauga SWCD access to the storm water management facilities and any riparian setback areas, if applicable, at reasonable times for inspections to document the facilities' condition and ensure its originally designed function; 4) For each type of storm water facility, list the maintenance and frequency of such required; 5) Identify the funding source for the above listed party to perform maintenance of, and repairs to, storm water facility; and 6) Specify that any pollutants collected in the storm water facility are disposed of in accordance with local, state, and federal regulations. The Geauga SWCD reserves the right to require additional notes and/or restrictions and may require these to be listed on the plat, if necessary.
- Alterations to these stipulations or termination of any of these requirements are prohibited in the document and must run with the land. The document must clearly identify each facility and its location. The owner may provide a draft for review as part of the submittal. Once the draft is approved, a recorded copy of the entire document must be submitted to Geauga SWCD to receive final inspection approval of the site;
- Q) Prior to construction commencing or before the pre-construction meeting, the following must additionally be provided:
- 1. Primary operator or contractor's name, address, phone, and email that is responsible for the development area. This primary operator/contractor shall additionally file a Notice of Intent (NOI) with the Ohio EPA as a co-permittee for the project and provide evidence of such;
  - 2. List of all contractor's/subcontractor's contact information (name, address, phone, and email) involved in the implementation of the WMSC Plan, including a written document containing signatures of all parties as proof of acknowledgement that they reviewed and understand the requirements and responsibilities of the WMSC Plan.

Identification of which storm water or erosion controls and phase as listed in the construction sequence that each contractor/subcontractor is responsible for shall additionally be provided;

- R) If disturbance of streams or wetlands is anticipated, appropriate documentation as listed in Section 4.05 must additionally be provided as applicable.

## **SECTION 4.03 SITE CONSTRUCTION PLANS, DRAWINGS, AND DETAILS**

The WMSC Plan shall include construction plan sheets containing drainage, erosion and sediment control measures, and storm water control for proper management of the site during and after construction. A detail listing of the components required for all other sites are as follows:

- A) Vicinity Map: A map should be shown on the plans indicating the site in relation to the surrounding area;
- B) Contact and Site Information Page with duplicate information as indicated in Section 4.02 ;
- C) Site Plan: A plan sheet indicating all temporary and permanent BMP's proposed to be used during all phases of construction shall be provided. It is preferred that the entire site be contained on one sheet if possible to permit an entire view of the site for analysis. If a smaller scale is used to permit inclusion of the entire site on one sheet, separate sheets providing an enlarged view of areas on individual sheets should be additionally provided. The following items shall be provided within the plans and follow the applicable performance and design standards as outlined in Section 7 of these Regulations:
1. The limits of clearing, grading, excavation, or any other soil disturbing activities, including off-site spoil and borrow areas that are not addressed by a separate NOI and associated WMSC Plan;
  2. Soil types and their boundaries, including locations of unstable or highly erodible soils and/or known contaminated soils;
  3. Existing and proposed two (2) foot contours with both clearly labeled accordingly. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed in acres;
  4. Surface water locations including springs, wetlands, watercourses, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or watercourses and first subsequent named receiving water(s) the applicant intends to fill or relocate for which the applicant is seeking approval from the U.S. Army Corps of Engineers and/or Ohio EPA;
  5. Location of conservation easements, areas designated as open space or preserved vegetation areas, and a description of any associated temporary or permanent fencing or signage;
  6. Sediment ponds and traps and associated details reflecting their dimensions, calculation of the disturbed area, sediment storage volume, detention volume, dewatering drawdown time, and the contributing drainage area;

7. Location and detail drawings of all erosion and sediment control practices, including location of areas likely to require temporary stabilization during the course of site development;
8. Areas designated for the storage or disposal of solid and liquid wastes, including dumpster areas for construction debris, areas designed for cement truck washout, and vehicle fueling;
9. The location of designated construction entrances where vehicles will access the construction site;
10. The location of any areas of proposed floodplain fill, floodplain excavation, stream restoration, or known temporary or permanent stream crossing activities in watercourses;
11. The location and dimensions of riparian setbacks that may be applicable through local zoning or subdivision regulations;
12. Existing and planned location of buildings, roads, parking facilities, and utilities;
13. Detail drawings of all permanent and temporary structural storm water management practices that will be used to control pollutants in storm water before and after construction operations have been completed along with the location and details of existing and planned drainage features including catch basins, culverts, ditches, swales, storm sewers, surface inlets, and outlet structures;
14. Description and specifications for stabilization of all disturbed areas of the site and guidance to which method of stabilization should be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, the use of construction entrances, and the use of alternative ground cover;
15. The plan must make use of nonstructural practices that preserve the existing natural condition to the maximum extent practicable. Such practices should include preserving riparian setbacks, preserving existing vegetation and vegetative buffer strips, phasing construction operation in order to minimize the amount of disturbed land at any one time, and designation of tree preservation areas or other protective clearing or grubbing practices;
16. Construction schedule clearly identifying the appropriate erosion, sediment, or storm water control method and the general sequence during the construction process when each specific method will be implemented;
17. General Notes must be provided to clearly indicate the methods, timing, and implementation of all temporary and permanent storm water management and erosion and sediment control items. The following notes, or similar but not less restrictive, shall minimally be provided:
  - a. "Minimize tracking of sediments by vehicles by utilizing the construction entrance as the only entrance for vehicles. Maintain this entrance with stone as needed to prevent dirt and mud from tracking onto the roadway. Regular sweeping of the roadway may be necessary to ensure roadway does not build up with sediment."

- b. "The owner of record must provide regular inspection and maintenance for all erosion and sediment control practices. Permanent records of all maintenance and inspections must be kept throughout the construction period. Inspection must be made a minimum of once every seven (7) days and immediately after storm events greater than 0.5 inches of rain within a 24-hour period. The name of owner's designated inspector, major observations, date of inspections, and corrective measures taken must be noted on all inspections."
- c. "Other erosion and sediment control items may be necessary due to environmental conditions and may be required at the discretion of the Geauga SWCD or its representatives."
- d. "Sediment/storm water ponds and erosion and sediment controls shall be implemented as the first step of grading and within 7 days from the start of grubbing. Upon completion of construction of ponds, seeding and mulching of entire constructed pond area shall immediately follow to aid in the stabilization and minimize erosion and sediment transport of the soil before water leaves the pond. All erosion and sediment controls shall continue to function until disturbed areas are fully restabilized."
- e. "No solid or liquid waste shall be discharged into storm water runoff. (This includes washing out of cement trucks.) Designated wash pit areas are shown on the plans and are preset for this purpose away from areas of storm water runoff."
- f. "Site stabilization either permanent or temporary must follow the requirements as applicable on the following tables:"

<b><i>Area requiring permanent stabilization</i></b>	<b><i>Time frame to apply erosion controls</i></b>
Any area that will lie dormant for one year or more.	Within 7 days of the most recent disturbance.
Any area within 50 feet of a watercourse and at final grade.	Within 2 days of reaching final grade.
Any area at final grade.	Within 7 days of reaching final grade within that area.

<b><i>Area requiring temporary stabilization</i></b>	<b><i>Time frame to apply erosion controls</i></b>
Any disturbed area within 50 feet of a watercourse and not at final grade.	Within 2 days of the most recent disturbance, if that area will remain idle for more than 14 days.
For all construction activities, any disturbed area, including soil stockpiles, that will be dormant for more than 14 days but less than one year, and not within 50 feet of a watercourse.	Within 7 days of the most recent disturbance within the area.
Disturbed areas that will be idle over the winter.	Prior to November 1.
NOTE: Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. These techniques may include mulching, erosion matting, or placement of stone.	

- D) Storm Water, Erosion and Sediment Control Selection: The WMSC Plan must make use of non-structural practices that preserve the existing natural condition as much as feasible. Such practices may include preserving riparian setbacks (i.e. providing a 50' buffer to surface waters of the State), preserving existing vegetation and vegetative buffer strips, minimize disturbance of steep slopes, minimize soil compaction, phasing construction operation in order to minimize the amount of disturbed land at any one time, and designation of tree preservation areas or other protective clearing or grubbing practices.

#### **SECTION 4.04 POST-CONSTRUCTION STORM WATER CONTROL METHODS**

Storm water control methods shall be designed so as to control flooding from within the site as well as off-site flooding and erosion that may be caused by discharge from the development. As part of the design, the Engineer shall provide documentation that supports and ensures any storm water point discharge is directly connected to a public storm sewer system, public drainage ditch, or other natural channel with the capacity to accept the discharge. If none of these outlets are available, the post-developed surface water drainage discharge location and types shall match the pre-developed surface water drainage discharge location and types and may not degrade adjoining properties. This may require the designer use multiple storm water management features to try to match the pre-developed discharge locations. In these cases, the designer is also encouraged to utilize grass filter strips, impervious area disconnection and other runoff reduction or low-impact development techniques to minimize discharge rates and maintain sheet flow. The design engineer shall additionally manage all distinct drainage watersheds from the developed area and not redirect into different watersheds. Construction activities shall be exempt from the requirements of this section if the proposed activities do not include the installation of any impervious surface, or include abandoned mine land reclamation regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities or it can be demonstrated that the post-construction storm water management requirements of this section have been provided as part of a larger common plan of development or they are addressed in a regional or local storm water management plan. Nonresidential construction activities where soil disturbing activities of less than 1 acre are proposed and are part of a larger common plan of development (including additions and additional buildings on developed lots) that were built prior to 2003 shall be exempt from providing the  $WQ_v$  component of the post-construction storm water management requirements.

- A) To prevent pollution of public waters by soil sediment and protect the integrity of watercourses from erosion caused by the effects of accelerated storm water runoff from development areas, the increased peak rates and volumes of runoff shall be controlled and meet the below itemized criteria. The peak discharge rate of runoff from the critical storm and all more frequent storms occurring under post-development conditions does not exceed the peak discharge rate of runoff from a one (1)-year frequency, 24-hour storm occurring on the same development drainage area under pre-development conditions. In some instances, where multiple drainage areas drain to the same watercourse, it may be allowable to compare the post-developed combined net outflow from these drainage areas to meet the pre-developed outflow from a one (1)-year frequency, 24-hour storm. The engineer must provide valid reasons on why this method may be applicable.
- B) Storms of less frequent occurrence (longer return periods) than the critical storm up to the 100-year storm have peak runoff discharge rates no greater than the peak runoff rates

from equivalent size storms under pre-development conditions. Consideration of the 1, 2, 5, 10, 25, 50, and 100-year storms will be considered adequate in designing and developing to meet this standard.

C) The critical storm for a specific development drainage area is determined as follows:

1. Use the SCS TR-20 Hydrologic Analysis Model<sup>1</sup> or other appropriate and approved hydrologic simulation model along with the latest rainfall data available from NOAA (National Oceanic and Atmospheric Administration) Atlas 14, to determine the total volume (acre-feet) of runoff from a one (1)-year, 24-hour storm occurring on the development drainage area before and after development. Include clearly in your calculations the lot coverage assumptions used for full buildout of the proposed condition. Curve numbers for the pre-development condition must reflect the average type of land use over the past 10 years and not only the current land use. To account for unknown future cosmetic improvements to a construction site, an assumption of an impervious surface such as asphalt or concrete must be utilized for all parking areas or driveways, even if stone/gravel is to be utilized in construction. Curve numbers used in runoff calculations for the post-developed condition must reflect a more severe hydrologic soil group due to the resulting compaction of the soil during construction. For example, if a pre-development grass covered area has a curve number within the hydrologic soil group C and the post-development condition for the same area would remain grass covered but will be disturbed, a curve number within the hydrologic soil group D shall be utilized in design calculations. If the pre-development condition in an area is a hydrologic soil group D, the post-development condition may also remain a D. The more severe soil group shall also be utilized in the routing calculations and computing of the peak discharge.
2. From the volumes determined in (1) above, determine the percent increase in volume of runoff due to development. Using this percentage, select the 24-hour critical storm from the following table:

**TABLE 1: CRITICAL STORM DETERMINATION TABLE**

IF THE PERCENTAGE OF INCREASE IN VOLUME OF RUNOFF IS:		THE CRITICAL STORM WILL BE:
EQUAL TO OR GREATER THAN:	LESS THAN:	
--	10	1 year
10	20	2 year
20	50	5 year
50	100	10 year
100	250	25 year
250	500	50 year

<sup>1</sup> U.S. Department of Agriculture Soil Conservation Service. May 1983. *TR-20: Computer Program for project formulation hydrology.*

(For example, if the percent increase between the pre-development and post-development runoff volume for a 1-year storm is 35%, the critical storm is a 5-year storm. The peak discharge rate of runoff for all storms up to this frequency shall be controlled so as not to exceed the peak discharge rate from the 1-year frequency storm under pre-development conditions in the development drainage area. The post-development runoff from all less frequent storms need only be controlled to meet the pre-development peak discharge rate for each of those same storms.)

- D) The structural BMP selected must be chosen to be compatible with site and soil conditions and be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume and be additionally sized for protection of watercourses from erosion and sediment pollution and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The water quality volume,  $WQ_v$ , shall be equivalent to the volume of runoff from a 0.90-inch rainfall and shall be determined using the following equations:

1. Using the following equation:  $WQ_v = R_v * P * A/12$

Where:  $WQ_v$  = water quality volume in acre-feet

$P$  = 0.90 inch precipitation depth

$A$  = area draining into the BMP in acres

$R_v$  = volumetric runoff coefficient calculated equation below:

$$R_v = 0.05 + 0.9i$$

where  $i$  = fraction of the post-construction impervious surface

(For example if a project is creating 20% impervious surface a value of 0.2 would be utilized for the "i" value.)

2. An additional volume equal to 20 percent of the  $WQ_v$  shall be incorporated into the  $WQ_v$  BMP for sediment storage and/or reduced infiltration capacity post-construction.
3. The  $WQ_v$  BMP must be designed to treat 100% of the  $WQ_v$  of each unique drainage area and the entire area draining into the  $WQ_v$  BMP regardless of whether or not it is part of the proposed project. To avoid treating offsite drainage, rerouting around  $WQ_v$  BMP may be utilized.
4.  $WQ_v$  BMP's, as listed in Tables 2 and 3 below, shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage available for successive rain events and avoid the creation of nuisance conditions. The outlet structure for the post-construction  $WQ_v$  BMP must not discharge more than the first half of the  $WQ_v$ . The  $WQ_v$  is the volume of storm water runoff that must be detained by a post-construction practice as specified by the most recent edition of the Rainwater and Land Development Manual.
5. If there is an existing post-construction  $WQ_v$  BMP that treats runoff from the disturbed area and the  $WQ_v$  BMP meets the post-construction requirements of this permit, no additional post-construction  $WQ_v$  BMP will be required. A regional storm water  $WQ_v$  BMP may be used to meet the post-construction requirement if: (1) the  $WQ_v$  BMP meets the design requirements for treating the  $WQ_v$ ; and (2) a legal agreement is

established through which the regional WQv BMP owner or operator agrees to provide this service in perpetuity. Design information for these regional facilities such as drainage areas, capacities, elevations, outlet details and drain times shall be included in the submitted WMSC Plan.

**TABLE 2: EXTENDED DETENTION POST-CONSTRUCTION PRACTICES WITH MINIMUM DRAIN TIMES**

<i>Extended Detention Practice</i>	<i>Minimum Drain Time of WQ<sub>v</sub></i>
<p><b>Permeable Pavement – Extended Detention</b>            The outlet structure shall not discharge more than the first half of the WQ<sub>v</sub> in less than one-third of the drain time.</p>	24 hours
<p><b>Dry Extended Detention Basin</b>            The outlet structure shall not discharge more than the first half of the WQ<sub>v</sub> in less than one-third of the drain time. Dry basins must include forebay and micropool each sized at 10% of the WQ<sub>v</sub> and a protected outlet or include acceptable pretreatment and a protected outlet.</p>	48 hours
<p><b>Wet Extended Detention Basin</b>            The outlet structure shall not discharge more than the first half of the WQ<sub>v</sub> in less than one-third of the drain time. Provide both a permanent pool and an extended detention volume above the permanent pool, each sized at 1.0 x WQ<sub>v</sub>.</p>	24 hours
<p><b>Constructed Extended Detention Wetland</b>            The outlet structure shall not discharge more than the first half of the WQ<sub>v</sub> in less than one-third of the drain time. Provide both a permanent pool and an extended detention volume above the permanent pool, each sized at 1.0 x WQ<sub>v</sub>.</p>	24 hours
<p><b>Sand and Other Media Filtration – Extended Detention</b>            The outlet structure shall not discharge more than the first half of the WQ<sub>v</sub> in less than one-third of the drain time. The WQ<sub>v</sub> ponding area shall completely empty within 24 and 72 hours.</p>	24 hours
<p><b>Underground Storage – Extended Detention</b>            The outlet structure shall not discharge more than the first half of the WQ<sub>v</sub> in less than one-third of the drain time. Underground storage must have pretreatment for removal of suspended sediments included in the design and documented in the WMSC Plan. This pretreatment shall concentrate sediment in a location where it can be readily removed. For non-infiltrating, underground extended detention systems, pretreatment shall be 50% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.</p>	24 hours

**TABLE 3: INFILTRATION POST-CONSTRUCTION PRACTICES WITH MAXIMUM DRAIN TIMES**

<i>Infiltration Practice</i>	<i>Maximum Drain Time of WQ<sub>v</sub></i>
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<p style="text-align: center;"><b>Bioretention Area/Cell</b></p> <p>Bioretention soil media shall have a permeability of approximately 1-4 in/hr. Meeting the soil media specifications in the Rainwater and Land Development Manual is considered compliant with this requirement. Bioretention cells must have underdrains unless in-situ conditions allow for the WQv (surface ponding) plus the bioretention soil (to a depth of 24 inches) to drain completely within 48 hours. The WQv stored above ground shall fully drain the WQv within 24 hours to minimize nuisance effects of standing water and to promote vigorous communities of appropriate vegetation.</p>	24 hours
<p style="text-align: center;"><b>Infiltration Basin</b></p> <p>The WQv stored above ground shall fully drain the WQv within 24 hours to minimize nuisance effects of standing water and to promote vigorous communities of appropriate vegetation.</p>	24 hours
<p style="text-align: center;"><b>Infiltration Trench</b></p> <p>Must be designed to fully infiltrate the WQv and shall empty within 48 hours to recover storage for subsequent storm events.</p>	48 hours
<p style="text-align: center;"><b>Permeable Pavement – Infiltration</b></p> <p>Must be designed to fully infiltrate the WQv and shall empty within 48 hours to recover storage for subsequent storm events.</p>	48 hours
<p style="text-align: center;"><b>Underground Storage - Infiltration</b></p> <p>Must be designed to fully infiltrate the WQv and shall empty within 48 hours to recover storage for subsequent storm events. Underground storage with infiltration must have adequate pretreatment of suspended sediments included in the design and documented in the WMSC Plan in order to minimize clogging of the infiltrating surface. Pretreatment shall concentrate sediment in a location where it can be readily removed. Examples include media filters situated upstream of the storage or other suitable alternative approved by the Ohio EPA. For infiltrating underground systems, pretreatment shall be 80% effective at capturing total suspended solids according to the testing protocol established in the Alternative Post-Construction BMP Testing Protocol.</p>	48 hours

- E) Methods for controlling the rate, volume, and quality of storm water runoff may include, but are not limited to, the following:
1. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide nonerosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and function are maintained and protected (e.g., no significant change in the hydrological regime of the receiving water). (For example, using grass-lined road ditches, rather than paved street gutters where practical, and discharging roof water to vegetated areas, or grass and rock lined drainage channels.)
  2. Grading and construction of terraces or diversions to slow runoff by diffusion, or use of grade control structures, such as check dams, to provide a level of control in flow paths and/or existing channels.
  3. Induced infiltration of increased storm water runoff into the soil where practical. (For example, constructing special infiltration areas where soils are suitable, retaining topsoil for all areas to be revegetated, or providing good infiltration areas with proper emergency overflow facilities.)
  4. Provisions for detention and retention of storm water, with properly designed retention basins being preferred. For example, utilizing permanent ponds and lakes as storm water basins that provide multiple use areas for storm water detention, recreation,

wildlife, fire protection, and aesthetics. Constructed wetlands, extended dry detention basins, or subsurface storage areas are other options.

5. Use of Low Impact Design methods such as bioretention areas, bio-swales, rain gardens, and infiltration trenches.
  6. Such practices may include, but are not limited to: storm water detention structures (including extended dry basins); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; re-creation of floodplains; and sequential systems (which combine several practices). The use of separate practices for treatment of water quality and quantity should be considered for a more effective design where contributing drainage areas are small.
  7. An applicant may choose alternative post-construction BMP's that are not listed in Table 2 or 3 for construction sites with soil disturbing activities over 2 acres if the applicant provides a letter from the Ohio EPA authorizing its approval. Alternative post-construction BMP's are required to have previously been tested to confirm storm water treatment efficacy equivalent to those have BMP's listed in Tables 2 and 3 using the protocol described within the latest version of the Ohio EPA Permit - Authorization for Storm Water Discharges Associated with Construction Activity Under the National Pollutant Discharge Elimination System.
  8. All concentrated storm water runoff from a post-construction BMP that flows to natural wetlands or adjacent parcels shall include a method to diffuse flow before the runoff enters the wetlands or adjacent parcel.
- F) A description of the post-construction BMP's for the site that will be installed during construction and the rationale for their selection in protection of watercourses from erosion and pollution prevention from sediment deposition must be provided.
- G) All pond designs must meet or contain the following:
1. A minimum one-foot of freeboard above the 100-year design flow elevation;
  2. An emergency spillway;
  3. Inlet to outlet path designed to prevent short-circuiting;
  4. Low maintenance orifices (e.g., install reverse flow pipes and/or inverted elbows to minimize orifice obstruction);
  5. Access to the structures for maintenance;
  6. Orifices less than 3" generally will not be permitted unless a low maintenance outlet can be provided;
  7. Design factors for the pond shall include benching or minimum side slopes of 3:1;
  8. Storm water ponds shall not be located in line with a stream.
- H) Maintenance plans and Inspection and Maintenance Agreements shall be provided for all post-construction BMP's. Maintenance plans shall be provided by the permittee to the

post-construction operator of the site upon completion of construction activities. These plans shall additionally be included in the Long Term Inspection and Maintenance Agreement that is recorded with the deed as required in Section 8.04. All storm water management facilities shall be cleaned and maintained such that the full water quality volume is available and that the facility functions as designed at all times.

- I) Permanent post-construction storm water quality structures shall not be installed until 80% vegetation has been established and all temporary sedimentation control devices have been removed. Upon final site stabilization, all storm water basins must have all post-construction flow control devices installed.
- J) For redevelopment projects (i.e., developments on previously developed property), post-construction storm water quality practices shall either ensure a 20% net reduction of the site's volumetric runoff coefficient through impervious area reduction, provide for treatment of at least 20% of the  $WQ_v$  for the previously developed area using a practice meeting Table 2 or 3 criteria in this Section, or a combination of the two. Draindown times cannot be reduced by 20%, only the total volume to be treated can be reduced by 20%. If choosing to treat 20% of the  $WQ_v$ , the designer may choose to treat 20% of the total  $WQ_v$  or treat 100% of  $WQ_v$  for 20% of the site using the average volumetric runoff coefficient for the entire site. A redevelopment project consists of a project where the composite runoff coefficient on the new land will not increase. If the composite runoff coefficient increases, it will be considered a new development project.

Where there is a combination of redeveloped areas and new development, a weighted approach shall be used with the following equation:

$$WQ_v = P * A * [(Rv_1 * 0.2) + (Rv_2 - Rv_1)] / 12$$

where

- P = 0.90 inches
- A = area draining in the BMP in acres
- Rv1 = volumetric runoff coefficient for existing conditions (current site impervious area)
- Rv2 = volumetric runoff coefficient for proposed conditions (post-construction site impervious area)

Post-construction practices shall be located to treat impervious areas most likely to generate the highest pollutant load, such as parking lots or roadways, rather than areas predicted to be cleaner such as rooftops.

- K) For soil-disturbing activities that will disturb one (1) acre of land or greater but less than two (2) acres and are not directly connected to commercial, industrial, or subdivision construction, a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed must be included in the WMSC Plan. Structural measures should be placed on upland soils to the degree attainable. Such measures may include, but are not limited to rain gardens, vegetated swales, rain barrels and infiltration trenches.
- L) Transportation projects – Construction of new roads and roadway improvement projects by public entities (i.e., state, counties, townships, cities, or villages) may implement post-construction BMPs in compliance with the current version (as of the effective date of this

permit) of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by the Ohio EPA as an alternative to the conditions of the Ohio EPA Construction General Permit.

M) Runoff reduction practices may be utilized to reduce the size of structural post-construction practices used to capture and treat the WQv by incorporating runoff reducing practices into the design of the site's drainage system. The approach to calculate and document runoff reduction is detailed in the most recent edition of the Rainwater and Land Development Manual. BMP specific runoff reduction volumes are set by specifications within the Rainwater and Land Development Manual for the following practices:

- Impervious surface disconnection
- Rainwater harvesting
- Bioretention
- Infiltration basin
- Infiltration trench
- Permeable pavement with infiltration
- Underground storage with infiltration
- Grass swale
- Sheet flow to filter strip
- Sheet flow to conservation area

## **SECTION 4.05 COMPLIANCE WITH STATE AND FEDERAL REGULATIONS**

Approvals issued in accordance with this regulation do not relieve the applicant of responsibility for obtaining all other necessary permits and/or approvals from the Ohio EPA, the U.S. Army Corps of Engineers, and/or other federal, state, and/or county agencies not listed herein, nor does it imply that the applicant has met the requirements of those agencies. If requirements vary, the most restrictive requirement shall prevail. These permits may include but are not limited to those listed below. Proof of compliance with these state and federal regulations is required to be submitted with the Water Management and Sediment Control Plan or Abbreviated Water Management and Sediment Control Plan before the Geauga SWCD will approve or recommend approval. The owner must address each of the items listed below by submitting proof of compliance as specified or an explanation of why the permit, certification, or determination is not required or applicable. The authorizing agencies listed below are responsible for ensuring compliance with their respective permits.

- A) Ohio EPA NPDES Permits authorizing storm water discharges associated with construction activity or the most current version thereof: Proof of compliance with these requirements shall be a copy of the Ohio EPA Director's Authorization Letter for the NPDES Permit, Ohio EPA NPDES Permit Number for the project, a copy of the check and application for a permit, or a letter from the site owner explaining why the NPDES Permit is not applicable.
- B) If there is any indication or reasonable evidence that disturbance of an existing watercourse or potential wetland might occur, one or all of the following may be required depending on the extent and type of disturbance:
1. Jurisdictional Determination: Proof of compliance shall be a copy of the Jurisdictional Determination from the U.S. Army Corps of Engineers affirming the findings of a qualified professional's survey and report of the site.

2. Section 404 of the Clean Water Act: Proof of compliance shall be a copy of the U.S. Army Corps of Engineers' Individual Permit application if an Individual Permit is required for the development project, public notice, or project approval. If an Individual Permit is not required, the site owner shall submit proof of compliance with the U.S. Army Corps of Engineers' Nationwide Permit Program. Proof of compliance with the Nationwide Permit Program shall be a copy of the U.S. Army Corps of Engineers' Nationwide Permit application or project approval letter.
  3. If a Section 404 Permit or Jurisdictional Determination is not required because wetlands or watercourses are not present on the property and there is no indication or reasonable evidence that disturbance will occur, a letter from the site owner must be provided verifying that a qualified professional has surveyed the site and found no waters of the United States.
  4. Ohio EPA Isolated Wetland Permit: Proof of compliance shall be a copy of Ohio EPA's Isolated Wetland Permit application, public notice, or project approval, or a letter from the site owner verifying that a qualified professional has surveyed the site and found no waters of the United States. Isolated wetlands shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
  5. Section 401 of the Clean Water Act: Proof of compliance shall be a copy of the Ohio EPA Water Quality Certification application, public notice, or project approval, or a letter from the site owner verifying that a qualified professional has surveyed the site and found no waters of the United States. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time of application of this regulation.
- C) Ohio Dam Safety Law: Proof of compliance shall be a copy of the ODNR Division of Water permit application, a copy of the project approval letter from the ODNR Division of Water, or a letter from the site owner explaining why the Ohio Dam Safety Law is not applicable.

**Section**

**5**

**ABBREVIATED WATER  
MANAGEMENT AND  
SEDIMENT CONTROL PLAN  
CONTENT**

**SECTION 5.01 GENERAL REQUIREMENTS**

The Abbreviated Water Management and Sediment Control Plan shall incorporate measures listed below as recommended by the most current edition of the Rainwater and Land Development Manual or approved equal. All BMP's required and shown on the plans shall have the appropriate construction detail and notes provided on the submitted plan. A Registered Professional Engineer, Registered Professional Surveyor, Registered Landscape Architect, or Certified Professional Erosion and Sediment Control Specialist (CPESC), or owner with assistance from the Geauga SWCD may prepare this plan.

**SECTION 5.02 PLAN COMPONENTS**

The Abbreviated WMSC Plan shall include a minimum of the following BMP's and associated details and documents as applicable:

- A) A completed Abbreviated WMSC Plan Application that includes site information as indicated in Section 4.02, A, B, and M of these Regulations.
- B) Site Plan that includes information as indicated in Section 4.03 B, C, C1, C3 thru C12, C14, C15 and C17 of these Regulations.
- C) Compliance with State and Federal Regulations as indicated Section 4.05 B and C of these Regulations.
- D) Construction Entrances: Construction entrances shall be built and shall serve as the only permitted points of ingress and egress to the development area. These entrances shall be built of a stabilized pad of aggregate stone or recycled concrete or cement sized greater than 2" in diameter and placed over a geotextile fabric.
- E) Street Sweeping: Streets directly adjacent to construction entrances and receiving traffic from the development area shall be cleaned daily to remove sediment tracked offsite. If applicable, the catch basins on these streets nearest to the construction entrances shall be protected with a BMP and maintained weekly.
- F) Protection of Adjacent Properties: An appropriate BMP (i.e., silt fence, diversion dike/ditch, sediment trap, etc.) shall be provided where sediment deposition can occur offsite or where sediment may be transported offsite via a watercourse or wetland. An

adequate undisturbed vegetative/forested buffer between the proposed soil disturbance and adjacent properties, watercourses, or wetlands may additionally be specified. If this method is employed, indicate the length of the buffer and average slope on the plans.

- G) Inlet Protection: Erosion and sediment control practices, such as boxed inlet protection, shall be installed to minimize sediment-laden water entering active storm drain systems. Straw or hay bales are not acceptable forms of inlet protection.
- H) On-Site Channel/Ditches: If channels or ditches will be created on site with a slope greater than 2%, turf reinforcement matting must be provided along the bottom to stabilize the channel from the erosive flow of storm water.
- I) Stream Crossings: Any watercourses that will be crossed by construction equipment shall have a temporary crossing specified. The temporary crossing utilized shall consist of a culvert, bridge, or a ford utilizing backfill consisting entirely of stone, rock, or clean recycled concrete.
- J) Stabilization: The development area shall be stabilized as detailed in Table 4 below.

**TABLE 4: STABILIZATION – SMALL LOTS**

<b><i>Area requiring stabilization</i></b>	<b><i>Time frame to apply erosion controls</i></b>
Any disturbed area within 50 feet of a watercourse and not at final grade.	Within 2 days of the most recent disturbance, if that area will remain idle for more than 14 days.
Any disturbed area, including soil stockpiles, that will be dormant for more than 14 days but less than one year, and not within 50 feet of a watercourse.	Within 7 days of the most recent disturbance within the area.
Disturbed areas that will be idle over the winter.	Prior to November 1
Any disturbed area at final grade	Within 7 days of reaching final grade.
NOTE: Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. These techniques may include mulching, erosion matting, or placement of stone.	

- I) Internal Inspection and Maintenance: All controls on the development area shall be inspected at least once every seven calendar days and within 24 hours after any storm event greater than one-half (0.5) inch of rain per 24-hour period by the owner. Documentation of these inspections must be onsite and readily available upon request. Maintenance shall occur as detailed below:
  1. When practices require repair or maintenance. If the internal inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it must be repaired or maintained within three (3) days of the inspection. Sediment settling ponds must be repaired or maintained within ten (10) days of the inspection.
  2. When practices fail to provide their intended function. If the internal inspection reveals that a control practice fails to perform its intended function and that another, more

appropriate control practice is required, the Abbreviated WMSC Plan must be amended and the new control practice must be installed within ten (10) days of the inspection.

3. When practices depicted on the Abbreviated WMSC Plan are not installed. If the internal inspection reveals that a control practice has not been implemented in accordance with the schedule, the control practice must be implemented within ten (10) days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record must contain a statement of explanation as to why the control practice is not needed.



**Section**

**6**

**SUBMITTAL AND REVIEW**

**SECTION 6.01 WMSC PLAN SUBMITTAL AND REVIEW**

- A) When a WMSC Plan is required, two (2) copies of all plans and calculations shall be submitted to Geauga SWCD along with the applicable fee. When an Abbreviated WMSC Plan is required one (1) copy of all plans shall be submitted to Geauga SWCD along with the applicable fees. All plans shall be submitted in 11"x17" format or smaller. If a larger plan is needed, the Geauga SWCD will request it.
- B) For a proposed major subdivision, a WMSC Plan shall be submitted to the Geauga SWCD after the approval of the preliminary plan by the Geauga County Planning Commission and concurrently with the submittal of construction drawings to the Geauga County Engineer. Approval of the WMSC Plan by the Geauga SWCD must occur two weeks prior to the regularly scheduled Planning Commission meeting and the approval shall be a condition precedent to final plat approval by the Geauga County Planning Commission and final approval of the construction drawings by the Geauga County Engineer and Commissioners. (Any WMSC Plan submitted for review and approval by the Geauga SWCD less than 30 days before the next regularly scheduled meeting of the Planning Commission may not be approved in time to meet deadlines required for review of the final plat at that Planning Commission Meeting.) No construction shall commence until the final plat has been approved by the Planning Commission.
- C) Within thirty (30) days of receipt of a complete WMSC or Abbreviated WMSC Plan including required fees, the Geauga SWCD shall indicate its status of compliance or noncompliance to the owner or to his appointed representative. Indication of noncompliance shall include specific plan deficiencies and the procedures for filing a revised plan.
- D) At the time of submission of the revised plan, another 30-day period begins. During the review process, if in the opinion of the Geauga SWCD a plan has been revised to the extent that the original design of the storm water management facilities has changed (i.e., new location, different type of structure), the project will be considered new and another review fee will be required to be submitted. Plans found in compliance with these Regulations shall remain effective and valid for 2 years from date of approval unless renewed. Renewal is accomplished by the submission of another plan and review fee.
- E) If a site is actively under construction and a new owner takes over, a resubmittal of a complete WMSC Plan or Abbreviated WMSC Plan is NOT required as long as scope of work has not changed. The new owner must notify the Geauga SWCD and submit an updated, as applicable to the site, WMSC Plan application, Contractor WMSC Plan Certification Form, and Ohio EPA NOI.
- F) If a site is idle and construction is not complete and it has been 2 years or more since the project was approved and a new owner takes over, the new owner must resubmit a

complete WMSC submittal as applicable in either Section 4 or 5 of these Regulations including plans, calculations, application, and applicable fee.

- G) If a site is idle and construction is not complete and it has been under 2 years since the project was approved and the approval was granted under the Geauga County WMSC Regulations and Ohio EPA Construction General Permit in place at the time of transfer, no resubmittal is required. The new owner must notify the Geauga SWCD and submit an updated application and Contractor WMSC Plan Certification Form and updated Ohio EPA NOI.

**SECTION 6.02 WMSC PLAN REVIEW, FILING, AND INSPECTION FEE SCHEDULE**

The WMSC and Abbreviated WMSC Plan review, filing, and inspection fee is part of the complete “Plan” submittal and is required to be submitted to the Geauga SWCD before the review process begins. All checks shall be made payable to “Gaugua SWCD.”

<b>FEE SCHEDULE</b>			
<b>Type of Site</b>	<b>Area of Disturbance</b>	<b>% of Disturbed Area to the Entire Lot(s)</b>	<b>Fee</b>
All building lots EXCEPT single-family residential lots and subdivisions (Storm water quality AND/OR quantity design and calculations required with submittal to be reviewed)	1 acre or more	<5%	\$ 350.00
		5-10%	\$ 550.00
		11-20%	\$ 800.00
		21-30%	\$ 1,200.00
		Over 31%	\$ 1,800.00
All building lots EXCEPT single-family residential lots and subdivisions (Both storm water quality and quantity design and calculations NOT required with submittal because storm water provisions have been previously designed and built for full buildout of site)	1 acre or more	N/A	\$350.00
All building lots EXCEPT single-family residential lots and subdivisions	< 1 acre and NOT part of a larger common plan of development	N/A	\$200.00
Utility Line Construction	Any	N/A	\$300.00
Single-Family Residential lot	N/A	N/A	\$60.00
Clearing Plan	N/A	N/A	\$100.00
<b>Type of Site</b>	<b># of Sublots/Units</b>	<b>Fee</b>	
Subdivision (commercial, industrial, condominium, PUD, or residential)  ** Phased Subdivisions shall be charged per phase unless multiple phases will be under construction simultaneously.	≤5	\$ 1,750.00	
	6-10	\$ 2,000.00	
	11-15	\$ 2,250.00	
	16-20	\$ 2,500.00	
	≥21	\$ 2,750.00	

**Section**

**7**

**PERFORMANCE AND DESIGN  
STANDARDS**

**SECTION 7.01 GENERAL REQUIREMENTS AND NOTIFICATION**

A WMSC Plan must be reviewed and found in compliance with these Regulations by the Geauga SWCD prior to the commencement of any soil-disturbing activities. Specifications for performance standards required within this section shall conform, as a minimum, to those set forth in the most recent edition of the *Rainwater and Land Development Manual* from the Ohio Department of Natural Resources Division of Soil and Water Conservation and the requirements of the most current Ohio Environmental Protection Agency General Construction Permit. Any nonadherence to these performance and design standards may result in a Notice of Violation, subsequent Stop Work Orders, and daily fines as outlined in Section 8.01 of these Regulations.

The owner of a site with this approved WMSC Plan must notify the Geauga SWCD within 48 hours before initiating any soil-disturbing activities. The Geauga SWCD shall also be notified upon project completion to grant final site approval of the project as well as to ensure an “as-built” drawing and associated long-term maintenance agreement has been submitted and recorded for any storm water management facilities required and built for the project.

**SECTION 7.02 PROTECTION OF ADJACENT PROPERTIES**

- A) Properties adjacent to the site, including public land and waters of the State, shall be protected from sediment deposition resulting from land disturbance during construction. This may be accomplished by preserving a well-vegetated buffer strip around the lower perimeter of the land disturbance, by installing perimeter controls such as sediment barriers, filters or dikes, sediment basins, or by a combination of such measures.
- B) When water must be pumped for the purposes of dewatering for items such as culvert construction, storm sewer construction, pond maintenance/construction, or footer/basement construction, this water must pass through a filtering device or onto well-vegetated soil on the property where construction is occurring before entering adjacent properties, streams, or channels.

**SECTION 7.03 SOIL STABILIZATION**

- A) Permanent Soil Stabilization: All areas at final grade must be permanently stabilized within 7 days of reaching final grade. This is usually accomplished by using seed and mulch, but special measures are sometimes required. Permanent stabilization must be specified and performed as listed in Table 5 below.

**TABLE 5: PERMANENT STABILIZATION**

<b><i>Area requiring permanent stabilization</i></b>	<b><i>Time frame to apply erosion controls</i></b>
Any area that will lie dormant for one year or more.	Within 7 days of the most recent disturbance.
Any area within 50 feet of a watercourse and at final grade.	Within 2 days of reaching final grade.
Any area at final grade.	Within 7 days of reaching final grade within that area.

1. For slopes steeper than 3:1, turf reinforcement matting, erosion control netting, placement of seed and mulch with tackifier, retaining walls, and/or other comparable method shall be utilized as appropriate.
2. Permanent stabilization must be shown for all channels to prevent erosive flows. Measures may include erosion control matting, sodding, or rock riprap and shall follow the design standards of the most current version of the Ohio Department of Transportation’s “Location and Design Manual, Volume Two Drainage Design” Section 1102. All on-site conveyances of storm water shall be minimally designed and constructed to withstand the expected velocity of flow from a 5-year, 24-hour frequency storm without erosion. All channels, including roadside ditches, shall minimally have turf reinforcement matting specified and used when the shear stresses exceed 1 psf. The shear stress can be calculated using the following:

$$\tau = 62.4 (D) (S)$$

where:

- D = Water surface depth (ft)  
(as determined from a 5-year, 24-hour frequency storm)
- S = Slope of the channel (ft/ft)
- $\tau$  = Actual shear stress

Typically channels with slopes 2% or greater will minimally require turf reinforcement matting. All turf reinforcement matting shall be installed at a minimum width of 7.5 feet. Roadway ditches shall additionally be designed according to the Regulations adopted by the Commissioners pursuant to O.R.C. 711.101 and any standard specifications required by the Geauga County Engineer. If failures occur within any storm water channels, a revised design, additional stabilization, and immediate repair is required.

3. Soil stabilization measures should be selected to be appropriate for the time of year and site conditions, and may include the need for use of the addition of topsoil, straw mulch, erosion control matting, rock riprap, and/or retaining walls. Permanent seeding should be done when soil temperatures are at least 50° F or between March 15 and September 30. Dormant seeding can be done from October 1 to March 15 and must include a mulch cover and a seeding rate increase of 50% from nondormant seeding standards. At all other times of the year, the area should be temporarily stabilized until a permanent seeding can be applied. The addition of a small grain into the seed mix may aid germination and development.

4. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until an 80% ground cover is achieved that is mature enough to control soil erosion satisfactorily and to survive severe weather conditions.
- B) Temporary Soil Stabilization: Temporary soil stabilization is the most effective BMP during construction. The goal of temporary stabilization is to provide cover quickly. This is accomplished by seeding with fast-growing grasses and then covering with straw mulch. Either a mulch only or dormant seeding as specified in Section 7.03 A(3) above shall be used between October 1 and March 15. To minimize costs of temporary stabilization, leave natural cover in place for as long as possible. Only disturb areas where work is anticipated within the next 14 days. Temporary soil stabilization is required and NOT an option. Temporary stabilization must be specified and performed as listed in Table 6 below.

**TABLE 6: TEMPORARY STABILIZATION**

<b><i>Area requiring temporary stabilization</i></b>	<b><i>Time frame to apply erosion controls</i></b>
Any disturbed area within 50 feet of a watercourse and not at final grade.	Within 2 days of the most recent disturbance, if that area will remain idle for more than 14 days.
Any disturbed area, including soil stockpiles, that will be dormant for more than 14 days but less than one year and not within 50 feet of a watercourse.	Within 7 days of the most recent disturbance within the area.
Disturbed areas that will be idle over the winter.	Prior to November 1.
NOTE: Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. These techniques may include mulching, erosion matting, or placement of stone.	

1. To receive authorization from the Geauga County Engineer to commence proof rolling and/or cement stabilization activities within a subdivision, between October 1 and March 15, all denuded areas except the roadway but including the roadside ditches must be temporarily seeded and mulched and all drainage ditches including roadside ditches must have excelsior matting installed. During all other times of the year, commencement of proof rolling and/or cement stabilization activities may occur when all denuded areas have been temporarily seeded and mulched and all drainage ditches have excelsior matting installed outside of the road right of way.
- C) Soil Stockpiles: Soil stockpiles shall be stabilized with temporary seed and mulch or have perimeter silt fencing placed to prevent soil loss. All stockpiles shall be located at least one hundred (100) feet from all watercourses, drainage ways, wetlands, and site drainage exit points.

**SECTION 7.04 STORM WATER RUNOFF CONTROLS**

- A) Runoff control practices and associated details must be provided to control the flow of runoff from disturbed areas to prevent erosion. Such practices may include rock check dams, pipe slope drains, and diversions to direct flow away from exposed soil and protective grading practices. These practices shall divert runoff away from the disturbed

areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide nonerosive flow velocity from the structure to a watercourse so the natural physical and biological characteristics and functions are maintained and protected.

- B) Control of storm water runoff requires the use of grassed/vegetated areas or sedimentation basins to remove sediment and/or contaminants.
  - 1. Vegetated filter strips, a minimum of 30' feet in width, can be utilized when sheet or overland flow is planned (storm water is not collected). If at any time it is found that a vegetated filter strip alone is ineffective in stopping sediment movement onto adjacent property, additional perimeter controls shall be provided.
  - 2. Grassed swales can be utilized for treatment if the development site is not conducive to more diffuse overland flow. A minimum ratio of 100 linear feet of grassed swale per acre of impervious area is required. When possible, swales should be designed to minimize the velocity of runoff to less than 2 feet per second from a 10-year, 24-hour storm. If failures occur within these swales, immediate repair and/or revised design is required.
  - 3. A thirty (30) foot vegetated buffer strip is required to be retained or re-established immediately along all existing disturbed water and drainage ways. Construction will not be permitted in these areas between October 1<sup>st</sup> thru March 15<sup>th</sup> due to the inability of an immediate re-establishment of vegetation.

## **SECTION 7.05      SEDIMENT BASINS/TRAPS**

- A) Sediment control practices and construction details of these practices must be provided for all structural practices that shall store runoff, allow sediments to settle and/or divert flows away from exposed soils, or otherwise limit runoff from exposed areas.
- B) Sediment basins shall not directly discharge into a stream or other water body or be located in-line with a stream.
- C) A sediment settling pond is required when any one of the following conditions will exist:
  - 1. Concentrated storm water runoff (storm sewer, pipe, or ditch);
  - 2. Runoff from drainage areas that exceed the design capacity of silt fence, inlet protection, or other sediment barriers; and
  - 3. Runoff from drainage areas of 10 acres or more.
- D) A temporary sediment trap may only be utilized when the contributing drainage area is 5 acres or less. When the contributing drainage area is larger than 5 acres, but less than 100 acres, a sediment basin must be utilized. If the contributing drainage area is larger than 100 acres, a combination of Best Management Practices must be utilized to divide the acreage into manageable units.
- E) Structural practices shall be used to control erosion and trap sediment from a site that will remain disturbed for more than 14 days. Such practices may include among others: sediment settling ponds and earth diversion dikes or channels which direct runoff to a

sediment settling pond. All sediment control practices must be capable of ponding runoff in order to be considered functional. All sediment basins and/or traps must provide, at minimum, a storage volume for the dewatering zone of 67 cubic yards per acre of total contributing drainage area with a minimum 48-hour drawdown time. The volume of the sediment storage zone shall be calculated by one of the following methods:

Method 1: The volume of the sediment storage zone shall be 1000 cubic feet per disturbed acre within the areas draining to the settling pond; or

Method 2: The volume of the sediment storage zone shall be the volume necessary to store sediment as calculated with RUSLE (Revised Universal Soil Loss Equation) or a similar generally accepted erosion prediction model.

The use of a dewatering device must be provided on the outlet structure to allow dewatering of the facility and ensure adequate time for sediment settlement. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity must be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone must be less than or equal to five feet. The configuration between inlets and outlet of the basin must provide at least two units of length for each one unit of width (>2:1 length: width ratio); however, a length to width ratio of 4:1 is recommended. Maintenance of the sediment settling pond must be performed to remove sediment when the design capacity has been reduced by 40 percent. A stake shall be placed in the sediment pond pre-marked with this depth so it can be easily determined in the field when the sediment has reached this depth. (This is typically reached when sediment occupies one-half of the basin depth). Any dredged sediments placed on site must be immediately seeded and mulched or hauled off site to an appropriate location. When designing sediment-settling ponds, the applicant must consider public safety as a design factor for the sediment basin and alternative sediment controls must be used where site limitations would preclude a safe design. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal is encouraged.

- F) The Geauga SWCD may require sediment settling basins or traps for smaller disturbed areas where deemed necessary. Sediment settling basins or traps, whether permanent or temporary, must be provided and continue to function until final stabilization of the site is achieved. Temporary sediment settling basins or traps may be removed following final stabilization of the site.
- G) The maximum allowable limit of Total Suspended Solids (TSS) discharged from a sediment basin during construction is 45 mg/l. Geauga SWCD reserves the right to obtain a random grab sample of the outflow and have it analyzed to ensure this standard is being met. If it is found that the TSS exceeds 45 mg/l the owner must pay for the original test, correct the installation to meet this TSS performance standard and pay the Geauga SWCD for subsequent sampling and tests, as needed, until the sediment basin meets this TSS performance standard. The addition of flocculants may be required to meet the TSS limit. Prior to adding flocculants, the owner or owner's representative must provide documentation to the Geauga SWCD that the product proposed is non-toxic to downstream aquatic life.



## **SECTION 7.06      INSTALLATION OF SEDIMENT CONTROLS**

Sediment basins and traps, diversion dikes, sediment barriers, and other measures intended to trap sediment onsite shall be constructed as a first step in grading and be made functional before upslope land disturbance takes place. Earthen structures whether permanent or temporary, such as dams, dikes, sediment basins, storm water basins, and diversions shall be seeded and mulched within seven (7) days after installation is complete.

## **SECTION 7.07      STORM SEWER INLET PROTECTION**

Storm sewer inlet protection must be provided to minimize sediment-laden water from entering storm drain systems, unless the storm drain system drains to a sediment-settling pond. All storm sewer inlets/catch basins that are made operable during construction shall be protected so that sediment-laden water will not enter the conveyance system without first being filtered or otherwise treated to remove sediment. Provisions shall be made for these inlets/catch basins to operate and be maintained before, during, and after the final surface is applied around it such as concrete, asphalt, or grass. This may require a provision for an alternate method of inlet protection such as the use of a "Dandy Bag" or approved equal. Water should pond around the inlet when it rains. Silt fence alone cannot be utilized as inlet protection. A sturdy frame must be constructed such as wood 2x4's to support silt fence around inlets. The storm sewer inlet/catch basin protection should encircle the entire basin and be properly entrenched if silt fence is to be utilized. Sediment must be removed on a regular basis around the inlet and properly spread, seeded, and mulched or disposed of appropriately offsite.

If ponding on an active roadway will be a safety concern or is not permitted, the contractor shall make use of an insert that is placed in the catch basin. This insert will allow water to pass through the inlet grate and capture the sediment inside the catch basin structure rather than on the roadway. This method may require more frequent maintenance to ensure ponding on the roadway does not occur.

## **SECTION 7.08      CUT AND FILL SLOPES**

- A) Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Consideration should be given to the length and steepness of the slope, the soil type, upslope drainage area, groundwater conditions, and other applicable factors. Slopes should be no steeper than 2:1 and preferably 3:1 or less. Slopes that are found to be eroding excessively during the first year after construction shall be provided with additional slope stabilizing measures by the developer until the problem is corrected. The following guidelines are provided to aid in developing an adequate design:
1. Roughened soil surfaces are generally preferred to smooth surfaces on slopes. Tracking should be done perpendicular to the direction of flow to retard runoff.
  2. Diversions should be constructed at the top of long steep slopes that have significant drainage areas above the slope. Diversions or terraces may also be used to reduce slope length.
  3. Concentrated storm water should not be allowed to flow down cut or fill slopes unless contained within an adequate channel, flume, or slope drain structure.

4. Wherever a slope face crosses a water seepage plane that endangers the stability of the slope, adequate drainage or other protection should be provided.

#### **SECTION 7.09 STABILIZATION OF OUTLETS**

All culvert, pipe, and storm sewer outlets must have rock channel protection placed immediately following construction.

#### **SECTION 7.10 WORKING IN OR CROSSING WATERCOURSES**

- A) Working in and/or crossing watercourses must be done in compliance with applicable County and/or local riparian management regulations. Proof of this compliance must be shown to the Geauga SWCD and may include a copy of the approved variance allowing specific impacts to the riparian area.
- B) Construction vehicles should be kept out of watercourses to the extent possible. Where in-stream work is necessary, precautions shall be taken to stabilize the work area during construction to minimize erosion. The stream (including bed and banks) shall always be restabilized immediately after in stream work is completed. An Ohio EPA 401 Permit and/or a U.S. Army Corps Section 404 Permit may be necessary to perform projects within watercourses.
- C) Where an active (wet) watercourse will be crossed by construction vehicles regularly during construction, a temporary vehicular watercourse crossing shall be provided. Temporary crossings, such as a bridge, culvert, or fording, and backfilling entirely with stone, rock, or clean recycled concrete shall be implemented.
- D) If construction activities will disturb areas adjacent to watercourses, structural practices shall be designed and implemented on site to protect all adjacent watercourses from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a watercourse. For all construction activities immediately adjacent to surface waters of the State, it is recommended that a riparian setback of at least 25-feet, as measured in a straight line perpendicular to the ordinary high water mark of the surface water, be maintained in its natural state as a permanent buffer.

#### **SECTION 7.11 MAINTENANCE OF TEMPORARY MEASURES**

All temporary and permanent erosion and sediment control practices shall be maintained and repaired as needed to ensure continued performance of their intended function throughout the course of soil-disturbing activities and until any upslope development area is restabilized. As construction progresses and the topography is altered, appropriate controls must be constructed or existing controls altered to address the changing drainage patterns. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the applicant must replace or modify the control for site conditions. Other erosion and sediment control items may be necessary due to environmental conditions and may be required at the discretion of the Geauga SWCD or its representatives. The owner will be responsible for such maintenance until final inspection approval by the Geauga SWCD.

## **SECTION 7.12      DISPOSITION OF TEMPORARY MEASURES**

All temporary erosion and sediment control measures shall be disposed of within 30 days after final stabilization of the site is achieved and approved by the Geauga SWCD or after the temporary measures are no longer needed, unless otherwise authorized by the Geauga SWCD. Trapped sediment and other disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sediment accumulation.

## **SECTION 7.13      CONSTRUCTION ENTRANCES**

Good housekeeping practices must be implemented to ensure sediment is not tracked off-site. Construction entrances shall be installed and maintained to minimize off-site tracking of sediments. These entrances shall be built of a stabilized pad of aggregate stone (ODOT #2) or recycled concrete sized greater than 2" in diameter and placed over a geotextile fabric. A stone access drive should be installed at every point where vehicles enter or exit the site. Maintenance of the stone access drive with additional stone throughout construction to ensure mud is not tracked out onto the roadway is required. The length of the construction stone entrance must be at least 70 feet (30 feet for an individual subplot).

## **SECTION 7.14      OTHER POLLUTANT CONTROLS**

No solid (other than sediment) or liquid waste, including building materials, shall be discharged in storm water runoff. Wash pit areas must be constructed in pre-designated areas as shown on the plans. The applicant must implement all necessary BMP's to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the State. Under no circumstance shall concrete trucks wash out directly into a drainage channel, storm sewer, or surface waters of the State. No exposure of storm water to waste materials is recommended.

Covered dumpsters shall be provided for all construction solid waste and debris. Vehicle and equipment refueling areas shall be provided with self-contained tanks to control accidental spillage.

## **SECTION 7.15      SILT FENCE AND DIVERSIONS**

Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties and water resources from sediment transported via sheet flow.

Where intended to provide sediment control, silt fence shall be placed on a level contour and not placed where concentrated flow is directed toward it. Silt fence shall be pulled tight and trenched at least 4" to 6" into the ground and backfilled to prevent runoff from cutting underneath the fence. Sections of silt fence shall be joined so there are no gaps in the fence. The ends of the silt fence shall be brought upslope of the rest of the fence to prevent runoff from going around the ends. Silt fence shall not control drainage areas larger than 5 acres. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in the table below.

**TABLE 7: MAXIMUM DRAINAGE AREA TO SILT FENCE**

<i>Maximum drainage area (in acres) to 100 linear feet of silt fence</i>	<i>Range of slope for a particular drainage area (in percent)</i>
0.5	< 2%
0.25	≥2% but <20%
0.125	≥20% but <50%

The use of a combination barrier constructed of silt fence supported by straw bales or silt fence embedded within rock check dams may be effective for use in roadside ditches and on-site diversion swales and ditches. Placing silt fence in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Such devices, which include swales, dikes, or berms, may receive storm water runoff from areas up to 10 acres.

#### **SECTION 7.16 COMPLIANCE WITH OTHER REQUIREMENTS**

The WMSC Plan shall be consistent with applicable State and/or local waste disposal, sanitary sewer, or septic system regulations, including provisions prohibiting waste disposal by open burning, and shall provide for the proper disposal of contaminated soils to the extent these are located within the permitted area.

Prior to or upon commencement of construction, the general contractor or other contractor that has control over the day-to-day operations on the site shall file a no fee Ohio EPA Co-Permittee NOI for the site.

#### **SECTION 7.17 TRENCH AND GROUND WATER CONTROL**

There shall be no turbid discharges to surface waters of the State resulting from dewatering activities. If ground water or a trench contains sediment, it must pass through a sediment-settling pond or equally effective sediment control device prior to being discharged from the construction site. Alternately, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag, or comparable practice. Ground water dewatering which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.

#### **SECTION 7.18 COMPLIANCE WITH GEauga SWCD APPROVED PLANS**

All storm water controls and BMP's on the construction site must follow and be installed per the approved WMSC Plan. The Geauga SWCD may request a revised set of plans and/or calculations be submitted within 10 days to document and support the field change if a substantial variation is occurring or is proposed during construction.

## **SECTION 7.19      STORM WATER BASIN CONSTRUCTION**

Storm water basins will not be considered complete or final until the basin has been finish graded, all excess sediment removed, outlet control structures installed, and temporary sediment dewatering structures removed.

## Section

# 8

# ADMINISTRATIVE

## SECTION 8.01 INSPECTION AND COMPLIANCE

- A) The Geauga SWCD will make regular inspections of development areas to determine compliance with these rules and Regulations and a report of the site's compliance status sent to the owner or the owner's appointed representative. All soil-disturbing activities, including installation of permanent storm water facilities, must be constructed and maintained in conformity with approved WMSC Plans and these Regulations.
- B) If it is determined by the Geauga SWCD that a violation of these Regulations occurred and the owner failed to submit and receive approval of a WMSC Plan or failed to obtain the appropriate federal and/or state permits necessary for soil-disturbing activities, an immediate Stop Work Order may be issued.
- C) If it is determined by Geauga SWCD that a violation of these Regulations has occurred regardless of whether or not the owner has obtained the proper permits, Geauga SWCD shall issue the first Notice of Violation to the owner or the owner's appointed representative and copy to the Commissioners indicating the deficiencies or items of noncompliance. If the deficiencies or items of noncompliance have not been corrected within a period of not less than thirty (30) days of the issuance of the first Notice of Violation, the Geauga SWCD shall issue a second Notice of Violation to the owner or his representative and a copy to the Commissioners indicating the deficiencies or items of noncompliance. If the deficiencies, or items of noncompliance have not been corrected within a period of not less than fifteen (15) days of the issuance of the second Notice of Violation and the violation continues, the Geauga SWCD may:
  - 1. Request in writing the opinion from the Prosecuting Attorney of Geauga County to determine if the violation is egregious. If in the opinion of the Prosecuting Attorney the violation is egregious, a written approval will be issued to Geauga SWCD to proceed with issuance of a Stop Work Order and a copy of such notice provided to the Commissioners; or,
  - 2. Request the Commissioners issue a determination of violation
- D) After issuance of a Stop Work Order by the Geauga SWCD or determination of a violation by the Commissioners, the Geauga SWCD shall request that the Commissioners seek in writing from the Prosecuting Attorney of Geauga County an injunction or other appropriate relief in the court of common pleas to abate excessive erosion and sedimentation and secure compliance with these Regulations. The court of common pleas may order the construction of necessary measures to gain compliance and may also assess a civil fine of not less than one hundred or more than five hundred dollars. Each day of violation of a rule or stop work order is issued shall be considered a separate violation subject to this civil fine.

- E) The owner to whom a stop work order is issued may appeal the order to the Geauga County Court of Common Pleas, seeking an equitable or other appropriate relief from the order.

## **SECTION 8.02      VARIANCE**

- A) The Commissioners may grant a variance to these Regulations where the owner or the owner's appointed representative can show that a hardship exists whereby compliance with these Regulations is not appropriate based upon all of the following:
  - 1. That exceptional topographic or other physical conditions exist that are peculiar to the particular parcel of land.
  - 2. That the peculiar condition in (A) above did not result from previous actions by the owner.
  - 3. That a literal interpretation of these Regulations would deprive the owner of rights enjoyed by other property owners.
- B) Adverse economic conditions shall not be considered as a valid reason or hardship for a variance request to be granted. No variances will be granted where activities occur that will defeat the purposes of these Regulations.
- C) The request for a variance shall be submitted to the Geauga SWCD in writing and shall state the specific variances sought and include sufficient data to justify the granting of a variance. The request shall be reviewed by both the Geauga SWCD and the Commissioners and may be either 1) Approved; 2) Approved with modifications; or 3) Disapproved, within twenty (20) working days of receipt of the request.

## **SECTION 8.03      APPEALS**

Any person aggrieved by any order, requirement, determination, or any other action or inaction by the Commissioners in relation to these Regulations may appeal to the court of common pleas. Such an appeal shall be made in conformity with Chapters 2505 and 2506 of the Revised Code. Written notice of appeal shall be served on the clerk of the Geauga County Board of Commissioners and the office of the Geauga SWCD.

## **SECTION 8.04      MAINTENANCE AND FINAL INSPECTION APPROVAL**

- A) To receive final inspection and acceptance of any project the following must be provided or completed:
  - 1. Disposition of all temporary erosion and sediment control measures.
  - 2. Final stabilization and all permanent erosion and sediment control measures must be in existence.
  - 3. Permanent storm water management facilities must be installed and made functional per the WMSC Plan as submitted and approved by the Geauga SWCD. An "as-built" plan must be certified (sealed, signed, and dated) by a Professional Engineer with a statement certifying that the storm water facilities installed in the field meet the design

standards, including elevation and dimensions of the WMSC Plans originally approved by the Geauga SWCD. This may include a submittal of a revised set of storm water facility calculations if the design was altered significantly when constructed. The "as-built" plan must minimally provide the location, dimension, and elevations of all structures and reference the entity or individual (s) responsible for long-term maintenance. A sample certification document is available from the Geauga SWCD website at <http://www.geaugaswcd.com>.

4. A copy of the complete inspection and maintenance agreement as specified in Section 4.02(O) must be provided as recorded with the Geauga County Recorder.

The above listed items must be received by the Geauga SWCD prior to receiving approval from the Geauga County Engineer's for the maintenance period inspection for subdivisions and prior to receiving final inspection approval of the site by the Geauga SWCD.

- B) A landowner may alter an existing storm water basin only upon written approval of the Geauga SWCD when the below process is followed in addition to submittal of an appropriate WMSC Plan and subsequent plan review, filing, and inspection fee as specified in these Regulations:
  1. Storm water Basin Modification Request process
    - a. Confirm ownership of basin
    - b. Submit construction drawing of modification proposal showing:
      - i. Surface area of disturbance
      - ii. Depth of excavation
      - iii. Details of changes or modification to outlet structure or appurtenances
      - iv. Statement from a registered Professional Engineer that alterations will not adversely affect the original design of the storm water basin functionality
    - c. Obtain written approval from Geauga SWCD
    - d. Submit construction schedule specifying start and end dates
    - e. Provide Geauga SWCD 48-hour notification prior to start of construction
    - f. Provide name, address, and telephone number of contractor/excavator
    - g. Upon completion of construction provide an as-built" plan and revised storm water calculations of the modified basin as specified in Section 8.04, A) 4 above
- C) As an alternative, the owner/responsible party may petition the Commissioners for permanent maintenance of storm water control structures and/or facilities when the benefiting area involves two or more property owners through the Ohio Drainage Law, O.R.C. 6131 or O.R.C. 1515. The County may require alternate designs of facilities to reduce maintenance costs.
- D) When construction is complete, the owner must file a Notice of Termination (NOT) with the Ohio EPA notifying the Ohio EPA that the site is complete and no longer active. A copy of the NOT form shall be forwarded to the Geauga SWCD.
- E) Geauga SWCD shall regularly inspect all permanent storm water management facilities to ensure they are functioning as originally designed. The responsible party as listed in the long term maintenance agreement will be notified of any repairs or maintenance required. The person(s) listed as the responsible party must correct any deficiencies as noted within



the time frame listed in the inspection report. Failure to correct deficiencies will result in enforcement action as listed in Section 8.01 of these Regulations.

**Appendix A-8      Township WMSC Zoning Resolutions**

# **BAINBRIDGE TOWNSHIP**

**1987**

## **ZONING RESOLUTION**

**“Including Subsequent Amendments Adopted Thereto”**

- Chapter 101 Purpose and Conflict.**
- Chapter 105 Definitions.**
- Chapter 109 Zoning Inspector; Certificates and Enforcement.**
- Chapter 113 Zoning Commission.**
- Chapter 117 Board of Zoning Appeals.**
- Chapter 121 Amendments.**
- Chapter 131 Districts Classified and Purpose; Zoning Map.**
- Chapter 135 R-5A Rural Open Residential District.**
- Chapter 139 R-3A Rural Residential District.**
- Chapter 140 Active Public Park District.**
- Chapter 141 Professional Office (P-O) District.**
- Chapter 142 Passive Public Park District.**
- Chapter 143 CB Convenience Business District.**
- Chapter 151 CR Commercial Recreation District. [Deleted 6/8/2015 – Z-2015-1]**
- Chapter 153 Farm Markets and Agritourism.**
- Chapter 155 LIR Light Industry Restricted District.**
- Chapter 157 Agriculture.**
- Chapter 159 Environmental Standards.**
- Chapter 160 Establishment of Riparian Setbacks.**
- Chapter 161 General Provisions.**
- Chapter 165 Nonconformities.**
- Chapter 169 Off-Street Parking and Loading.**
- Chapter 173 Signs.**
- Chapter 177 Prohibited Uses.**
- Chapter 181 Oil and Gas Wells. [Deleted 11/15/2004 - Z-2004-3]**
- Chapter 185 Blasting.**
- Chapter 186 Wireless Telecommunications Towers and Facilities.**
- Chapter 190 Mixed Use Planned Unit Development District.**

## CHAPTER 159

# ENVIRONMENTAL STANDARDS

159.01 Purpose and intent.

159.02 Words and terms defined.

159.03 Requirements and application procedures.

159.04 Compliance with state and federal regulations.

### 159.01 PURPOSE AND INTENT.

- A. The purpose of these regulations is to establish technically feasible and reasonable standards to achieve a level of water management and sediment control that will minimize damage to property and degradation of water resources and wetlands, and will promote and maintain the public health and safety.
- B. These regulations are intended to:
  - 1. Allow development while minimizing increases in downstream flooding, erosion, and sedimentation.
  - 2. Reduce water quality impacts to receiving water resources and wetlands that may be caused by new development or redevelopment activities.
- C. These regulations apply to all of the permitted and conditional buildings, structures, and uses set forth in every zoning district in this zoning resolution, except as otherwise provided herein.

### 159.02 WORDS AND TERMS DEFINED.

For the purpose of these regulations, the terms used herein shall have the meaning as set forth in the most recently adopted version of the Geauga County Water Management and Sediment Control (WMSC) Regulations administered by the Geauga Soil and Water Conservation District (SWCD). Said terms are adopted and made a part of these regulations as though fully rewritten herein.

**159.03 REQUIREMENTS AND APPLICATION PROCEDURES.**

- A. Two (2) sets of a Water Management and Sediment Control (WMSC) Plan shall be included with the application for a zoning certificate for any of the permitted principal accessory, or conditional buildings, structures, and uses or off-road parking, loading/unloading areas allowed by this resolution and any additions or alterations thereto, disturbing three hundred (300) square feet or more of land area on a lot or contiguous lots under the same ownership of record. A WMSC Plan must be submitted, reviewed and approved by the Geauga SWCD if one (1) or more of the following conditions apply:
1. If the disturbance (regardless of size) is planned on a subplot within a platted subdivision; or
  2. If one (1) acre (43,560 square feet) or more of land area will be disturbed on a lot or on contiguous lots under the same ownership of record.
- B. WMSC Plans are not required for any permitted principal, accessory, or conditional buildings, structures, or uses or off-road parking, loading/unloading areas allowed by this resolution or any additions or alterations thereto disturbing less than three hundred (300) square feet of land area on a lot or on contiguous lots under the same ownership of record, unless the disturbance is within a platted subdivision as set forth in paragraph (A)(1) hereinabove. This shall include structures where post holes and/or excavation and grading will not exceed three hundred (300) square feet even though the structure may exceed three hundred square feet (300).
- C. The contents of the WMSC Plan shall meet all requirements and recommendations for erosion and sediment control and storm water management contained in the most recent version of the Geauga County Water Management and Sediment Control Regulations.
- D. If the lot owner is required to prepare a Storm Water Pollution Prevention Plan (SWP3) in accordance with the most recent version of the Ohio Environmental Protection Agency's (EPA) General NPDES Permit for Storm Water Associated with Construction Activity, this SWP3 may be submitted in lieu of a separate WMSC Plan. In situations of conflict between OEPA requirements and these regulations, the most restrictive shall prevail.

- E. The zoning inspector shall review the WMSC Plans submitted under this resolution and approve for compliance or return for revisions with comments and recommendations for revisions within thirty (30) working days after receipt of the Plan. The zoning inspector may advise applicants to submit the WMSC Plan to the Geauga SWCD for review provided, however, if the disturbance falls within conditions set forth in paragraph (A)(1) or (A)(2) hereinabove, then the zoning inspector shall require the applicant for a zoning certificate or a conditional zoning certificate to submit the WMSC Plan to the Geauga SWCD for review. A disapproved Plan shall receive a narrative report citing specific problems and procedures violated and the procedures for filing a revised Plan to ensure compliance with the Geauga County Water Management and Sediment Control Regulations. At the time the zoning inspector receives a revised Plan, another thirty (30) day review period shall begin.
  
- F. Soil disturbing activities shall not begin and zoning certificates or conditional zoning certificates shall not be issued without a WMSC Plan approved by the zoning Inspector in accordance with these regulations or a copy of an approval letter or permit issued by the Geauga SWCD in accordance with the Geauga County WMSC Regulations that has been submitted with an application for a zoning certificate or a conditional zoning certificate.
  
- G. Any addition or alteration to the site design as shown on the approved WMSC Plan may require the resubmission of said Plan in accordance with these regulations. In making a determination regarding such resubmission, the zoning inspector shall consult with the Geauga SWCD. The zoning inspector shall determine if any addition or alteration requires the issuance of a new zoning certificate or conditional zoning certificate.

**159.04 COMPLIANCE WITH STATE AND FEDERAL REGULATIONS.**

- A. Approvals issued in accordance with these regulations do not relieve the site owner of responsibility for obtaining all other necessary permits and/or approvals from the Ohio EPA, the U.S. Army corps of Engineers, and/or other federal, state, and/or county agencies not listed herein, nor does it imply that the owner has met the requirements of those agencies. Such permits and/or approvals should be obtained before any zoning certificate or conditional zoning certificate is issued. If requirements vary, the most restrictive requirement shall prevail.
  
- B. Soil-disturbing activities regulated under these regulations may not begin until proof of compliance with all necessary state and federal permits as detailed below has been obtained or an explanation of why such permits are not required or applicable. The authorizing agencies cited herein are responsible for ensuring compliance with their respective permits. These permits may include, but are not limited to, the following:

1. Ohio EPA NPDES Permits authorizing storm water discharges associated with construction activity or the most current version thereof: Proof of compliance with these requirements shall be a copy of the Ohio EPA Director's Authorization Letter for the NPDES Permit, or a letter from the lot owner explaining why the NPDES permit is not applicable.
2. If there is any indication or reasonable evidence that disturbance of an existing watercourse or wetland might occur, one (1) or all of the following shall be required depending on the extent and type of the disturbance:
  - a. Jurisdictional Determination: Proof of compliance shall be a copy of the Jurisdictional Determination from the U.S. Army Corps of Engineers affirming the findings of a qualified professional's survey and report of the site.
  - b. Section 401 of the Clean Water Act: Proof of compliance shall be a copy of the Ohio EPA Water Quality Certification approval, public notice, or a letter from a qualified professional who has surveyed the lot explaining why Section 401 of the Clean Water Act is not applicable. Such a letter shall be noted on site plans submitted to the zoning inspector. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the Ohio EPA and U.S. Army Corps of Engineers at the time an application is made under this resolution.
  - c. Ohio EPA Isolated Wetland Permit: Proof of compliance shall be a copy of Ohio EPA's isolated Wetland Permit approval or a letter from a qualified professional who has surveyed the lot explaining why the Ohio EPA Isolated Wetland Permit is not applicable. Such a letter shall be noted on site plans submitted to the zoning inspector. Isolated wetlands shall be delineated by protocols accepted by the Ohio EPA at the time an application is made under these regulations.
  - d. Section 404 of the Clean Water Act: Proof of compliance shall be a copy of the U.S. Army Corps of Engineers Individual Permit approval. If an Individual Permit is not required, the lot owner shall submit proof of compliance with the U.S. Army Corps of Engineer's Nationwide Permit Program. This shall include one (1) of the following:
    - i. A letter from a qualified professional who has surveyed the site explaining why Section 404 of the Clean Water Act is not applicable. Such a letter shall be noted on site plans submitted to the zoning inspector.

- ii. A site plan showing that any proposed fill of waters of the United States conforms to the general and specific conditions specified in the applicable Nationwide Permit. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time an application is made under these regulations.
3. Ohio Dam Safety Law: Proof of compliance shall be a copy of the Ohio Department of Natural Resources (ODNR) Division of Water permit application, a copy of the project approval letter from the ODNR Division of Water, or a qualified professional explaining why the Ohio Dam Safety Law is not applicable.



**ZONING RESOLUTION**  
**RUSSELL TOWNSHIP**  
Geauga County, Ohio



*This Zoning Resolution is based upon a Comprehensive Land Use Guide Plan entitled: Russell Township: Stewards of the Land, recommended by the Russell Township Zoning Commission on August 19, 1996, and adopted by the Russell Township Board of Trustees on October 2, 1996.*

Approved: April 6, 1992 by Russell Township Zoning Commission  
Approved: Russell Township Trustees Effective: December 18, 1992.  
As amended to December 16, 2016

**4.13 Water Management and Sediment Control**

(Amended April 23, 2004 – Amendment No. 2004-1; deleted May 18, 2007)  
(Replaced May 18, 2007 - Amendment No. 2007-1)

The purpose of this regulation is to establish technically feasible and reasonable standards to achieve a level of water management and sediment control that will minimize damage to property and degradation of water resources and wetlands, and will promote and maintain the public health and safety. This regulation is intended to allow development while minimizing increases in downstream flooding, erosion, and sedimentation, and to reduce water quality impacts to receiving water resources and wetlands that may be caused by new development or redevelopment activities.

This regulation applies to all of the permitted and conditional buildings, structures, and uses set forth in every zoning district in this zoning resolution, except as otherwise provided in this resolution. This regulation also applies to all soil disturbing activity incident to or in preparation for the construction of any building, structure, or use regardless of when such soil disturbing activity occurs.

For the purpose of this regulation, the terms used herein shall have the meaning as set forth in the most recently adopted version of the Geauga County Water Management and Sediment Control Regulations. Said terms are a part of these regulations as though fully rewritten herein.

**A. Requirements and Application Procedures**

1. Two (2) sets of a Water Management and Sediment Control (WMSC) Plan shall be submitted to the Zoning Inspector for the construction of all principal permitted, accessory, and conditional buildings, structures, uses, and off-street parking, loading/unloading areas allowed by this resolution, any additions or alterations thereto, and any soil disturbing activity incident or in preparation thereto.
2. WMSC Plans are not required for any principal permitted, accessory, and conditional buildings, structures, uses, and off-street parking, loading/unloading areas allowed by this resolution, any additions or alterations thereto, and any soil disturbing activity incident or in preparation thereto disturbing less than three hundred (300) square feet of area.
3. The contents of the WMSC Plan shall meet all requirements and recommendations for erosion and sediment control and storm water management contained in the most recent version of the Geauga County Water Management and Sediment Control Regulations.
4. If the site owner is required to prepare a Storm Water Pollution Prevention Plan (SWP3) in accordance with Ohio EPA's NPDES Permit No. OHC000002, or the most recent version thereof, this SWP3 may be submitted in lieu of a separate WMSC Plan. In

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situations of conflict between OEPA requirements and these requirements, the most restrictive shall prevail.

5. The Zoning Inspector shall review the WMSC Plans submitted under this resolution and approve for compliance or return for revisions with comments and recommendations for revisions within thirty (30) days after receipt of the Plan. The Zoning Inspector shall advise applicants that the WMSC Plan may be forwarded to the Geauga Soil and Water Conservation District (GSWCD) for technical assistance and review. A disapproved Plan shall receive a narrative report stating specific problems and procedures for filing a revised Plan to ensure compliance with the Geauga County Water Management and Sediment Control Regulations. At the time the Zoning Inspector receives a revised Plan, another thirty (30) day review period shall begin.
6. Any soil disturbing activity shall not begin and a zoning certificate or a conditional zoning certificate shall not be issued without a WMSC Plan approved by the Zoning Inspector.
7. Any addition or alteration to the site design as shown on the approved WMSC Plan may require the resubmission of said Plan in accordance with these regulations. In making a determination regarding such resubmission, the Zoning Inspector may consult with the GSWCD. The Zoning Inspector shall determine if any addition or alteration requires a resubmission as well as the issuance of a new zoning certificate or conditional zoning certificate.
8. Failure to comply with the conditions of an approved WMSC Plan shall be a violation of this regulation.

B. Compliance with State and Federal Regulations

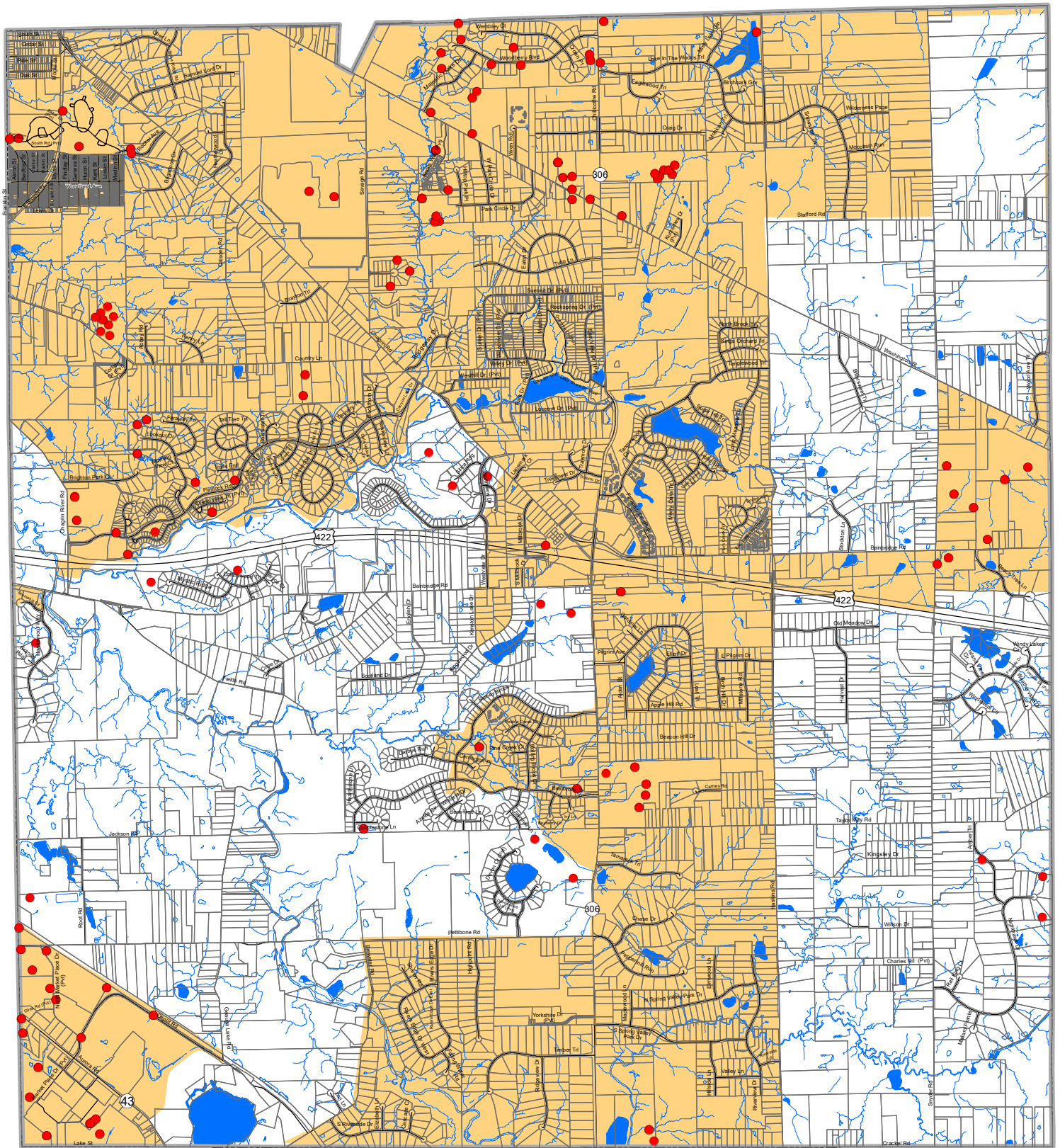
1. Approvals issued in accordance with these regulations do not relieve the site owner of responsibility for obtaining all other necessary permits and/or approvals from federal, state, and/or county agencies. Such permits and/or approvals shall be obtained before any zoning certificate or conditional zoning certificate is issued or a WMSC Plan is approved. If requirements vary, the most restrictive requirement shall prevail.
2. Soil disturbing activities regulated under these regulations shall not begin until proof of compliance with all necessary state and federal permits as detailed below has been provided. These permits may include, but are not limited to, the following:
  - a. Ohio EPA NPDES Permits authorizing storm water discharges associated with construction activity or the most current version thereof: Proof of compliance with these requirements shall be a copy of the Ohio EPA Director's Authorization Letter

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for the NPDES Permit, or a letter from the lot owner explaining why the NPDES Permit is not applicable.

- b. Section 401 of the Clean Water Act: Proof of compliance shall be a copy of the Ohio EPA Water Quality Certification approval, public notice, or a letter from a qualified professional who has surveyed the lot explaining why Section 401 of the Clean Water Act is not applicable. Such a letter shall be noted on site plans submitted to the Zoning Inspector. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the Ohio EPA and U.S. Army Corps of Engineers at the time an application is made under this regulation.
- c. Ohio EPA Isolated Wetland Permit: Proof of compliance shall be a copy of Ohio EPA's Isolated Wetland Permit approval or a letter from a qualified professional who has surveyed the lot explaining why the Ohio EPA Isolated Wetland Permit is not applicable. Such a letter shall be noted on site plans submitted to the Zoning Inspector. Isolated wetlands shall be delineated by protocols accepted by the Ohio EPA at the time an application is made under these regulations.
- d. Section 404 of the Clean Water Act: Proof of compliance shall be a copy of the U.S. Army Corps of Engineers Individual Permit approval. If an Individual Permit is not required, the lot owner shall submit proof of compliance with the U.S. Army Corps of Engineers Nationwide Permit Program. This shall include one of the following:
  - 1. A letter from a qualified professional who has surveyed the site explaining why Section 404 of the Clean Water Act is not applicable. Such a letter shall be noted on site plans submitted to the Zoning Inspector.
  - 2. A site plan showing that any proposed fill of waters of the United States conforms to the general and specific conditions specified in the applicable Nationwide Permit. Wetlands, and other waters of the United States, shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time an application is made under these regulations.
- e. Ohio Dam Safety Law: Proof of compliance shall be a copy of the Ohio Department of Natural Resources (ODNR) Division of Water permit application, a copy of the project approval letter from the ODNR Division of Water, or a qualified professional explaining why the Ohio Dam Safety Law is not applicable.

**Appendix A-9 Structural Stormwater Control BMP map**

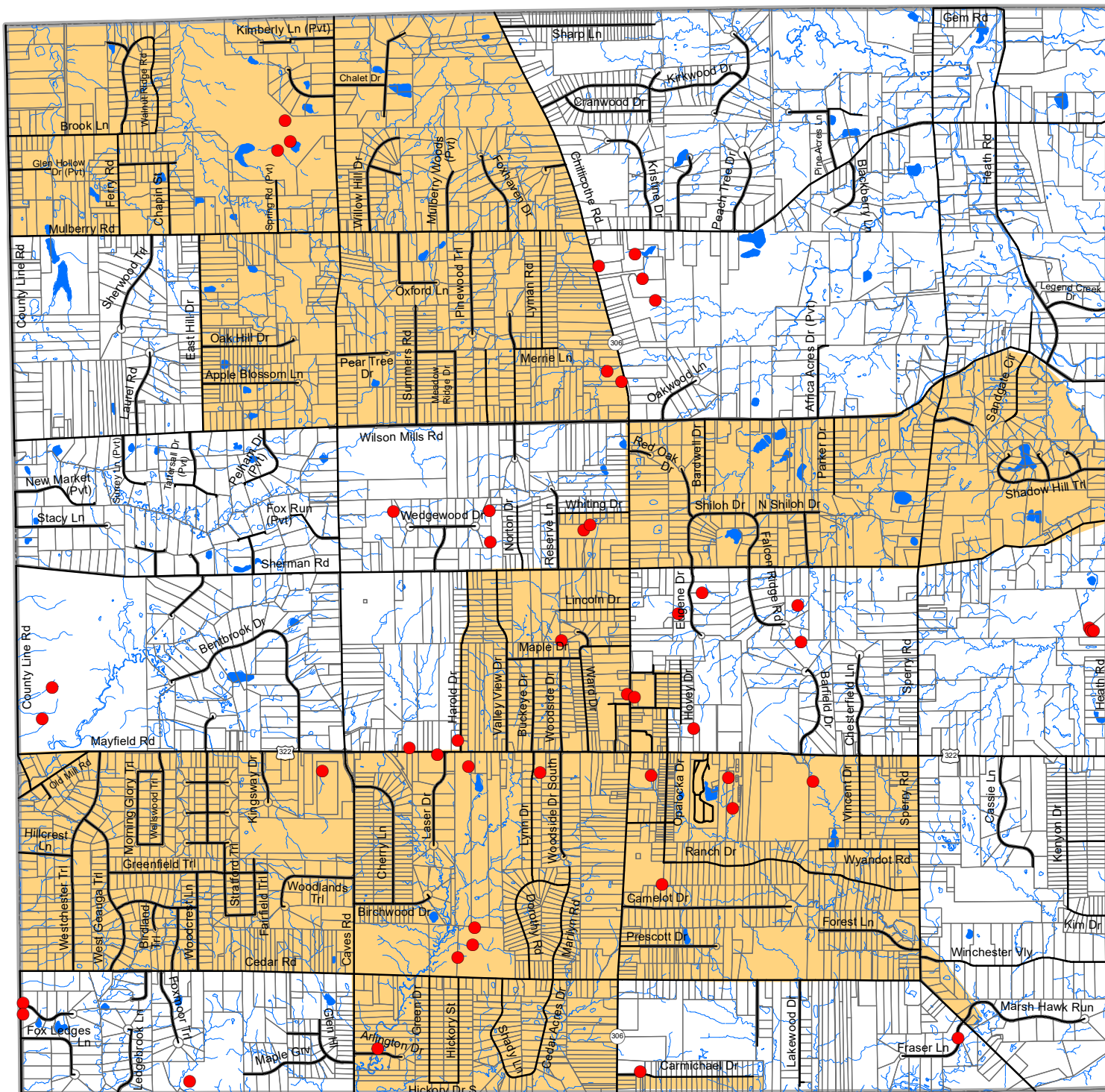


# Post-Construction Storm Water BMPs Bainbridge Township

- Post-Construction Storm Water BMPs (Through 12/2021)
- Natural Water Feature
- 2000-2010 Urbanized Area



Updated December 2022



# Post-Construction Storm Water BMPs Chester Township

- Post-Construction Storm Water BMPs (Through 12/2021)
- Natural Water Feature
- 2000-2010 Urbanized Area



Updated December 2022





**Appendix A-10 Sample Long-Term Operation & Maintenance Agreement**

DECLARATION OF RESTRICTIVE COVENANTS FOR INSPECTION & MAINTENANCE  
OF STORM WATER STRUCTURES

This Declaration of Restrictive Covenants for Inspection and Maintenance of Storm Water Structures (hereinafter the "Declaration of Restrictions") is made on the \_\_ day of \_\_\_\_\_, 20\_\_ by ABC Building (hereinafter the "Owner"), for itself and its successors and assigns, for the benefit of Geauga Soil and Water Conservation District (hereinafter the "District").

RECITALS

WHEREAS, Owner owns real property located in Any Township, Geauga County, Ohio, the legal description for such real property being attached hereto as Exhibit A (hereinafter the "Property"); and

WHEREAS, Owner will construct certain improvements on the Property and, in connection therewith, will cause to be constructed on the Property a storm water detention basin; and

WHEREAS, Owner desires to describe herein its agreements with respect to the inspection and maintenance of the said storm water retention basin, and certain other agreements in connection therewith, all of such agreements to be for the benefit of the District.

NOW, therefore, ABC Building hereby declares the following agreements and covenants for the Property:

1. DEFINITIONS: As used in this Declaration of Restrictions, the following terms shall have the designated meanings:
  - (a) Facility: That certain storm water detention basin facility consisting of an approximate X-acre pond and all associated appurtenances on the Property, which is further described on Exhibit B attached hereto.
2. MAINTENANCE:
  - (a) It is the Owner's responsibility to maintain and make all necessary repairs to the Facility located on the Property to ensure its original designed function including but not limited to the following: (Insert as appropriate for type of structure(s))

- 1) Stormwater Dry Pond Monthly Maintenance
  1. Removal of floating debris
  2. Removal of woody vegetative growth from pond area including embankments
  3. Removal of trash and/or sediment accumulation
  4. Removal of obstructions in orifices and/or outlets
  5. Mowing of pond, banks, and dam
- 2) Stormwater Dry Pond Annual Maintenance
  1. Repair erosion to the outfall or spillway
  2. Repair and/or replace any damaged structures (i.e. catch basins, risers, pipes, headwalls)
  3. Repair animal burrows and/or other leaks in the dam
  4. Debris should be removed from overflow spillway and grates.
- 3) Infiltration Trench Monthly Maintenance
  1. Remove debris from all inlet and outlet pipes
  2. Mowing of vegetated area and ensuring not driven over to reduce over compaction
  3. Ensure trench is dewatering between storms and not bypassing facility
- 4) Infiltration Trench Annual Maintenance
  1. Removal of sediment in sediment traps or pretreatment swales
  2. Repair any aggregate areas
- 5) Bioretention Area Monthly Maintenance
  1. Remove gross accumulated sediment and debris.
  2. Keep outlets free from blockage by sediment or debris.
  3. Repair soil erosion or scouring.
  4. Keep inlets to bioretention area free from blockage by sediment, and debris.
  5. Remove weeds and invasive plants from bioretention area.
  6. Inspect plant health seasonally to ensure vigorous growth. Prune plants, particularly shrubs and trees, during the dormant season (fall to early spring).
- 6) Bioretention Area Annual Maintenance
  1. Replace diseased or dying plants.
  2. Repair broken underdrains.
  3. Maintain and replace annually a minimum 3 inch depth of coarse shredded hardwood bark mulch. Pine mulches and fine or chipped hardwood mulches may not be used since they will float and move, blocking drainage.
  4. Check planting soil and filter media layer for clogging. Replace every 2-10 years/ as needed.

3. CHANGES: Owner will not eliminate or make structural changes or modifications to the Facility without the prior written approval from the District.

4. ACCESS: Owner hereby grants to the District the right to inspect the Facility. The District shall give the Owner at least ten days prior written notice of its intent to inspect the Facility. Owner hereby grants to the District the right to enter upon the Property for purpose of inspection of the Facility, subject to requirements for notice described above.
5. RECORDING: This Declaration of Restrictions shall be recorded in the Geauga County Recorders' Office.
6. BINDING EFFECT: This Declaration of Restrictions shall be binding upon and shall inure to the benefit of, the parties hereto and their successors and assigns; provided, however, upon a sale of the Property, the owner of the Property, including without limitation the Owner, shall be released from any and all liabilities and obligations under this Declaration of Restrictions which accrue from and after the date of sale. The Owner, and its successors and assigns, shall only be obligated hereunder so long as it or they own fee simple title to the Property. This Declaration of Restrictions shall run with the land and shall be binding upon future owner thereof.
7. NOTICE: Any notice permitted or required to be given pursuant to the terms of this Declaration of Agreements shall be deemed properly given if either hand delivered, or mailed by certified U.S. mail, return receipt requested, or sent by overnight courier requiring signature of receipt, to the following addresses:

IF TO THE OWNER:

ABC Building  
Street Address  
City, State Zip

IF TO DISTRICT:

Gauga Soil and Water Conservation District  
12611 Ravenwood Drive Suite 240  
Chardon, OH 44024

A party hereto may change its address for purpose of Notice hereunder by giving written notice to the other party pursuant to requirements of this Section 7.

IN WITNESS WHEREOF, ABC Building has signed this Declaration of Restrictions on the \_ day of \_\_\_\_\_, 20\_\_.

Signed in the presence of:

ABC Building

\_\_\_\_\_  
Witness

By: \_\_\_\_\_

\_\_\_\_\_  
Witness

Title: \_\_\_\_\_

STATE OF OHIO

COUNTY OF GEAUGA

The foregoing instrument was acknowledged before me this \_\_ day of \_\_\_\_\_,  
20\_\_ by \_\_\_\_\_ the Owner of ABC Building on behalf of ABC Building.

\_\_\_\_\_  
NOTARY PUBLIC

This instrument prepared by:

SAMPLE  
FOR YOUR USE

**Appendix A-11    Geauga County Subdivision Regulations – Drainage Maintenance District**

TITLE: The Subdivision Regulations of Geauga County, Ohio  
As Amended to March 31, 2010

AUTHOR: The Geauga County Planning Commission and Its Staff  
David C. Dietrich, AICP, Planning Director

ADDRESS: Geauga County Planning Commission  
470 Center Street, Building 1C  
Chardon, Ohio 44024-1071

PHONE NUMBERS: (440) 279-1740  
(440) 279-1741  
(440) 279-1742  
(440) 279-1744

FAX NUMBER: (440) 285-7069

E-MAIL ADDRESS: [baptie@co.geauga.oh.us](mailto:baptie@co.geauga.oh.us)

WEBSITE: [www.co.geauga.oh.us/Departments/Planning-Commission.aspx](http://www.co.geauga.oh.us/Departments/Planning-Commission.aspx)

## **E. Floodplain Regulations in Major Subdivisions**

The following regulations shall apply to all proposed major subdivisions wholly within, partially within, or in contact with any special flood hazard area. Major subdivision proposals shall be consistent with the need to minimize flood damage and are subject to all applicable provisions of these regulations.

1. Major subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
2. Major subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.
3. In all areas of special flood hazard where base flood elevation data are not available (approximate "A" Zone on Flood Insurance Rate Map), the developer shall provide, at the time of submission of a preliminary plan, a written hydrologic and hydraulic engineering analysis by a professional engineer that generates base flood elevations. The developer shall provide technical data to FEMA within six (6) months of the date when a hydrologic and hydraulic analysis is completed and submitted to the county planning commission that generates base flood elevations as required herein.
4. The special flood hazard area boundary shall be delineated on preliminary plans for major subdivisions and the base flood elevation(s) shall be provided. See Article IV, Section 401 (A) (20).
5. The special flood hazard area boundary shall be delineated on final plats for major subdivisions and the base flood elevation(s) shall be provided. See Article IV, Section 402 (A) (20).
6. All road pavement surfaces shall be located and constructed at or above the base flood elevation within major subdivisions.

## **F. Drainage Maintenance District (DMD)**

The establishment of a Drainage Maintenance District (DMD) pursuant to R.C. Section 6131.63 may be required by the board of county commissioners, upon the recommendation of the county engineer, in a major subdivision. Easements for drainage, with dimensions as required by these regulations shall be shown on the preliminary plan and the final plat. Such easements shall be granted to the board of county commissioners by the owner on the final plat (see Appendix for sample language). The declaration of covenants and restrictions for the major subdivision shall contain appropriate language as required by the county engineer and the Geauga SWCD regarding maintenance of the drainage easements; and, shall be subject to review by the county prosecutor's office. If no declaration is proposed for the major subdivision, such language shall be included on the final plat, subject to review as provided herein.

### **Section 503: Standards for Utility Easements**

For utility lines serving a subdivision, easements as set forth hereunder shall be provided. Such easements may be considered as part of the lot adjoining it in computing the lot area, but shall be kept clear of structures, trees or other improvements which would interfere with installation or maintenance of utility lines or related appurtenances.



**Appendix A-12 Sample Drainage Maintenance District Agreements**

**THE STANDARD SPECIFICATIONS AND PROCEDURES**  
**FOR**  
**THE DESIGN AND CONSTRUCTION OF SUBDIVISION ROADS**  
**IN**  
**GEAUGA COUNTY, OHIO**

**ADOPTED BY:**  
**THE GEAUGA COUNTY BOARD OF COMMISSIONERS.**

Adopted:  
October 1, 2020

**REQUEST FOR ESTABLISHMENT OF DRAINAGE MAINTENANCE DISTRICT**  
**PURSUANT TO O.R.C. § 6131.63, et seq.**

The undersigned owners of \_\_\_\_\_ acres in \_\_\_\_\_ Township, Geauga County, Ohio propose to create a residential subdivision known as \_\_\_\_\_ as evidenced by the attached preliminary plan (Exhibit "A") that has been approved by the Geauga County Planning Commission. Storm water drainage improvements related to this subdivision will be constructed at the undersigned's cost within a period of one year as evidenced by this agreement. Pursuant to O.R.C. sections 6131.63 and 6137, the undersigned hereby requests that the drainage improvements delineated on attached Exhibit "B," be accepted as a part of the Geauga County Drainage Maintenance District and that an annual assessment be collected with the Real Estate Taxes for each lot in the subject subdivision to cover the cost of current and future maintenance of the improvements. Said assessments shall run with the land referenced in Exhibit "A" and be binding on the Petitioner, its successors in interest and title, and assigns.

The undersigned represent one-hundred percent (100%) of the property owners to be assessed for maintenance related to this drainage improvement, and hereby waives my/our/its rights for a public viewing and hearing and ask that the Geauga County Board of Commissioners approve this action in conjunction with the approval of the construction plans and schedule for the \_\_\_\_\_ subdivision.

The engineer's estimated cost of the drainage improvements is \$\_\_\_\_\_ as detailed in Exhibit "C." The initial maintenance fee, paid by the undersigned, and the annual maintenance fee, assessed to the sub lot owners, will range from two to twenty percent (2%-20%) of the engineer's estimate. The storm water drainage improvements will benefit all \_\_\_\_\_ lots owned by the undersigned, its successors and assigns created in the approved preliminary plan and each lot will receive an equal share of the benefit (cost) of the project. The first year's assessment for all the sub lots in \_\_\_\_\_ subdivision in the amount of \$\_\_\_\_\_ has been paid to Geauga County by the undersigned. The basis for calculating the assessment for each lot is therefore \$\_\_\_\_\_ per lot. The undersigned understands that the basis for calculating the maintenance assessment will be reviewed and possibly revised every six (6) years.

Easements to Geauga County for the maintenance of the storm water improvements have been provided on the approved final plat.

Respectfully submitted by:

\_\_\_\_\_  
Development Name                      Date

\_\_\_\_\_  
Witness                                      Date

\_\_\_\_\_  
Owner                                      Date

\_\_\_\_\_  
Witness                                      Date

\_\_\_\_\_  
Print Name

Received by the Board of Geauga County Commissioners on: \_\_\_\_\_

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

RESOLUTION NO. \_\_ - \_\_\_\_\_

**RESOLUTION APPROVING ANNUAL ASSESSMENT ON IMPROVEMENTS  
IN (name of subdivision) IN (name of township) TOWNSHIP, GEAUGA COUNTY,  
UNDER THE AUTHORITY OF OHIO REVISED CODE 6137**

**WHEREAS,** (name of developer), the developer of (name of subdivision) in (name of township) Township, Geauga County, Ohio will be dedicating a public highway know as (name of road); and

**WHEREAS,** (name of developer) has offered (name of subdivision) be part of the Geauga County Drainage Maintenance District and that an annual assessment be collected with the real estate taxes for each of the (number of lots) lots in (name of subdivision), and

**WHEREAS,** the Geauga County Board of Commissioners accepted the request for the establishment of a Drainage Maintenance District pursuant to ORC 6131.63 et sq., on (date of request), and

**NOW, THEREFORE, BE IT RESOLVED** that the Geauga County Board of Commissioners certify the ditch maintenance assessment of (Dollar Amount) dollars (\$XX.XX) per lot, to the Geauga County Auditor, which is to be included in the next succeeding real estate tax collection.

**BE IT FURTHER RESOLVED** that the assessment funds be deposited in the storm water fund (03A-SW) established by the Board of Geauga County Drainage Engineer.

**BE IT FURTHER RESOLVED** that the annual assessment to cover the cost of current and future maintenance of the improvements will be reviewed and possibly revised after six (6) years.

**BE IT FURTHER RESOLVED** that the Clerk of the Geauga County Board Commissioners is hereby instructed to transmit a certified copy of this resolution to the \_\_\_\_\_ Township Board of Trustees, Geauga County Auditor, and the Geauga County Drainage Engineer.

Voting thereon:	Vote
_____	_____
Commissioner	
_____	_____
Commissioner	
_____	_____
Commissioner	

I, \_\_\_\_\_, Clerk of the Board of County Commissioners of Geauga County, Ohio, certify that the foregoing is a true and correct copy of a resolution adopted at a legally convened Board meeting held on \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
\_\_\_\_\_, Commissioners' Clerk

**SAMPLE DEED RESTRICTION LANGUAGE**  
**(THIS IS ONLY A SAMPLE AND WE RECOMMEND CONSULTING LEGAL COUNSEL FOR**  
**ADVICE)**

**DRAFT**

**DECLARATION OF RESTRICTIONS FOR LOTS IN \_\_\_\_\_ SUBDIVISION**

**DRAINAGE MAINTENANCE DISTRICT**

THIS DECLARATION OF DEED RESTRICTIONS OF \_\_\_\_\_ SUBDIVISION is made by \_\_\_\_\_, (hereinafter referred to as "Declarant") whose address is \_\_\_\_\_ for [itself] and its successors and assigns, for the benefit of the Geauga County Board of Commissioners and the owners of \_\_\_\_\_ subdivision.

**WITNESSETH**

WHEREAS, Declarant owns in fee simple, certain real property situated in the Township of \_\_\_\_\_, County of Geauga, State of Ohio, hereinafter referred to as the "premises" and described in the attached legal description, exhibit \_\_\_\_.

WHEREAS, Declarant proposes to develop and improve the premises for single family residential purposes under a general plan for development, and desires to establish certain restrictions pursuant to this plan for development with respect to the premises;

NOW, THEREFORE, Declarant, as owner of the premises, for himself; and his heirs, executors, administrators, tenants, successors and assigns, declares that the premises are held and hereafter shall be conveyed, subject to the following covenants, rights, reservations, limitations, and restrictions.

**Article 1:**

A Drainage Maintenance District ("DMD") Easement exists on sublots \_\_\_\_ within the XX Subdivision for purposes of maintaining and repairing, as necessary, the storm water management facility(s) located on those lots. A copy of the final recorded plat, construction plans, DMD Agreement, County Commissioners Resolution and Construction Estimate describing the easement and terms of such can be obtained from the Geauga County Engineer's Office. The DMD provides funding to the Geauga County Commissioners to maintain and repair the storm water management facility(s) through an assessment of all subplot owners within the XX Subdivision, as necessary.

The Geauga County Commissioners, its agents, successors *and assigns* have the right to maintain and/or repair the storm water management facility(s) and all its associated appurtenances as *(list)* located on subplot \_\_\_\_ under the authority and funding of the DMD Agreement. The subplot owners have the right to enjoy and utilize the property where the DMD Easement exists. The subplot owner may perform any of the below listed maintenance items as aesthetically necessary and not structurally related. The Geauga County Commissioners, its agents and successors have the right to enter the DMD Easement and perform the below listed items if they deem it necessary. Maintenance items may include but are not limited to the following: *(Edit and use as applicable – other items may be required depending on type of structure – consult engineer of project)*

1. Storm water Pond Monthly Maintenance
  - (a) Removal of floating debris
  - (b) Removal of woody vegetative growth from pond area including embankments  
(planting of trees on any dams or embankment is not allowed)
  - (c) Removal of trash and/or sediment accumulation
  - (d) Removal of obstructions in orifices and/or outlets
  - (e) Mowing of pond, banks, and dam

2. Storm water Pond Annual Maintenance
  - (a) Repair erosion to the outfall or spillway
  - (b) Repair and/or replace any damaged structures (i.e. catch basins, risers, pipes, headwalls)
  - (c) Repair animal burrows and/or other leaks in the dam
  - (d) Nuisance trapping, as necessary, to prevent animal burrows with appropriate state permits/licenses and/or licensed trappers.
  - (e) Debris should be removed from overflow spillway and grates.
3. Infiltration Trench Monthly Maintenance
  - (a) Remove debris from all inlet and outlet pipes
  - (b) Mowing of vegetated area and ensuring not driven over to reduce over compaction
  - (c) Ensure trench is dewatering between storms and not bypassing facility
4. Infiltration Trench Annual Maintenance
  - (a) Removal of sediment in sediment traps or pretreatment swales
  - (b) Repair any aggregate areas
5. Bioretention Area Monthly Maintenance
  - (a) Mowing of vegetated area and ensuring not driven over to reduce over compaction
  - (b) Replace and remove any diseased or dead plants
6. Bioretention Area Annual Maintenance
  - (a) Mulch should be replaced annually at a depth of no greater than 3" and cover the entire area. Remove old compacted mulch prior to new mulch placement.
  - (b) Repair any areas that have eroded

No structural alterations, modifications, or elimination may be made to the storm water facility (retention pond) without prior written approval from the Geauga County Commissioners, its agents, successors, and assigns.

The Geauga County Commissioners, its agents, and successors are hereby authorized to access the storm water management facilities (*list types*) at the \_\_\_\_\_ Subdivision for inspection purposes on sublots \_\_\_\_ \_ as shown on the recorded final plat.

#### Article 2:

The covenants, rights, terms, reservation, limitations, agreements and restrictions contained in this Declaration shall be deemed to be covenants running with the land herein described as the premises, and not conditions and shall bind the Declarant and all owners of building lots, their respective heirs, successors or assigns. This declaration shall create privity of contract and/or estate with and among all owners of all or any part of the premises, their heirs, executors, administrators, successors or assigns. There shall be no alteration, amendment, vacation or any other change to the DMD Easement described herein and shown on the record plat of the \_\_\_\_\_ nor shall there be any alteration, amendment, vacation or other change to this declaration without the prior written approval of the Geauga County Board of Commissioners, its agents, successors, and assigns.

This Declaration may be amended or cancelled only by an instrument in writing, signed by the owners of the property and by the Geauga County Board of Commissioners, certifying that both parties have agreed to amend or cancel this Declaration. Any amendment or cancellation hereto shall be promptly filed for record with the Geauga County Recorder.

IN WITNESS WHEREOF, Declarant has duly executed this Declaration on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_.

WITNESSES:

OWNER:

(Signature) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Print Name) \_\_\_\_\_

(Print Name) \_\_\_\_\_

(Print Title) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Print Name) \_\_\_\_\_

**STATE OF OHIO, COUNTY OF GEAUGA**

Before me a Notary Public, in and for said County personally appeared the above named \_\_\_\_\_ as owner of \_\_\_\_\_ Subdivision, who acknowledged that he did sign the forgoing instrument and that the same was his free act and deed

IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal, at \_\_\_\_\_, Ohio this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public

Prepared By:



**Appendix A-13 Universal Illicit Discharge and Spill Reporting Forms (County and Ohio EPA)**



# NPDES Small MS4 General Permit Illicit Discharge Reporting Form

State of Ohio Environmental Protection Agency  
Division of Surface Water

In accordance with Part III.B.3.j.v of OHQ000004, use this form to notify Ohio EPA if any of the following illicit discharges are detected discharging to your MS4:

- Illicit sanitary cross connections from industrial, commercial, or multi-family sources; and
- Leaking or broken sanitary sewer lines that are actively contributing sewage to your MS4.

Within 24 hours of discovery of the source of the illicit discharge, this form is to be completed and emailed to the appropriate Ohio EPA district office using one of the following addresses:

- Southeast District Office: [sedo24hournpdes@epa.ohio.gov](mailto:sedo24hournpdes@epa.ohio.gov)
- Southwest District Office: [swdo24hournpdes@epa.ohio.gov](mailto:swdo24hournpdes@epa.ohio.gov)
- Northwest District Office: [nwdo24hournpdes@epa.ohio.gov](mailto:nwdo24hournpdes@epa.ohio.gov)
- Northeast District Office: [nedo24hournpdes@epa.ohio.gov](mailto:nedo24hournpdes@epa.ohio.gov)
- Central District Office: [cdo24hournpdes@epa.ohio.gov](mailto:cdo24hournpdes@epa.ohio.gov)

Permittee Information				
Name of MS4 Permittee:				
NPDES Facility Permit Number:				
Contact Name for Permittee:				
Contact Telephone Number:	(    )	-		
Contact Email Address:				
Illicit Discharge Information				
Please provide: <ul style="list-style-type: none"> <li>• A general description of the illicit discharge that was detected,</li> <li>• An estimate of volume (gpd),</li> <li>• The identified source (if known),</li> <li>• Any analytical data (if taken),</li> <li>• Potential for human contact (low, medium, high), and</li> <li>• Is there any evidence of any distressed or dead wildlife?</li> </ul>				
Date/time illicit discharge began:	<input type="checkbox"/> Unknown	Date:	/	/
				Time:
Date/time illicit discharge discovered:		Date:	/	/
				Time:
Location of the illicit discharge (lat/long):				
Stormwater Outfall ID/Number (if known):				
Did discharge reach a water of the state?				<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, list affected waterbodies:				
Who else have you notified? (fire department, health department, water treatment plant, downstream MS4, facility responsible, etc.) include contact name(s) and phone number(s):				
Has illicit discharge been eliminated?				<input type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, date/time illicit discharge eliminated:	Date:	/	/	Time:
If No, describe actions taken to contain the illicit discharge and estimated schedule for elimination:				

**Geauga County**  
**NPDES Small MS4 General Permit**  
**Universal Illicit Discharge/Spills Reporting Form**

Name of MS4 Co-Permittee:	
Contact Name of Co-Permittee	
Contact Name Phone Number	
Contact Name Email Address	

How was it detected and who reported:

Description of illicit discharge including:  
 (Estimated amount, visual description  
 any analytical data taken, potential for  
 human contact, evidence of any distressed  
 or dead wildlife)

Date/Time Illicit Discharge began:	Unknown	<input style="width: 40px; height: 20px;" type="text"/>	Date:	<input style="width: 40px; height: 20px;" type="text"/>	Time:	<input style="width: 40px; height: 20px;" type="text"/>
Date/Time Illicit Discharge discovered:	Unknown	<input style="width: 40px; height: 20px;" type="text"/>	Date:	<input style="width: 40px; height: 20px;" type="text"/>	Time:	<input style="width: 40px; height: 20px;" type="text"/>
Location of Illicit Discharge (lat/long):	Lat:	<input style="width: 40px; height: 20px;" type="text"/>	Long:	<input style="width: 40px; height: 20px;" type="text"/>		

Address Illicit Discharge detected (if known):

Stormwater Outfall ID/Number (if applicable):

Did discharge reach a water of the state	Yes	<input style="width: 40px; height: 20px;" type="text"/>	No	<input style="width: 40px; height: 20px;" type="text"/>	Unknown	<input style="width: 40px; height: 20px;" type="text"/>
--	-----	---	----	---	---------	---

If yes, list affected waterbodies:

Fire Department Notified	Who/#	<input style="width: 90%; height: 20px;" type="text"/>
Emergency Management Agency	Who/#	<input style="width: 90%; height: 20px;" type="text"/>
Health Department (if applicable)	Who/#	<input style="width: 90%; height: 20px;" type="text"/>
Downstream MS4 (if applicable)	Who/#	<input style="width: 90%; height: 20px;" type="text"/>
Ohio EPA (Spill Hotline)	Who/#	<input style="width: 90%; height: 20px;" type="text"/>
Other		

Has the discharge been eliminated:	Yes	<input style="width: 40px; height: 20px;" type="text"/>	No	<input style="width: 40px; height: 20px;" type="text"/>	Unknown	<input style="width: 40px; height: 20px;" type="text"/>
Date and time eliminated	Date	<input style="width: 40px; height: 20px;" type="text"/>	Time	<input style="width: 40px; height: 20px;" type="text"/>		

Was discharge determined to be from a one-time incident, spill, or another unidentified source?	No	<input style="width: 40px; height: 40px;" type="text"/>	Yes	<input style="width: 40px; height: 40px;" type="text"/>
---	----	---	-----	---

Was discharge determined to be from an illicit sanitary cross connection from industrial, commercial or multi-family source?	No	<input style="width: 40px; height: 40px;" type="text"/>	Yes	<input style="width: 40px; height: 40px;" type="text"/>	if yes, fill out OEPA form
--	----	---	-----	---	----------------------------

Was discharge determined to be from a leaking or broken sanitary sewer lines that are actively contributing to your MS4?	No	<input style="width: 40px; height: 40px;" type="text"/>	Yes	<input style="width: 40px; height: 40px;" type="text"/>	if yes, fill out OEPA form
--	----	---	-----	---	----------------------------

**Once form is completed please forward this completed form along with the OEPA Form (if applicable) to Geauga SWCD.**

**Appendix A-14 Best Management Practices – Erosion and Sediment Control Field  
Manual for Local Government Highway and Public Utility  
Departments**

This manual was created by the staff of the Geauga Soil and Water Conservation District under the authority of the Board of Supervisors.

Funding for this brochure was made possible from continuing financial support of the Geauga County Commissioners and the Ohio Soil and Water Conservation Commission.



## Geauga Soil and Water Conservation District

14269 Claridon-Troy Road | PO Box 410 | Burton, OH 44021  
T 440.834.1122 F 440.834.0316 W [geaugaswcd.com](http://geaugaswcd.com)

***Geauga SWCD Mission:***

*"To conserve, protect, and enhance the resources of Geauga County by providing leadership, education, and assistance to all."*

*All services are provided without regard to race, religion, gender, age, physical or mental handicap, nation origin or politics.*

*Last Revision: 11/2016*

# Best Management Practices

## ***Erosion & Sediment Control Field Manual***

***For Local Government Highway  
and Public Utility Departments***

## Preface

Excessive sediment entering streams is detrimental to the health of a stream and the aquatic organisms living within. According to the EPA, erosion resulting from human activities accounts for 70% of soil loss, whereas the remaining 30% is from natural processes.

This field manual for erosion and sediment control was developed for local service department personnel as an abbreviated and portable guide to refer to when performing soil disturbing activities in order to minimize the amount of sediment leaving a work site and entering a body of water.

This is not a complete list nor does it contain explicit details of all Best Management Practices (BMPs), rather a list of the more common practices and basic information needed for practices commonly encountered for local service department personnel. For a comprehensive list of BMPs, refer to the Ohio Department of Natural Resources (ODNR) "Rainwater and Land Development Manual" which may be viewed at the following link: [http://epa.ohio.gov/Portals/35/storm/technical assistance/Intro 11-6-14-1.pdf](http://epa.ohio.gov/Portals/35/storm/technical%20assistance/Intro%2011-6-14-1.pdf)

Information for this field manual was based on the 2006 Third Edition of the "Rainwater and Land Development Manual" updated as of November 6, 2014.



**Gauga Soil and Water  
Conservation District**

14269 Claridon-Troy Road | PO Box 410 | Burton, OH 44021  
T 440.834.1122 F 440.834.0316 W [geaugaswcd.com](http://geaugaswcd.com)

## Rock Outlet Protection



**CORRECT**



**INCORRECT**

### What

- A rock or riprap apron typically at the outlet of storm drains, culverts, open channels, sediment traps, or detention facilities

### Why

- Provides an erosion-resistant transition area where concentrated or high velocity flows can dissipate energy before entering other open channels or natural streams

### How

- Outlet protection shall consist of a rock or riprap layer and an underlying filter or gravel bedding
- Width of the protection should be the width of the headwall or 4 feet wider than the pipe diameter
- Size, depth and width of the rock is based on the velocity of water and the slope of the discharge area (Minimum rock size is Type D  $\geq 6$ " )

### Maintenance

- If erosion or undermining occurs, replace rocks with larger rocks and/or create a more level surface

## Rock Lined Channel



### What

- A trapezoidal-shaped channel that is filled with rock riprap placed on top of a filter or bedding material

### Why

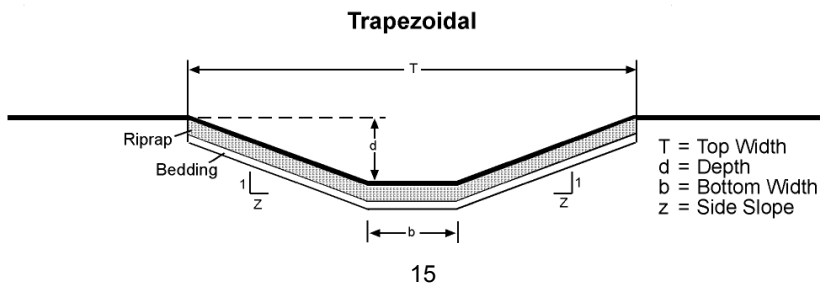
- A rock lined channel allows for the conveyance of runoff from areas of concentrated flow without damage from erosion or flooding

### How

- The design capacity of the rock lined channel should be adequate to carry the peak rate of runoff from a 10-year frequency storm or higher
- The area above the rock should be vegetated or otherwise protected

### Maintenance

- Ensure no erosion or undermining occurs and replace and repair as necessary and/or create a more level surface area



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## Silt Fence



**CORRECT**



**INCORRECT**

### What

- A geotextile fence installed to enclose disturbed areas of soil

### Why

- Silt fence traps sediment-laden sheet runoff from a disturbed area and filters out sediment before the runoff enters streams, storm sewer systems, and adjacent properties

### How

- Proper installation is critical and consists of being installed as follows:
  - Prior to land disturbance occurring
  - Along the contour
  - With the fence pulled tight and supported on the downslope side with stakes and the bottom 6 inches entranced into the ground
  - By wrapping ends of silt fence together before placing into ground
  - With the ends of the silt fence brought upslope to prevent runoff from going around the ends

### Maintenance

- Remove sediment accumulation from the silt fence when sediment reaches half the height of the silt fence and inspect regularly for fallen sections of fence

## Rolled Erosion Control Practices Turf Reinforcement Matting



**Rolled Erosion Control**



**Turf Reinforcement  
Matting**

### What

- Mattings/blankets made of a degradable material and typically integrated with seed and fertilizer

### Why

- Stabilizes easily eroded areas such as concentrated flow areas and steep slopes while vegetation becomes established
- Reduces soil erosion by providing temporary cover from the erosive action of rainfall and runoff
- Assists vegetative growth while providing soil/seed contact

### How

- Before applying seed, prepare slope by removing all rocks, clods, vegetation, or other debris so matting will have direct contact with the soil surface
- Follow specifications to install matting in the ODNR "Rainwater and Land Development Manual" with regard to:
  - Utilizing trenches and erosion check slots
  - Overlapping the material and direction of placement
  - Anchoring material into place

### Maintenance

- After large rain events repair section and restaple as necessary



## Dust Control



### Calcium Chloride

### Street Sweeper

#### What

- Prevents or reduces dust from exposed soils during land disturbance, demolition, and construction activities

#### Why

- Reduces the presence of airborne substances which may present health hazards, traffic safety problems, or harm to animal or plant life, and potential air quality regulatory fines

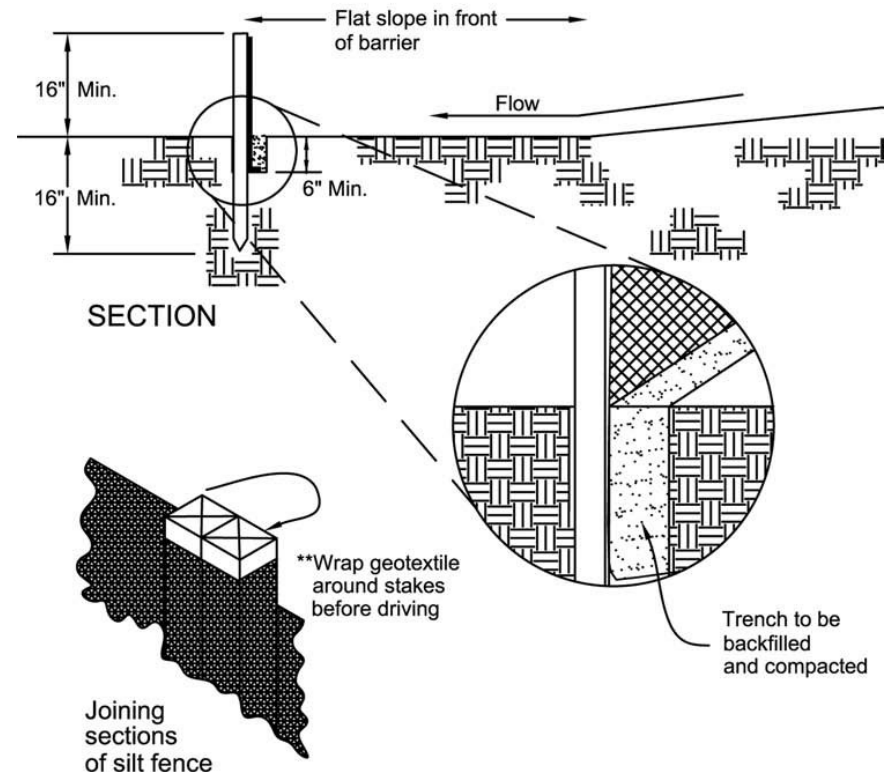
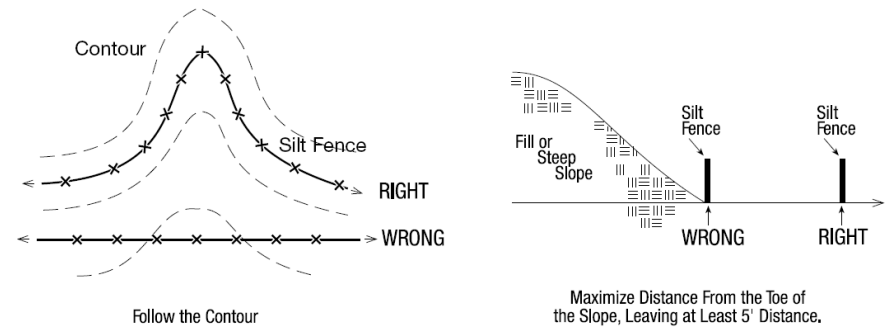
#### How

- Limit the amount of soil disturbance at any one time
- Stabilize soils utilizing any one or combination of methods below:
  - Apply mulch or vegetation
  - Temporarily leave soils rough graded
  - Sprinkle the site with enough water to prevent dust but not cause erosion
  - Use stone or chemical stabilizers
  - Preserve existing windbreaks
  - Apply calcium chloride
  - Use of a street sweeper/vacuum

#### Maintenance

- Reapply dust control as needed
- Regularly sweep debris from roadways

## Specifications for Silt Fence



## Storm Drain Inlet Protection



**CORRECT**



**INCORRECT**

### What

- Sediment barriers that are typically made of geotextile fabric attached to a 2" x 4" wood frame, washed gravel, crushed stone, or proprietary geotextile bags

### Why

- Removes sediment from storm water before it enters storm sewers and downstream areas
- Applicable anywhere site runoff could potentially enter through storm drain inlets

### How

- Must be installed before disturbance begins or before the inlet becomes functional
- A frame should be constructed out of 2" x 4" wood posts with each post driven 1 foot into the ground
- Attach wire mesh to frame and then stretch geotextile fabric tightly around the frame, overlapping fabric so ends of the cloth are not fastened to the same post
- Compact backfill around the inlet to the top of the inlet

### Maintenance

- Remove sediment buildup when it reaches half the height of the barrier or replace geotextile bags when full

## Filter Sock



**CORRECT**



**INCORRECT**

### What

- Sediment trapping devices using compost inserted into a flexible, permeable tube (often used as substitute for silt fence)

### Why

- Appropriate for limited drainage areas requiring sediment control where runoff is in the form of sheet flow or in areas that silt fence is normally considered acceptable

### How

- A preferred alternative where equipment may drive near or over sediment barriers, though driving over filter socks is not recommended
- Filter socks must be placed on a level contour to capture sheet flow, not concentrated flows, and preferably at least five (5) feet away from the toe of the slope
- Runoff must not exceed the berm height, otherwise a larger filter sock or alternative sediment control should be used
- The filter sock must be staked with 2" x 2" stakes driven a minimum of 12" into the ground

### Maintenance

- Remove sediment when accumulation is half the height of sock
- If driven over, repair or move back in place

## Phased Ditch Disturbance



**CORRECT**



**INCORRECT**

### What

- Limits the total amount of disturbance at any one time
- Sequences operations so that at least half the site is either undisturbed vegetation or re-stabilized prior to additional disturbance operations

### Why

- To protect highly erodible areas such as ditches and swales
- As storm water flows through scraped ditches, it erodes soil and carries the extra sediment and nutrients into streams
- Prevents sediment from redepositing in areas that were just ditched

### How

- Check the weather forecast and conduct work when there will be several days of clear weather
- When possible, re-vegetate the area immediately
- Create phases that can be stabilized quickly

### Maintenance

- Ensure work is progressing as planned and areas are being seeded regularly prior to new areas being exposed

## Mulching



### What

- A protective layer of mulch, usually straw, applied to bare soil or in conjunction with temporary or permanent seeding

### Why

- If soil is left bare/exposed, there can be significant loss of soil due to erosion caused by raindrop impact or wind
- When used in conjunction with seed, straw mulch helps to establish vegetation by keeping the seed in place, conserving moisture, and creating favorable conditions for seed to germinate

### How

- Spread layer of straw mulch on all disturbed portions of construction sites that will not be re-disturbed for more than 14 days
- Mulch must consist of one of the following:
  - Straw - apply at a rate of 2 tons/acre
  - Hydroseeder - apply wood cellulose fiber at 2,000 lb/acre
  - Wood mulch/chips - apply at 10-20 tons/ac

### Maintenance

- Reseed and mulch if no growth is evident within the specified germination period
- If mulch is washed or blown away, remulch and apply a tackifier

## Temporary and Permanent Seeding



### What

- Temporary seeding establishes temporary cover on disturbed areas by planting rapidly growing annual grasses or grains for areas temporarily being unworked or prior to the onset of winter
- Permanent seeding provides a perennial vegetation to permanently stabilize disturbed soil from construction activity

### Why

- Most effective erosion control method for final stabilization or
- Used to permanently stabilize soil, reduce erosion, prevent sediment pollution, reduce runoff by promoting infiltration and provide storm water quality benefits offered by dense grass cover

### How

- Important aspects to temporary seeding include:
  - Selection of the right plan materials
  - Site preparation to give the plants the best environment to succeed (loose and moist soil)
  - A soil test can determine if soil amendments, such as lime or fertilizer, are necessary
  - Apply seed uniformly using a spreader or hydroseeder

### Maintenance

- Areas failing to vegetate should be reseeded and fertilized as needed
- Seeding during hot and dry months may require irrigation

## Temporary Stream Crossing



### What

- Used when equipment or construction vehicles must cross the stream channel for a short period of time
- It is a temporary practice which includes restoring the crossing area after construction

### Why

- Provides construction traffic temporary access across a stream while reducing the amount of disturbance and sediment pollution

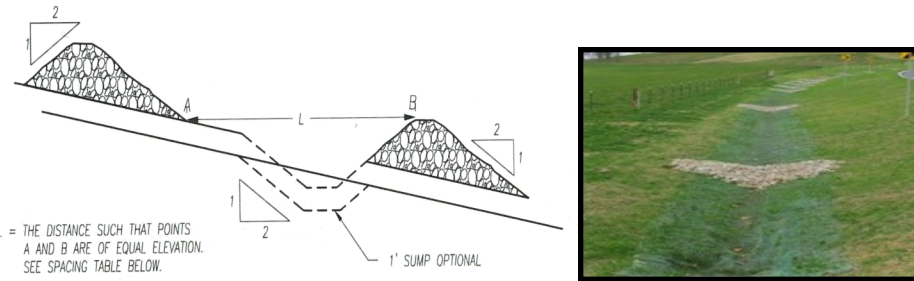
### How

- Applicable to streams with a drainage area of less than 5 square miles
- Crossing must be at a 90° angle to the stream to disturb as little of the stream as possible
- Only clean stone shall be placed within the stream channel
- Structures are subject to the rules and regulations of the U.S. Army Corps of Engineers for in-stream modifications. Contact their local office with any questions ([www.lrb.usace.army.mil](http://www.lrb.usace.army.mil))

### Maintenance

- Ensure dewatering devices are being utilized if needed
- Keep construction traffic on crossing

## Rock Check Dam



### What

- Small rock dams constructed in swales, grassed waterways, ditches, or diversions

### Why

- Reduces velocity of concentrated flows, thereby reducing erosion within the waterway

### How

- Center of the check dam must be lower than the sides so water to flows over and not around check dam
- Dam shall be constructed of 4" to 8" diameter stone and completely cover the width of the channel
- Maximum height of check dam shall not exceed 3 feet
- This practice often traps some sediment, but its trapping efficiency is extremely poor and should not be used as a sediment-trapping practice
- Spacing between check dams shall be done to ensure that the toe of the upstream dam is at the same elevation as the top of the downstream dam (see diagram above)

### Maintenance

- Remove sediment behind check dam once it accumulates to half the height of the check dam

## Construction Entrance (Entrance to Staging Area)



**CORRECT**

**INCORRECT**

### What

- Stabilized pad of stone underlain with a geotextile fabric where construction vehicle traffic is prevalent at construction site entrances or equipment/material staging areas

### Why

- Reduce the amount of mud tracked out onto roadways from construction traffic entering and leaving site or material/equipment staging area

### How

- Placement of #2 stone at a depth of 6-10" (depending on traffic load) on top of geotextile fabric
- Minimum width of 14 feet and at least 30 feet long

### Maintenance

- Top-dress entrance area with stone as needed as stone wears away or mud migrates to the surface of the stone
- Manually remove large clumps of debris and mud as necessary

## Dewatering Measures



**Filter Bag**



**Sediment Trap**

### What

- A filtering technique to remove sediment from water being pumped from work areas prior to being released off site

### Why

- Utilize whenever water hinders construction activities and has the potential of contributing sediment to streams if not treated before leaving the work site
- Reduces sediment impacts to downstream water resources by either allowing the sediment in the water to settle or by removing sediment before releasing the water

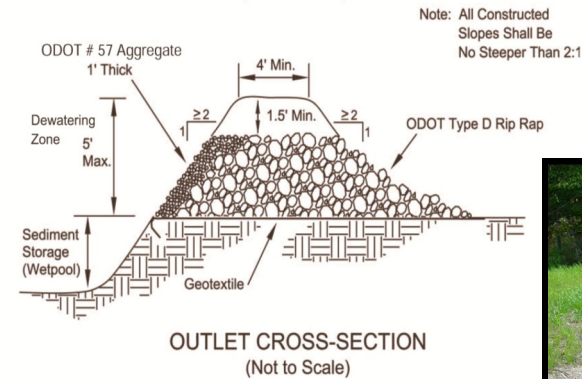
### How

- Larger particle sizes can settle out with filter strips and settling ponds
- More than one measure may be necessary to filter finer particle sizes, including but not limited to:
  - Sediment traps
  - Geotextile filter bags placed on flat ground

### Maintenance

- Once the bag or trap is full, replace or cleanout

## Sediment Traps



### What

- Poned area created to settle sediment out of storm water before leaving project area.
- Only applicable for drainage areas of one (1) to five (5) acres

### Why

- To allow sediment laden storm water runoff to pass through and settle out large sediment particles before discharging from a construction site

### How

- Constructed prior to storm water discharge point on a construction site or in series to break up a drainage area into one (1) to five (5) acre sections to be treated
- Provide sediment storage zone and dewatering zone as sized by an engineer

### Maintenance

- Clean out sediment from sediment storage area as it becomes full
- Remove trash and debris that may block the spillway

**Appendix A-15    Geauga County Pollution Prevention/Good Housekeeping Program**

**GEAUGA COUNTY, OHIO**

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**Geauga County and Townships'  
Facilities/Operations  
Pollution Prevention/Good Housekeeping Program**

**Site Addresses:**

BAINBRIDGE TOWNSHIP

Road Department and Settlers Park, 17800 Haskins Road, Chagrin Falls, OH 44022

CHESTER TOWNSHIP

Town Hall and Road Department, 12701 Chillicothe Road, Chesterland, OH 44026

Fire Station, 8552 Parkside Drive, Chesterland, OH 44026

Police Station, 12696 Opalocka Drive, Chesterland, OH 44026

RUSSELL TOWNSHIP

Police Station, 14820 Chillicothe Road, Novelty, OH 44072

Fire Station, 14810 Chillicothe Road, Novelty, OH 44072

Road Department, 15635 Chillicothe Road, Novelty, OH 44072

Town Hall, 14890 Chillicothe Road, Novelty, OH 44072

Geauga County, Ohio

**Prepared in support of:**

OEPA Facility Permit 3GQ00088\*CG as covered under OEPA NPDES Phase II General  
Permit OHQ000004

**Prepared for:**

Geauga County Commissioners  
Geauga County, Ohio

**Prepared by:**

Geauga Soil and Water Conservation District  
12611 Ravenwood Drive, Suite 240  
Chardon, OH 44024

**Version Dated: December 2022**



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## 1.0 INTRODUCTION

This Geauga County and Townships' Facilities/Operations Pollution Prevention/Good Housekeeping Program (PPGHP) for the following sites in Geauga County:

### BAINBRIDGE TOWNSHIP

- Road Department
- Settlers Park

### CHESTER TOWNSHIP

- Town Hall
- Road Department
- Fire Station One
- Police Station

### RUSSELL TOWNSHIP

- Police Station
- Fire Station
- Road Department
- Town Hall

has been prepared for the Geauga Board of County Commissioners (GBOCC) and is intended to satisfy the requirements of Minimum Control Measure Six as listed in the Stormwater Management Program for Geauga County (Dec 2022)

The SWMPs were submitted in fulfillment of the requirements of Ohio Environmental Protection Agency (OEPA) National Pollutant Discharge Elimination System (NPDES) Phase II General Permit for Small Municipal Separate Storm Sewers (OHQ00001), which was superseded by General Permit OHQ00002 issued on January 30, 2009, by OHQ00003 issued on September 11, 2014, and lastly by OHQ00004 issued on April 1, 2021. The SWMP was approved for coverage and all above listed communities filed under a consolidated permit for Geauga County under OEPA General Permit under Facility Permit Number 3GQ00088\*CG.

The program described in this document has been developed by the Geauga Soil and Water Conservation District (GSWCD) and Geauga County Engineer (GCE) with the intent to reduce the potential discharge pollutants from municipal operations at the various sites in Geauga County as listed above. It is the intent of this program to reduce the discharge of pollutants from the site to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of Ohio Revised Code 6111 as described in the OEPA Permits. Specifically, this document addresses pollution prevention and good housekeeping for municipal operations as described in Minimum Control Measure Six of the OEPA General Permit. The BOCC has committed to implement pollution prevention and good housekeeping Best Management Practices (BMPs) to reduce or prevent the discharge of pollutants in storm water runoff from municipal operations and facilities within their municipal separate storm sewer system (MS4).

This PPGHP is the main focus of the program BMPs for Control Measure Six in the SWMP. This document has been prepared following observations and inspections of the site and municipal operations. During the inspections, the existing storm water control measures already in place were documented, and existing and potential impacts to storm water runoff were noted. This PPGHP presents storm water controls that will

then be used by the various Townships or County to perform regular employee training and to implement and evaluate BMPs and controls at the facility to fulfill the requirements of the OEPA General Permit under which the GBOCC is currently covered.

This document describes the municipal site or operations, as well as the associated potential pollutant sources that are the focus of the storm water BMPs. The recommended BMPs will be implemented on an ongoing basis for the indefinite future. The Geauga County Engineer, Bainbridge Township, Chester Township and Russell Township (Gauga County Communities) plan to implement these procedures or similar controls, wherever they would be effective at preventing pollutants from discharging with storm water from the site.

This PPGHP will be maintained in the office of Joseph Cattell, PE PS, the Geauga County Engineer, and Carmella Shale, PE, of the GSWCD Office. The plan is available for inspection by representatives of Geauga County Communities, OEPA, and the United States Environmental Protection Agency (U.S. EPA) during normal business hours, Monday through Friday except holidays.

## 2.0 SITE MANAGEMENT RESPONSIBILITY / POLLUTION PREVENTION TEAM

<b>Bainbridge Township Facilities</b>	
<b>Site Addresses:</b> ROAD DEPARTMENT, 17800 Haskins Road, Chagrin Falls, OH 44022 SETTLERS PARK, 17800 Haskins Road, Chagrin Falls, OH 44022	
<b>Primary Site Contact:</b> Jim Stanek	<b>Phone number:</b> 440-543-9871
<b>Title:</b> Service Department	
<b>Secondary Site Contact:</b> John Brett	<b>Phone number:</b> 440-543-9874
<b>Title:</b> Road Department Foreman	
<b>Chester Township Facilities</b>	
<b>Site Addresses:</b> TOWN HALL, 12701 Chillicothe Road, Chesterland, OH 44026 ROAD DEPARTMENT, 12701 Chillicothe Road, Chesterland, OH 44026 FIRE STATION ONE, 8552 Parkside Drive, Chesterland, OH 44026 POLICE STATION, 12696 Opalocka Drive Chesterland, OH 44026	
<b>Primary Site Contact:</b> Charles Mascella	<b>Phone number:</b> 440.729.9110
<b>Title:</b> Road Superintendent	
<b>Secondary Site Contact:</b> Michael Joyce	<b>Phone number:</b> 440.729.7058
<b>Title:</b> Chester Township Trustee	
<b>Russell Township Facilities</b>	
<b>Site Addresses:</b> POLICE STATION: 14820 Chillicothe Road, Novelty, OH 44072 FIRE STATION: 14810 Chillicothe Road, Novelty, OH 44072 ROAD DEPARTMENT: 15635 Chillicothe Road, Chagrin Falls, OH 44022 TOWN HALL: 14890 Chillicothe Road, Novelty, OH 44072	
<b>Primary Site Contact:</b> Gene Layne	<b>Phone number:</b> 440.338.5309
<b>Title:</b> Road Superintendent	
<b>Secondary Site Contact:</b> Kristina Port	<b>Phone number:</b> 440.338.8912
<b>Title:</b> Russell Township Trustee	

### 2.1 Discussion of Site Reporting Structure

The Geauga County and Township Facilities/Operations Pollution Prevention / Good-Housekeeping Program (PPGHP) is coordinated through the Geauga County Engineer (GCE) and the contact is Joseph Cattell, PE, PS. The individual sites are managed by those listed as the Primary and Secondary Site Contacts in each table above.

A Hazardous Materials Spill requires notification to the Local Fire Department first. After that notification the Geauga County Local Emergency Planning Committee Emergency Response Consultant should be

notified through the Geauga County Sheriff's Office at 440-279-2009. The local fire department will notify the Geauga County HazMat Team for further assistance as required for the incident.

## **2.2 Reportable and Threshold Quantities**

The U.S. EPA and the OEPA are the authorities in the state of Ohio that regulate storm water quality. U.S. EPA and OEPA publish lists of chemicals and substances considered to be "hazardous" and/or "extremely hazardous." In a certain locale (in this case, the state of Ohio), the strictest regulatory limit for a given chemical constituent is the criterion that a municipality must meet for the discharge of that constituent to storm water.

As outlined in the Ohio State Emergency Response Commission Emergency Planning and Community Right to Know document dated October 2005, OEPA considers the following as materials subject to reporting:

1. Extremely Hazardous Substances 40 Code of Federal Regulations (CFR) 355,
2. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances 40 CFR Part 302 Table 302.4, and
3. Oil (as defined in ORC 3750.01) including, without limitation to, gasoline, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes.

As a general rule, sites covered in this PPGHP program are concerned with the discharge of oils and petroleum products. In Ohio, a reportable quantity of oil is considered to be:

1. Any discharge to navigable waters that causes a visible sheen, and/or
2. Any discharge of oil to the environment greater than 25 gallons.

Reportable spill events should be reported to the OEPA at (800) 282-9378. The Northeast District Office can also be reached at (440) 963-1200.

## **2.3 Site Building/Area Description, Storage and Function**

Bainbridge Township

- B1 – Road Department Main Building – Offices, storage of trucks, equipment, parts, signs and equipment fluids such as oils, cleaners, etc.
- B2 – Road Department Salt Dome – Salt storage only.
- B3 – Road Department Secondary Salt and Cinder storage – Storage of salt, cinders, topsoil and sand.
- B4 – Road Department Cold Storage – Storage of equipment, herbicides and crack sealer.
- B5 – Cell Towers and Building of Towers – Towers and electrical equipment for towers
- B6 – Recycle Area – Roll off containers for residents to recycle paper, cardboard, etc.
- B7 – Waste Oil Tank – 300 gallon above ground waste oil tank
- B8 – Fuel Tanks (Above Ground) – (1) 2500 gallon diesel fuel tank and (1) 1000 gallon gasoline fuel tank
- B9 – Cold Storage – Storage of equipment.

- B10 – Settlers Park – Soccer and baseball fields, outdoor pavilion, basketball court, sand volleyball court, gazebo and playground.

#### Chester Township

- C1 - Town Hall – Housing of personnel and administrative offices. There are no vehicles or raw materials stored or maintained at this location.
- C2 - Road Department – Offices, equipment storage, cleaning and maintenance.
- C3 – Road Department Cold Storage Building – Storage of trucks, off road equipment. One service bay for equipment maintenance. Floor drains are directed to an oil/water separator first and then directed to the sanitary sewer.
- C4 – Salt Barn – Storage of salt, #9 gravel, topsoil, mulch, and cold mix.
- C5 – Storage Tank (Above Ground) - 2 Chamber 10,000 gallon Storage tank contained within a concrete trough. Stores 3000 gallons of “beet juice” used for ice control and 7000 gallons of “dust bond” used for dust control.
- C6 – Fuel Tanks (Underground) – (1) underground 10,000 gallon gas fuel tank, (1) underground 10,000 gallon diesel fuel tank
- C7 – Fire Station One – Housing of personnel and administrative offices. All fire and EMS vehicles are stored. Maintenance is done by a 3<sup>rd</sup> party offsite. There is no storage of raw materials. All floor drains are directed to an in ground collection system that is pumped out and removed by a 3<sup>rd</sup> party at least once per year
- C8 – Police Station – Primarily houses personnel and administrative offices. Vehicles are kept outside on the parking lot. There is no storage of any materials and vehicle maintenance and vehicle washing is done by 3<sup>rd</sup> party offsite. There is no storage of raw materials.
- C9 – Police Car Garage – Cold storage of police cars only. No maintenance or washing of vehicles and no storage of raw materials.
- C10 – Used Oil Tanks - Two (2) above ground tanks to store used oil.

#### Russell Township

- R1 – Police Station - Administrative and employee facility for police officers and staff. Police cruiser vehicles are stored inside the structure in garage bays. Cleaning of vehicles such as car washing is done within the garage bay facility with proper drainage installed to storm sewer system. There is no storage of raw materials on-site.
- R2 – Fire Station - Administrative offices and employee facility for EMS, Paramedics, and Fire fighters. Sleeping, kitchen, shower, washer and dryer areas for gear and conference room are on site. Ambulance, Fire and Rescue vehicles are stored inside the structure in garage bays. Any vehicle washing is done within garage facilities and enters storm sewer system after passing through an oil/water separator.
- R3 – Road Department - There is a cement pad where fueling of vehicles is done. An EcoVault is present for storage of fuels, i.e., oil, diesel, and gasoline.
- R4 – Houses administrative office and employee facility for road crew personnel. All vehicles are stored inside the structure in garage bays at R3. Washing of trucks and road vehicles is

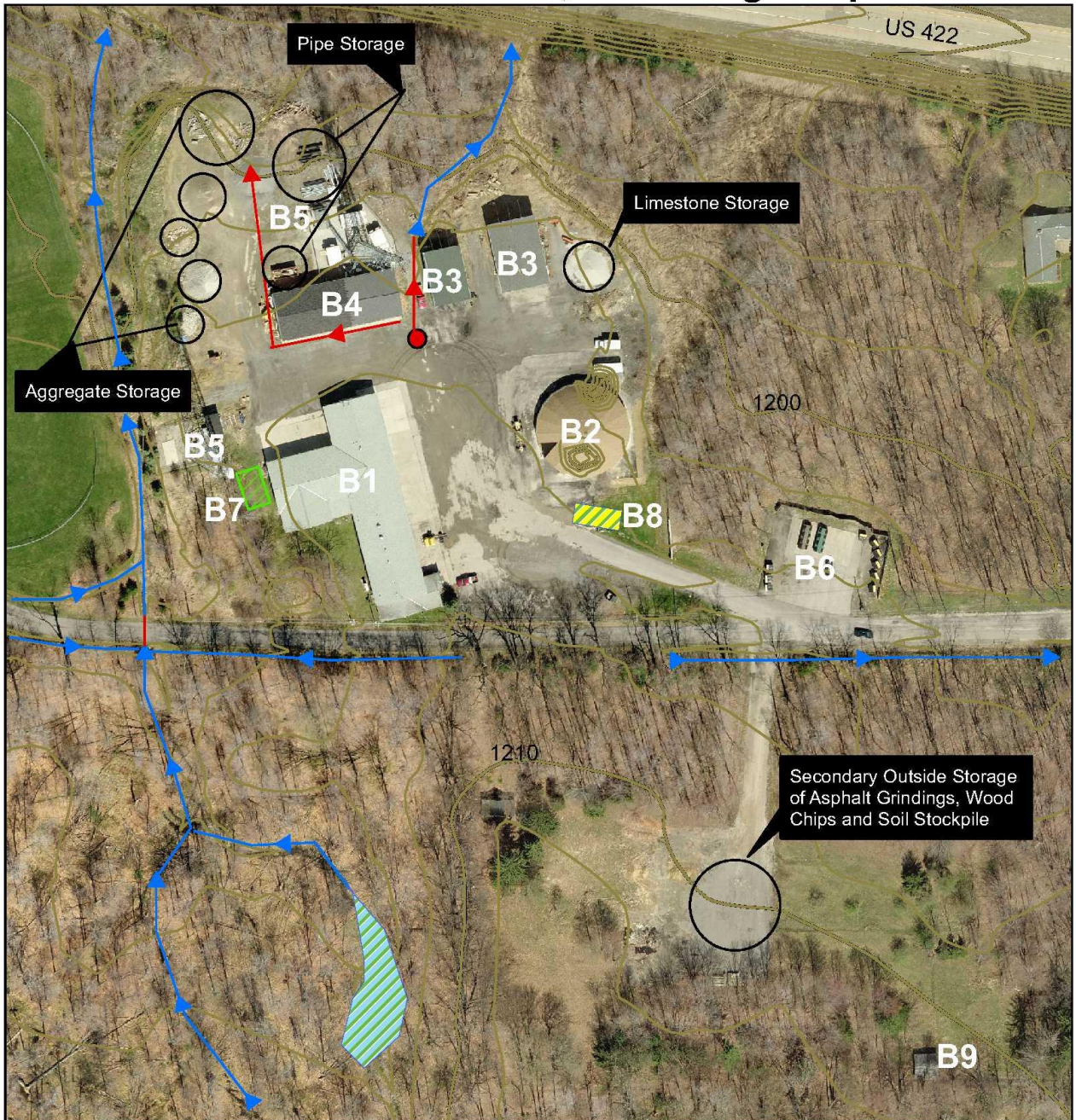
done within the garage area where the floor drains are connected to an oil separation system to catch any pollutants discharged to drains. Limited vehicle and equipment maintenance and repair service is conducted on-site such as oil change and lubrication services. Any paints, solvents or other Haz Mat materials are stored in fireproof safes designed for these materials. All major vehicle maintenance is done off-site at specialized garage facilities.

- R5- Salt/storage barn and is used to store salt, cinders, and crack sealer.
- R6 – Cold Storage Sheds – Storage of road signs and mulching materials
- R7 – Historic Town Hall - The historic town hall is used as a community meeting facility for home owner association, the Russell Historical Society, and other community township functions, meetings, and gatherings. There are no vehicles or raw materials stored, fueled or maintained at this location.

Geauga County – there are no buildings or facilities with the Phase 2 Urbanized Area

**See attached figures for facility layout**

# Bainbridge Road Department 17800 Haskins Road, Bainbridge Twp.



0 25 50 100 150 200  
Feet



### Legend

- |                         |             |                            |                |
|-------------------------|-------------|----------------------------|----------------|
| 10-ft Elevation Contour | Catch Basin | Aboveground Waste Oil Tank | Drainage Swale |
| 2-ft Elevation Contour  | Storm Sewer | Above Ground Fuel Tanks    | Wet Area       |



# Bainbridge Settler's Park 17800 Haskins Road, Bainbridge Twp.



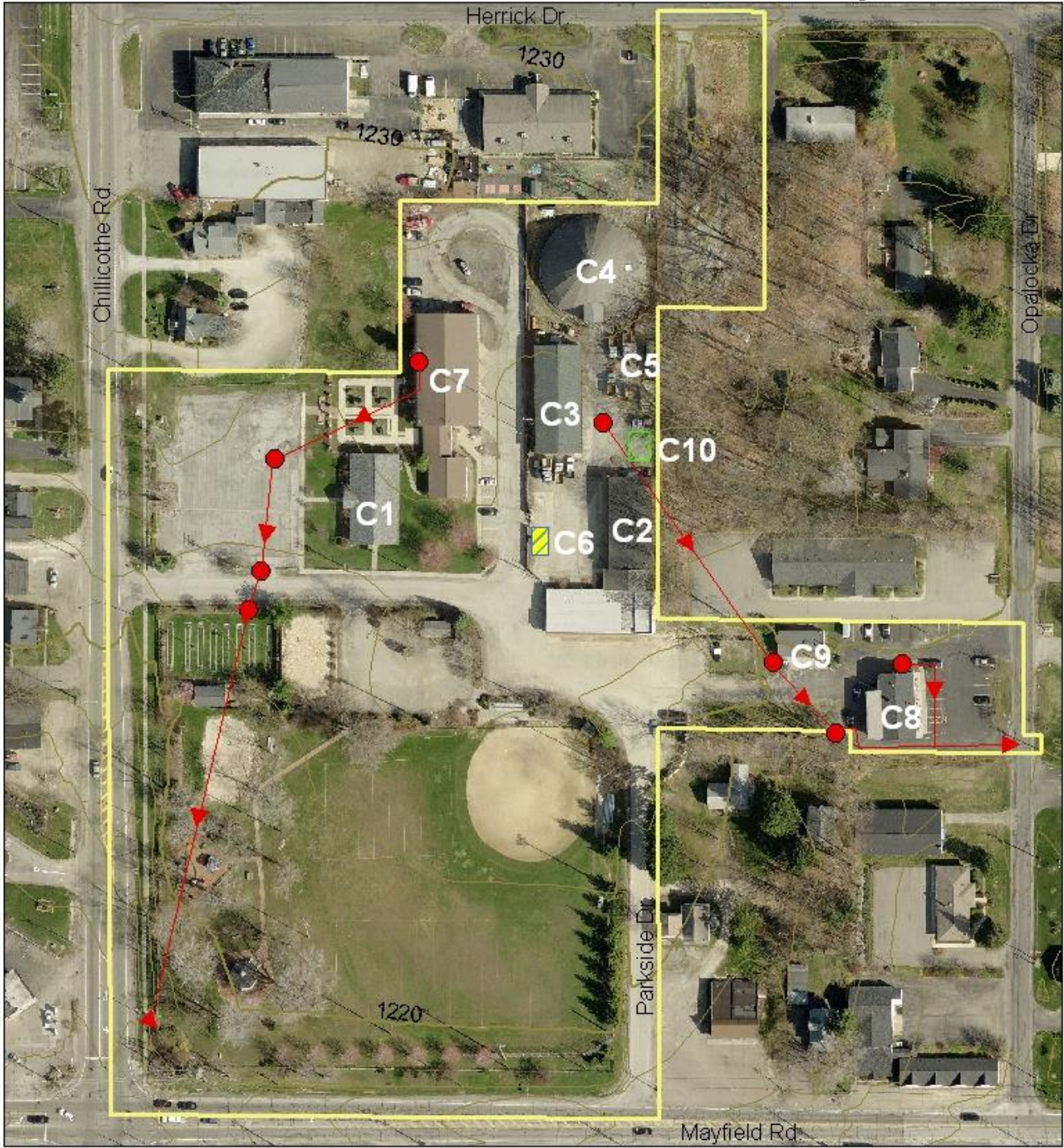
0 25 50 100 150 200 Feet



## Legend

- 10-ft Elevation Contour
- 2-foot Elevation Contour
- Catch Basin
- ▶ Storm Sewer
- ▶ Drainage Swale

# Chester Town Hall, Police/Fire Station, and Road Dept. 12701 Chillicothe Road, Chester Twp.



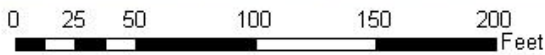
0 25 50 100 150 200 Feet

**Legend**

- Town Hall, Police and Fire Station, and Road Dept.
- 10-ft Elevation Contour
- 2-ft Elevation Contour
- Catch Basin
- ▶ Storm Sewer
- Underground Fuel Tank
- Aboveground Waste Oil Tank



# Russell Police and Fire Station 14810 and 14820 Chillicothe Road, Russell Twp.



### Legend

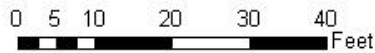
- 2-ft Elevation Contour
- 10-ft Elevation Contour
- Catch Basin
- ▶ Storm Sewer
- ▶ Drainage Swale

**Russell Road Department  
15625 Chillicothe Road, Russell Twp.**



- Legend**
- 2-ft Elevation Contour
  - 10-ft Elevation Contour
  - Catch Basin
  - Storm Sewer

# Russell Town Hall 14890 Chillicothe Road, Russell Twp.



### Legend

- 2-ft Elevation Contour
- 10-ft Elevation Contour
- ➔ Surface Drainage

## 3.0 FACILITY DRAINAGE AND POTENTIAL POLLUTION SOURCES

### 3.1 Facility Drainage

#### BAINBRIDGE TOWNSHIP

- B1 – Road Department – Five (5) floor drains are directed to an oil/water separator that is pumped out at least once per year and discharge into septic system.
- B3 – Secondary Salt and Cinder Storage – Catch Basin between Building B4 and B3 collects surface water and then drains north between buildings and discharges through wooded area between parking lot and US 422.
- B4 – Cold Storage – Trench drain in front of building drains west and then north along west side of building and discharges through wooded area between parking lot and US 422.
- B10 – Settlers Park – Underdrains within soccer fields drain into wooded areas. Catch basins and culverts across driveway drain to wooded areas and natural drainage swales.

#### CHESTER TOWNSHIP

- C1 - Town Hall – Surface drainage is via catch basins and storm sewers in town hall parking lot as shown on attached facility layout that outlets near the northeast side of the intersection of Mayfield Road and Chillicothe Road
- C2 – Road Department - Floor drains are directed to an oil/water separator first and then directed to the sanitary sewer.
- C3 – Road Department Cold Storage Building – Surface drainage is via catch basins and storm sewers in road department parking lot as shown on attached facility layout that outlets at south side of Police Station on Opalocka Drive.
- C7 – Fire Station One – Surface drainage is via catch basins and storm sewers in road department parking lot as shown on attached facility layout that outlets at south side of Police Station on Opalocka Drive. All floor drains are directed to an in ground collection system that is pumped out and removed by a 3<sup>rd</sup> party at least once per year
- C8 – Police Station – Surface drainage via trench drain across the front of building that connects to storm sewer south of station that outlets on Opalocka Drive.
- C10 – Used Oil tanks – Surrounded by brick/cemented 3' high barrier containment wall.

#### RUSSELL TOWNSHIP

- R1 – The Police Station - Floor drains are connected to an oil/water separator that is connected to the existing storm sewer system that drains to a detention pond located on the adjacent property where the Fire Station is located.
- R2 – The Fire Station – Floor drains in the bays for the vehicles. These drains go through an oil/water separator and then into the Russell Estates Sewer Treatment Facility. All surface and roof runoff either sheet flows or enters catch basins and is directed to the detention basin.

- R4 – Road Department building - Two (2) floor drains that drain to oil/water separators on either side of the building and then ultimately discharges to a drainage ditch along the property lines and then leads to the roadside ditch along SR 306. All surface and roof runoff either sheet flows or enters catch basins and is directed to the drainage ditches along the property lines that lead to the roadside ditch along SR 306.
- R7 – Historic Town Hall – All surface and roof drainage drains to a roadside ditch along SR 87. There are no floor drains in this building.

### **3.2 Inventory of Exposed Materials**

Exposed materials within the site boundary are typically on grass or gravel areas. Typical items stored on the site include:

BAINBRIDGE TWP – Outside storage of pipes, aggregates, and wood chips.

RUSSELL TWP - Items stored outside include brush clippings, wood chips, until either composted, donated to residents, or mixed with soil and donated to local landscaping firms to make mulch. Metal culvert pipes are stored outdoors at the road facility until trucked to a metal scrap dealer. Any non-metal piping is cut to size to fit into waste dumpster, and disposed of by the waste hauler. Various aggregates are stored in concrete divided bins on the asphalt paving area near the back of the road department property as shown on the site layout.

### **3.3 Potential Pollutant Generating Activities with Storm Water Exposure**

Potential pollutant generating activities exposed to storm water could include the loading/unloading of salt, washing vehicles, and the storage of grit, cold patch, gravel, soil, and other miscellaneous materials.

#### **3.3.1 Potential Spill and Leak Locations**

##### Fuel Tanks

##### BAINBRIDGE TOWNSHIP

- B8 – Road Department Fueling Station – Two above ground fuel tanks. One 2500 gallon diesel fuel tank and one 1000 gallon gasoline fuel tank.

##### CHESTER TOWNSHIP

- C6 – Road Department Fueling Station – Two underground fuel tanks. One 10,000 gallon diesel fuel tank and one 10,000 gallon gasoline fuel tank.

##### RUSSELL TOWNSHIP

- R3 - Road Department Fuel Depot. There is an EcoVault that encases the fuel storage tanks. A key lock system is needed to access the fuel distribution. A concrete pad area is present at the fuel filling area. Fuel tanks are for gasoline, diesel and oil.

Oil Tanks, Used Oil and Waste Products

BAINBRIDGE TOWNSHIP

- B7 – Road Department Waste Oil/Fluids Tank – 300 gallon above ground tank stored outside at the west end of the west wing of Building B1.

CHESTER TOWNSHIP

- C10 – Used oil is stored in two 250 gallon oil tanks outside the northeast end of building surrounded by brick/cemented three foot high containment wall.

RUSSELL TOWNSHIP

- R4 – Used oil is stored in storage drums and a 3rd party company comes to the facility to reclaim the product for recycling purposes.

Crack Sealer

CHESTER TOWNSHIP

- C3 – The Road department stores crack sealer blocks within this building. Material is a solid block until it is placed in equipment and heated for use.

RUSSELL TOWNSHIP

- R6 – The Road department stores crack sealer blocks in backbarn storage facility building. Material is a solid block until it is placed in equipment and heated for use.

Washer Fluids, Transmission Oil and Hydraulic Oil

BAINBRIDGE TOWNSHIP

- B1 – Road department stores engine oil, washer fluid and transmission fluid within 55 gallon drums in the building.

CHESTER TOWNSHIP

- C2 – Road department stores engine oil, washer fluid and transmission fluid within 55 gallon drums in the building. Hydraulic oil is stored in a bulk 250 gallon tank within the building.

RUSSELL TOWNSHIP

- R6 – The Road Department stores all these fluids in a fire proof cabinet in a backbarn storage facility.
- R1 – The Police Station stores washer fluid in closed factory containers in the garage storage room.



### **3.3.2 Sediment and Erosion Sources**

#### **SOIL STOCKPILES**

BAINBRIDGE TWP: Soil is stockpiled in Building B3 – Secondary Salt/Cinder Storage and reused when needed. Since it is covered, there is not erosion. A secondary location for soil stock pile is an asphalt pad as shown on the property layout. Any sediment generated from soil that is stockpiled here will be contained on the pad with use of silt fence.

CHESTER TWP: Grass will be maintained on the pond side slopes and silt sacks will be used in the catch basins immediate to the soil stockpile area. The area adjacent to the soil stockpile is also swept regularly to minimize the potential for sediment to enter the storm water system.

RUSSELL TWP: Soil is only stockpiled at the Road Department Facility. Any soil that is removed from ditches is taken to the road department. Silt fences are erected for boundary protection. Soil is donated to residents that request fill dirt. There would not be any erosion, and any runoff of soil would go to dirt parking lot area.

## **4.0 BEST MANAGEMENT PRACTICES / ON-SITE MEASURES AND CONTROLS**

The following sections discuss the storm water BMPs implemented and maintained at the site.

### **4.1 *Pollution Prevention Training for Employees***

Successful storm water pollution control relies in large part on proper training and education of employees. Many of the recommended BMPs in this PPGHP will require specific training for employees who conduct the activities. It is essential that employees understand and implement the BMPs that apply to operations within each facility. Training can be completed separately or done in conjunction with regular employee training procedures.

Employee training will emphasize the importance of keeping pollutants out of the storm drains, because the drains flow directly to the surface waters of the state without treatment. Facility personnel will be educated about the harmful environmental effects of improper disposal of materials so that they understand the importance of preventing storm water pollution.

The following training will be implemented by the Geauga County Engineer and the Townships of Bainbridge, Chester and Russell:

- Experienced workers or other trained personnel will be used to train facility employees.
- Training will be completed and documented once per year for all appropriate personnel.
- New personnel will be required to review and understand this document prior to initiating work activities at the site.
- Training will include the following elements at a minimum:
  - Best Management Practices and minimum maintenance,
  - Locations of Exposed Materials,
  - Spill Prevention, Containment and Countermeasures,
  - Chain of Notification and Spill Reporting,
  - Locations of Spill Equipment, and
  - Inspection, Recordkeeping and Reporting.

### **4.2 *Eliminating Illicit and Non-Storm Water Discharges***

The OEPA General Permit under which Geauga County and associated Townships are covered generally prohibits discharges of anything but storm water to the storm drains. As discussed in the General Permit, there are several specific exceptions to this general prohibition. Below is a list of acceptable non-storm water discharges.

<b>Acceptable Non-Storm Water Discharges</b>	
The following are acceptable non-storm water discharges (illicit discharges) only if they are not "significant contributors of pollutants to the MS4":	
Lawn watering Landscape irrigation Diverted stream flows Rising ground waters Uncontaminated ground water infiltration Uncontaminated pumped ground water Discharges from potable water sources Foundation drains Dechlorinated swimming pool discharges Discharges or flows from fire fighting activities	Air conditioning condensation Irrigation water Springs Water from crawl space pumps Footing drains Flows from riparian habitats and wetlands Water from open loop geothermal systems

Personnel from the Townships of Bainbridge, Chester and Russell and the Geauga County Engineer will inspect their respective facilities to be sure no unauthorized discharges enter storm drains or discharge offsite. Connections that allow sanitary or any sort of wastewater to enter the storm drain are prohibited, including storm drain connections from indoor drains or sinks. These are known as illicit connections and must be eliminated.

Another form of prohibited discharge is illegal dumping. Pollutants may be introduced to storm drains inadvertently, by routine practices that discharge water outdoors, or they may be released intentionally by routinely discharging wastes, wash water, and other materials to storm drains, catch basins, and other conveyance facilities either on the facility or in the street. A large part of this improper discharge results from employees lack of understanding, coupled with a lack of readily available proper routes for the discharge. Continuing employee training will be needed as described in Section 4.1.

The Townships of Bainbridge, Chester and Russell and the Geauga County Engineer will make a long-term ongoing effort to assure that no illegal discharges will occur from operations at their facilities as listed in this document. This requires continuing observations to identify potential sources of intentional or inadvertent illicit discharges. Efforts will be made to discontinue or re-route the storm water from those activities.

The following measures to help prevent non-storm water discharges will be implemented:

- Provide well-marked proper identification and disposal or collection methods for solid or liquid waste.
- Train employees in proper disposal of wastewaters, chemicals, solid waste, etc. Employees will be educated to understand that storm drains connect directly to streams and other water bodies without treatment.

- Label all storm drain inlets and catch basins “No dumping—flows to storm water system” so employees can tell which inlets are part of the storm drain system.
- Periodically inspect and maintain the facility operations and BMPs to evaluate the success of efforts to reduce and eliminate non-storm water discharges (minimum biannually).
- Periodically inspect and maintain storm drain inlets (minimum quarterly). Clean out catch basins so that accumulated sediment, trash, or other pollutants do not wash down the storm drains and enter any water bodies.

### **4.3 Spill Prevention and Cleanup**

Even small spills can have cumulative effects that add up to a significant source of potential pollutants in storm water discharges from the site. The goal is to prevent spills and leaks, maintain a regular inspection and repair schedule, and correct potential spill situations before a spill can occur.

When a spill does occur, quick and effective response will prevent pollutants from reaching storm water. Spills will be cleaned up promptly and not allowed to evaporate so that pollutants do not remain on the pavement to be washed to the storm drains with the next rain or remain in the soil to become a possible groundwater pollutant. If the spill is on an unpaved surface, personnel from the Geauga County Engineer and the Townships of Bainbridge, Chester and Russell will determine whether the contaminated soil should be removed to prevent it from being a source of future storm water pollutants. Spill procedures will also include cleaning up leaks, drips, and other spills without water whenever possible.

Spill prevention and response procedures for hazardous materials stored or handled onsite will follow the procedures described herein. Personnel from the Geauga County Engineer and the Townships of Bainbridge, Chester and Russell will contain and collect the spilled substance, then dispose of the substances and any contaminated soil in compliance with federal, state, and local material disposal regulations.

The spill control and cleanup procedures for these facilities are as follows:

- Small spills: These are spills that can be wiped up with a shop rag. Wet rags will not be put in the dumpster with the shop trash – they will be stored in a covered bin like the kind used at auto service stations. Used rags will be sent to a professional cleaning service or properly disposed of as non-hazardous or hazardous waste as necessary.
- Medium-sized spills: These are spills too large to wipe up with a rag. Medium-sized spills will be contained and soaked up using dry absorbent material such as: Vermiculite, specially-prepared sawdust, kitty litter, or other appropriate absorbent material. Absorbent snakes may be used as temporary booms to contain and soak up the liquid. Used absorbent material will be swept up or collected and will be disposed of as non-hazardous or hazardous wastes as necessary. A wet/dry shop vacuum cleaner may also be used to collect spills and dispose of the liquid as non-hazardous

or hazardous wastes. Vacuums will not be used for gasoline, solvents, or other volatile fluids, because the enclosed vacuum may become an explosive hazard.

- Large spills: Spills of non-hazardous liquids will be contained and cleaned using a minimum amount of wash water. Storm drain inlets will be isolated and/or plugged to prevent the spill from entering the Municipal Separate Storm Sewer System (MS4). Temporary plugs will be kept onsite for the facility inlets and employees will be trained in when and how to use them.

Refer to section 2.1 and 2.2 on how and when to report a spill. A Spill/Release Incident Reporting form is also provided in Appendix A. This form should be filled out promptly after a spill or release.

#### **4.4 Outdoor Equipment Operations**

Facility employees inspect the equipment on a regular basis as part of the facility's standard operations to see that it is functioning properly. Leaks, malfunctions, staining on and around the equipment, and other evidence of leaks and discharges observed will be noted. The inspecting person will be responsible for reporting any spills or leaks using the form provided in Appendix A. Spill and leak control and cleanup activities are described in Section 4.3.

The equipment operations BMPs for this facility are as follows:

- Equipment will be placed on an impermeable surface, or a drip pan will be installed beneath the potential leak points of the equipment.
- The amount of rain water that contacts the equipment will be minimized wherever possible (i.e., equipment will be stored under cover).

#### **4.5 Outdoor Materials Storage and Handling**

Outdoor material storage areas will be inspected for possible exposure of pollutants to storm water runoff. Bulk solid materials, raw materials, construction materials, or supplies stored outdoors will be covered and protected from storm water if pollutants could enter storm water. Materials of concern on the facility include, but are not limited to gravel, sand, lumber, topsoil, compost, concrete, and metal products.

The BMPs for the outdoor materials storage and handling areas for this facility are as follows:

- The parking lot or other surfaces near bulk materials storage facilities are swept periodically to remove fines that may wash out of the materials.
- Liquid tanks are kept in designated areas, preferably on paved impermeable surfaces, within secondary containment and/or with vehicle impact protection.
- Outdoor storage containers are kept in good condition. Containers are to be inspected regularly for damage or leaks.

- A portable pumping system is used that can be moved to accommodate separate containment structures on the facility. Water is then be pumped into a truck or portable temporary holding tank. The water is then tested and disposed of according to whether any pollutants are present.
- Road salt storage areas are covered.
- Salt truck loading areas are swept regularly to minimize salt laden runoff. Drainage from the salt truck loading area is captured by an onsite basin to minimize salt laden discharges from the facility.

#### **4.6 Waste Handling and Disposal**

This section summarizes the storage and disposal practices for some common municipal facility wastes. For many wastes, reusing or recycling is the most cost-effective means to prevent pollution.

The waste handling and disposal procedures for this facility are as follows:

- General shop trash is kept in a dumpster with the lid closed. The dumpster is kept in a paved area and kept clean by picking up dropped trash and sweeping the area regularly.
- Liquid wastes are kept out of the dumpster and the lid is kept closed to keep storm water out.
- Waste metal is collected for delivery to a scrap metal dealer.
- Empty drums stored outdoors are sealed to be watertight.
- Waste oil, antifreeze, spent solvents, and other liquids from vehicle maintenance activities are recycled.
- Spent batteries are disposed of as hazardous waste or returned for reclamation and reuse.

#### **4.7 Vehicle and Equipment Washing**

The discharge from these activities are considered to be occasional incidental and not anticipated to be a significant source of pollutants to the MS4. For this reason, this non-storm water discharge is not considered an illicit discharge under the General Permit rules. Discharge from both the interior and exterior areas enter regularly maintained structures that collect sediment and the exterior wash area also drains to an oil water separator. Soaps and detergents are generally not used to wash these vehicles or equipment.

Exterior wash pits are cleared of sediments via vacuum truck at least twice per year, or as needed. Collected sediments are sent to environmental services for disposal.

CHESTER TOWNSHIP - Use only biodegradeable soaps for washing.

RUSSELL TOWNSHIP (Fire Station) – All discharges ultimately enter the detention basin.

#### **4.8 Materials Receiving Areas**

Truck loading and unloading areas are potential sources of pollutants when rainfall and run-on contact spilled raw materials, dust, and motor fluids that can accumulate in these areas.

The BMPs for the designated loading areas that use an outdoor loading dock are as follows:

- Shipments are inspected for leaked motor fluids, spilled materials, debris, and other foreign materials.
- If spills are observed they are cleaned up according to Section 4.3.

#### **4.9 Vehicle and Equipment Maintenance and Storage Areas**

Whenever possible, vehicle and equipment maintenance is performed in an indoor garage. Outdoor vehicle maintenance takes place in an area designated for vehicle maintenance.

The following are the selected BMPs for vehicle and equipment maintenance at the facility:

- Equipment is kept clean so that a buildup of grease and oil will not wash away when the equipment is exposed to rain.
- Vehicle and equipment maintenance areas are paved with concrete wherever possible.
- Drip pans or containers are kept under the vehicles at all times during maintenance.
- Fluids are drained from any retired vehicles kept on-site for scrap or parts. Stored or out-of service vehicles awaiting restoration or service, and vehicles being held for resale are checked periodically for leakage. Drip pans or containers are kept under the vehicles.

Vehicle and equipment storage areas will be operated with some similar precautions:

- Vehicles and equipment are inspected to identify sources of spills or leaks. Designated facility personnel will perform regular walk-by inspections.
- The equipment yard is kept clean and clear of debris and litter.
- Storm drain inlets are cleaned on a regular schedule and also after large storms. Special attention is paid to the kinds of potential pollutants that accumulate there as a result of facility activities so that appropriate measures can be taken to control any pollutant sources.
- Improvements to a vehicle or equipment storage area should grade the area to slope to a longitudinal drain, or install curbs to direct all direct storm water to a single point of discharge to easily visually monitor the storm water discharge. If the vehicle or equipment yard is a large source of oily materials, the inlet will be fitted with an oil/water separator or oil/grease trap.
- Spills are cleaned up promptly; using dry cleanup procedures described in Section 4.3.
- BAINBRIDGE TOWNSHIP – General equipment and truck maintenance done on site.

- CHESTER TOWNSHIP - Consistent parking spots will be designated for each vehicle so that if a leak is indicated on the ground, the truck can be identified and repaired.
- RUSSELL TOWNSHIP - All vehicle maintenance and repair functions are done off-site by dealership personnel for buildings R1 and R2.

#### **4.10 Vehicle and Equipment Fueling Areas**

Vehicle and equipment fueling areas are designed and operated to minimize the potential for spilled fuel and leaked fluids coming into contact with storm water.

Fueling areas ideally should drain to a sump. However, storm drains in the area could also be covered during fueling or could drain to a valved-off storm drain structure that can be pumped out in the event of a spill before the valve is reopened.

The following are the selected BMPs for the proper operation of a fueling area at the facility:

- A concrete slab is used for the fueling area (concrete is preferred because fuel and oils cause asphalt to deteriorate).
- Gasoline overflows and spills are cleaned using dry methods as described in Section 4.3. Spills are not allowed to run off or evaporate, and are not flushed with a hose. Absorbent material are used and disposed of as described in Section 4.3.
- Signs will be posted that instruct pump operators not to “top off” or overfill gas tanks.
- Dry cleanup materials are to be kept in the fueling area, and employees are instructed in the proper dry cleanup methods described in Section 4.3. Facility personnel regularly observe the area for gasoline, motor oil, or other fluids that may have leaked.
- Keep temporary fuel tanks in a bermed area that has an impervious lining, such as concrete or a heavy-mil plastic liner.

#### **4.11 Facility Good Housekeeping Activities**

The following good housekeeping practices will be implemented on a regular basis:

- Facility clean-up is completed without water whenever possible, by sweeping or wiping, or washing with as little water as possible.
- Rooftop drains or downspouts are arranged so they do not drain directly onto paved surfaces wherever possible.
- The storm water conveyance system is kept clear of debris and litter to avoid blockage that may cause storm water to back up and to avoid the discharge of illicit materials.



- Storm drain inlets are cleaned regularly to remove sediment and debris. Inlets are inspected at least quarterly to determine whether additional facility BMPs may be required.
- Catch basins are cleaned out annually, shortly before the wet weather season.

#### **4.12 Facility and Municipal Construction Activities**

This section describes the BMPs to be implemented at Geauga County and Township Facilities for building repairs, remodeling, and minor construction projects that involve an area of disturbance less than one acre in size.

**Larger-scale projects, such as the construction of new facilities that disturb greater than one acre of ground must seek coverage and satisfy the requirements of the OEPA General Permit for Storm Water Discharges Associated with Construction Activity (OEPA Permit No. OHC000005) dated April 23, 2018.** These require more extensive storm water pollution prevention measures than described here.

The following BMPs will be implemented for minor construction and remodeling activities at the facility:

- Building materials will be stored under cover or in contained areas. Impermeable tarps will be put over piles of wood, or other materials.
- The working area will be kept clean. Wood splinters, paint chips, and other residues will be swept every day; as well as a thorough cleanup at the end of the project.
- Impermeable ground cloths, such as plastic sheeting, will be used during painting.
- Paint buckets and barrels of materials will be stored away from contact with storm water at the end of the work day.
- Paint spills will be treated as a chemical spill and will be captured before it flows to the storm drain. Paint will be cleaned up promptly using dry methods.
- Water based paint brushes and equipment will be cleaned in a sink connected to the sanitary sewer. Oil-based paint materials will be cleaned where the waste paint and solvents can be collected to be handled as small quantity hazardous waste - do not pour it to the sink or to a storm drain.
- Tarps or drop cloths will be hung to minimize the spread of windblown materials.
- Sand blasting areas will be controlled to keep particles off of paved surfaces and out of storm drains.
- Excess chemicals will be soaked up with absorbent material or rags rather than allowing them to flow to the storm drains or soak into the soil. If chemicals spill, they will be cleaned up promptly using dry techniques see Section 4.3.

### **4.13 Storm Water Management: Water Quality Controls**

Based on site observations and inspections, the following features will be added as needed to various parts of the storm water conveyance system on Geauga County and Township Sites to help control potential pollutants in the storm water before it leaves the site:

- Oil-Absorbent Materials - Oil and grease in storm water can be removed using oil-absorbent materials to contain oil spills. The absorbent material preferentially absorbs oil, and does not fill with water, and can be used on storm water with small concentrations of oily materials.
- Permanent Floating Booms - Installed in storm water ditches to control occasional light surface sheen. When the boom is spent, it is full of oil and is visibly heavier, and floats lower in the water. The booms are inexpensive enough that they may easily be replaced whenever the absorbent is saturated.
- Vegetated Swale or Channel - Plants provide peak flow control by slowing the water and remove some pollutants by encouraging the deposition of sediments and intercepting oily wastes that may be in the water. This control can be retrofitted to an existing storm water conveyance simply by allowing grasses to grow, if it does not interfere with storm water drainage and cause water to back up onto the site.
- Catch Basin Filters - Storm drain inlets or inlet inserts that contain filtration media or other design features to remove particulates and oily wastes from storm water as it enters the storm drain.

### **4.14 Preventive Maintenance**

The facility's preventative maintenance program consists of regularly inspecting and maintaining the equipment that is used for the operation/maintenance of the facility and/or the storage of chemicals.

### **4.15 Sediment and Erosion Control**

Areas subject to sediment loss through erosion will be addressed in the following BMPs:

- Developing areas of erosion will be repaired and stabilized as quickly as possible to prevent these areas from becoming more significant and to protect adjacent surface water bodies. For vegetated areas, these repairs will typically involve filling erosion areas with soil and seeding and mulching the disturbed surface. These repair areas should be monitored until a dense vegetative cover is established.
- Areas of more significant erosion may be subject to additional controls to control the velocity of storm water runoff and/or the transmission of sediment. These additional controls may involve rock check dams, straw bales, silt fence, or other effective velocity or sediment control measures.

## **5.0 STANDARD OPERATING PROCEDURES / MEASURES AND CONTROLS FOR OFF-SITE**

This section describes the storm water standard operating procedures as they pertain to storm water quality that is implemented for operational activities within the county and township jurisdictional area. These activities take place offsite but are managed by the staff at the facility(ies) described within this PPGHP.

### **5.1 Roadway Deicing**

All Township Road Departments and Geauga County Engineer shall ensure that equipment is calibrated to optimum levels according to manufacturer's instructions. The following additional BMPs must be implemented during roadway deicing operations as indicated by for each entity:

- Hills/curves and intersections are salt/cindered as 1<sup>st</sup> priority then remainder of roads as needed.
- All significant spills of salt on the public right-of-way must be cleaned up within 48 hours after snow plowing/salting operations have ceased from the previous storm event
- Salt with the addition of beet juice, ice bit or salt brine to cinder mix is used to reduce the usage of pure salt.

BAINBRIDGE TOWNSHIP (All Bainbridge Township roads and facilities)

- Bainbridge uses "Beet Heet" and a salt brine mixture to prewet and reduce salt usage

CHESTER TOWNSHIP (All Chester Township roads and facilities)

- Chester uses "Ice Bite" to decrease the need for reapplication of salt on surfaces

GEAUGA COUNTY ENGINEER (All county roads and facilities)

- Geauga County uses a liquid salt brine to pretreat roads resulting in a reduction of salt usage

RUSSELL TOWNSHIP (All Russell Township roads and facilities)

- Russell uses salt only with no additions

### **5.2 Roadway Surface Repair**

Minor roadway repairs and filling of potholes is performed by the Road Departments of the Townships of Bainbridge, Chester and Russell and Geauga County Engineer. Resurfacing and major roadway construction projects are contracted out. The following BMPs must be implemented during roadway repairs:

- Patch work and other roadway repairs must be performed during dry weather
- Workers must take appropriate measures to keep cold patch, asphalt materials or concrete materials away from storm sewer inlets and ditches
- All excess materials must be swept ups and properly disposed of
- There shall be no washout of concrete truck chutes into any areas that can carry storm water runoff and shall be taken back to the plant and washed out or use of a onsite constructed concrete washout pit must be implemented.
- Use appropriate inlet protection when repair work has the potential of entering inlets

### **5.3 *Vegetative Maintenance within the Public Right-of-Way***

Roadside vegetation is maintained by the Road Departments of Bainbridge, Chester and Russell Townships and Geauga County Engineer. Maintenance is performed by mowing of the roadside ditches and berms, cutting of excessive woody brush and tree limbs and occasional application of herbicides. The following BMPs must be implemented during vegetation maintenance within the public right-of-way:

- Use mechanical methods of vegetation removal, unless conditions demand the use of herbicides.
- Vegetative debris and brush chippings are disposed of as listed below for county and each township. Debris and chippings are not to be disposed of anywhere near a watercourse.
  - BAINBRIDGE TOWNSHIP: The Road Department stores tree and vegetation grindings on an asphalt pad located south of the recycle area at the Road Department property as shown on the site layouts attached. These materials are reused for mulch around township grounds or for pickup by residents if available.
  - CHESTER TOWNSHIP: The Road Department stores tree and vegetation grindings at a site outside the Urbanized Area (Mulberry/Sperry Road storage area) within the township.
  - RUSSELL TOWNSHIP: The Road Department transports any vegetative debris or brush clippings to the Road Department grounds and places these items into a wood chipper. Chips are donated and made available for pick up at the road facility for township resident's use. Extra chippings may also be mixed with soil or dirt for composting purposes. Most often the composted mixture is made available to local landscape firms for or as a mulch material.
- Herbicides may only be applied when winds are light and rain is not expected for at least 24-hours, or according manufacturers' specification, whichever is longer.
- Herbicides may only be applied by a certified licensed applicator using accepted standards and rates as specified by manufacturer.
- Ensure equipment is regularly calibrated to avoid over application.

- BAINBRIDGE TOWNSHIP: A licensed applicator is on staff for the occasional use of all herbicides. Major applications of herbicides and pesticides are outsourced to companies whom have certified licensed applicators. The township will annually receive list of products used, including the amount applied and the application rates.
- CHESTER TOWNSHIP: All applications of herbicides and pesticides are outsourced to companies whom have certified licensed applicators. The township will annually receive list of products used, including the amount applied and the application rates.
- RUSSELL TOWNSHIP: All applications of herbicides and pesticides are outsourced to companies whom have certified licensed applicators. The township will annually receive list of products used, including the amount applied and the application rates.

#### **5.4 *Catch Basin and Ditch Cleaning***

Cleaning of catch basins and roadside ditches is performed by the Road Departments of the Townships of Bainbridge, Chester and Russell and Geauga County Engineer. This maintenance is performed to remove accumulated sediment and debris and ensure positive drainage alongside roadways to ensure the structural integrity of the road. The following BMPs must be implemented during catch basin and ditch cleaning:

- Roadside ditches that are reditched and/or graded shall be reseeded within 7 days of completion. Any ditch that enters a waterway within 50 feet shall be reseeded within 2 days of completion. Turf reinforcement matting shall be placed in the bottoms of all ditches according to latest Geauga County Water Management and Sediment Control Manual and the ODOT Location & Design Manual, Volume Two Drainage Design Section 1102. Generally, ditches with a 2% or greater slope will require matting.
- Any backslope or inslope steeper than 3:1 shall also have additional reinforcement to ensure seed retention and growth.
- Spoils from ditching or catch basin cleaning shall be removed and taken to the respective road departments in designated area where it is surrounded by silt fencing.
- All ditching and/or road widening projects undertaken by township or county forces shall ensure seeding and mulching is completed within 7 days of the disturbance. Combination barriers consisting of silt fence with straw bale reinforcement behind it shall be installed to minimize sediment transport. Barrier shall extend to the top of the ditch line and be fully entrenched in the soil to function properly.

#### **5.5 *Turf Management and Pesticide Application***

The Road Departments of the Townships of Bainbridge, Chester and Russell and Geauga County Engineer maintain the grounds of the facilities referenced in this document. Maintenance includes mowing, fertilizer,

pesticide and herbicide application as needed. The following BMPs must be implemented during turf management and pesticide application:

- Any fertilizer, herbicide or pesticide application may only be performed by a certified licensed applicator.
  - BAINBRIDGE TOWNSHIP: A licensed applicator is on staff for the occasional use of all herbicides. Major applications of herbicides and pesticides are outsourced to companies whom have certified licensed applicators. The township will annually receive list of products used, including the amount applied and the application rates.
  - CHESTER TOWNSHIP: All applications of herbicides and pesticides are outsourced to companies whom have certified licensed applicators. The township will annually receive list of products used, including the amount applied and the application rates.
  - RUSSELL TOWNSHIP: All applications of herbicides and pesticides are outsourced to companies whom have certified licensed applicators. The township will annually receive list of products used, including the amount applied and the application rates.
- Fertilizers shall not be applied near pavement, storm drain inlets, or within 50 feet of a stream or other water body.
- A soil test should be done to determine the need and rate of fertilizer application, if necessary.
- Herbicides and pesticides are not prepared near storm drains, catch basins, streams or other water bodies.

## **5.6 *Street Sweeping***

Roadways with curb and gutter only are periodically swept to remove debris along the road curb line. The following BMPs must be implemented during street sweeping:

- All accumulated material picked up by machine is disposed of and incorporated into road deicing salt/cinder mix or placed in a dumpster and hauled away to landfill.

## **5.7 *Culvert and Pipe Replacements and Installations***

Culvert and pipe replacements and installation are periodically performed by the Road Departments of the Townships of Bainbridge, Chester and Russell and Geauga County Engineer. Resurfacing and major roadway construction projects are contracted out. The following BMPs must be implemented during culvert and pipe replacements and installations:

- There shall be no washout of concrete truck chutes into any areas that can carry storm water runoff and shall be taken back to the plant and washed out or use of a onsite constructed concrete washout pit must be implemented.

- The working area will be kept clean. The site should be swept every day; as well as a thorough cleanup at the end of the project.
- Materials will be stored under cover or in contained areas
- Disturbed areas will be reseeded within 2 days of final grading pursuant to Geauga County Water Management and Sediment Control Regulations.
- Work within streams will be minimized and expedited.
- Trench dewatering will only be done with the use of a silt sack at the end of the dewatering hose.
- Waste material to be transported to landfill or stockpiled for later disposal at metal scrap yard or cut into pieces and placed into dumpster for trash hauler pickup or reuse if possible.

## **6.0 REPORTING AND RECORD KEEPING REQUIREMENTS**

This document and the facility operations shall be reviewed and updated annually to reflect changing site conditions and the effectiveness of the BMPs at sites owned by Geauga County and the Township of Bainbridge, Chester and Russell as listed in this document. All changes to this PPGHP will be documented. A copy of this document and any revisions to the program described herein will be kept at the Geauga County Engineer's Office and all Township Facilities at all times. A copy of all documentation shall also be provided to the Geauga County SWCD for inclusion in the Annual Report before March 1<sup>st</sup> of each year.

### **6.1 *Non-Storm Water Discharge Visual Inspection***

The Facility Manager for each site within the Township or Geauga County will inspect on at least once per year and preferably on a quarterly basis for non-storm water (or illicit) discharges. A non-storm water discharge visual inspection form is provided in Appendix A. The completed form should be kept onsite.

### **6.2 *Storm Water Discharge Visual Inspection***

The Facility Manager for each site within Township or Geauga County will inspect the storm water discharges during storm events on or after a significant rainfall. The inspections will be performed at least once per year and preferably quarterly. A storm water discharge visual inspection form is provided in Appendix A. The completed form should be kept onsite.

### **6.3 *Annual Site Inspection***

The Facility Manager for each site within the Township or Geauga County will inspect operations *before* March 1<sup>st</sup> of each year using the Annual Site Inspection Form provided in Appendix A. The completed form should be kept onsite and a copy should be sent promptly to the GSWCD and GCE for the preparation of the Annual Report before March 1<sup>st</sup>.



# **Appendix A**

## **Site Inspection Forms**

**Facility/Operations Storm Water Inspection Log**  
 Township and County Facility/Operations Pollution Prevention/Good Housekeeping Program  
 Geauga County SWMP

**Owner of Site: (circle one)**

**Geauga County**

**Bainbridge Township**

**Chester Township**

**Russell Township**

**Year:** \_\_\_\_\_

**Insert Site Name:** \_\_\_\_\_

Item	Date Completed
Annual Site Inspection (Appendix A)	
<b>QUARTERLY NON- STORM WATER INSPECTIONS</b>	
Quarterly Non-Storm Water Visual Inspection (Appendix A Form) (1 <sup>st</sup> Qtr)	
Quarterly Non-Storm Water Visual Inspection (Appendix A Form) (2 <sup>nd</sup> Qtr)	
Quarterly Non-Storm Water Visual Inspection (Appendix A Form) (3 <sup>rd</sup> Qtr)	
Quarterly Non-Storm Water Visual Inspection (Appendix A Form) (4 <sup>th</sup> Qtr)	
<b>QUARTERLY STORM WATER INSPECTIONS</b>	
Quarterly Storm Water Visual Inspection (Appendix A Form) 1st Qtr	
Quarterly Storm Water Visual Inspection (Appendix A Form) 2nd Qtr	
Quarterly Storm Water Visual Inspection (Appendix A Form) 3rd Qtr	
Quarterly Storm Water Visual Inspection (Appendix A Form) 4th Qtr	

**Promptly forward a copy of this form to Geauga SWCD at [cshale@geauga.oh.gov](mailto:cshale@geauga.oh.gov) and Geauga County Engineer, 12665 Merritt Road, Chardon, OH 44024 when completed. The original should be kept onsite.**

Township and County Facility/Operations Pollution Prevention/Good Housekeeping Program  
Geauga County SWMP

Owner of Site: (circle one below)

Name of Site: \_\_\_\_\_

Geauga County

Bainbridge Township

Chester Township

Russell Township

1. Date of spill/release: \_\_\_\_\_
2. Location: \_\_\_\_\_
3. Time of spill/release: \_\_\_\_\_ a.m. / p.m.
4. Material spilled/released: \_\_\_\_\_
5. Amount spilled/released: \_\_\_\_\_
6. Cause of spill/release: \_\_\_\_\_

Promptly forward a copy of this form to Geauga SWCD at [cshale@geauga.oh.gov](mailto:cshale@geauga.oh.gov) and Geauga County Engineer, 12665 Merritt Road, Chardon, OH 44024 when completed. The original should be kept onsite.

7. Description of scene (e.g., type of media contaminated (e.g., soil), distance to storm sewers, if spill/release was contained):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8. Description of clean-up actions taken (e.g., how spill/release was contained (e.g., absorbent pillows), where recovered material was placed, how much material was not recovered, remaining actions to be taken):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. List of offsite emergency responders contacted:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. List of offsite emergency responders at scene:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11. Action taken to prevent recurrence: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. Signature: \_\_\_\_\_  
Printed Name: \_\_\_\_\_

*Use back of form for additional space as needed. Completed forms should be kept onsite.*  
**Quarterly Non-Storm Water Discharge Visual Inspection Form**  
Township and County Facility/Operations Pollution Prevention/Good Housekeeping Program

Geauga County SWMP

Owner of Site: (circle one below)

Name of Site: \_\_\_\_\_

Geauga County

Bainbridge Township

Chester Township

Russell Township

Date/Time: \_\_\_\_\_

Location: \_\_\_\_\_

Issue Being Evaluated	Yes	No	N/A	Comments (Stains, Odors, Leaks, Trash & Debris)
<b>OUTFALL(S):</b> Any water flowing?(If YES, define the source):				
Irrigation				
Water line flushing				
Broken water line				
Firefighting activities				
Unknown The connection to the source must be identified and eliminated as soon as possible.				
<b>SITE HOUSEKEEPING:</b> Clean of debris (paper, leaves, etc.)?				
Storm drain inlets clean?				
<b>VEHICLE MAINTENANCE/STORAGE AREAS:</b> Dirt and grease buildup?				
Clean of debris (paper, leaves, etc.)?				
Stains on the asphalt?				
<b>MATERIALS STORAGE AREAS:</b> Are recyclable materials accumulating?				
Are stored drums covered?				
Are oily parts exposed to storm water contact?				

Geauga County SWMP

Issue Being Evaluated	Yes	No	N/A	Comments (Stains, Odors, Leaks, Trash & Debris)
<b><u>MATERIALS STORAGE AREAS:</u></b> Are the loading and unloading areas clean?				
Are potential pollutants properly stored beneath covered areas?				
Are areas around waste containers clean?				
<b><u>VEHICLE FUELING AREAS</u></b> <u>Fuel stains evident?</u>				
<b><u>SITE CONSTRUCTION ACTIVITIES</u></b> Materials covered?				
Erosion controls in place?				
Construction debris/litter exposed to storm water?				
<b>Summary of recommended actions to eliminate unauthorized non-storm water discharges and reduce or prevent pollutants from contacting non-storm water discharges:</b>				
<p><b>Promptly forward a copy of this form to Geauga SWCD at <a href="mailto:cshale@geauga.oh.gov">cshale@geauga.oh.gov</a> and Geauga County Engineer, 12665 Merritt Road, Chardon, OH 44024 when completed. The original should be kept onsite.</b></p>				

Inspected By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Signature: \_\_\_\_\_

Owner of Site: (circle one below)

Name of Site: \_\_\_\_\_

Geauga County

Bainbridge Township

Chester Township

Russell Township

Date/Time: \_\_\_\_\_

Location: \_\_\_\_\_

Issue being evaluated	Yes	No	N/A	Comments (Stains, Odors, Color, Leaks, Trash, Debris, etc.)
<b>OUTFALL(S):</b> Clean of debris (paper, leaves, etc.)?				
<b>DISCHARGE WATER (Circle below):</b>				
Turbidity?	Clear	Cloudy	Muddy	
Oil & Grease sheen present?	Clear	Discontinuous	Continuous	
Floating Material present?	No	Yes If yes, describe material:		
Odors present?	No	Yes If yes, describe (i.e. petroleum, sewage, etc.):		
Discoloration present?	No	Yes If yes, describe color:		

**Storm Water Discharge Visual Inspection Form**  
 Township and County Facility/Operations Pollution Prevention/Good Housekeeping Program  
 Geauga County SWMP

Owner of Site: (circle one below)

Name of Site: \_\_\_\_\_

Geauga County

Bainbridge Township

Chester Township

Russell Township

Issue Being Evaluated	Yes	No	N/A	Comments (Stains, Odors, Color, Leaks, Trash, Debris, etc.)
<b><u>SITE AREA(S):</u></b>				
Are stored materials exposed to storm water contact?				
Are oily parts and/or drums exposed to storm water contact?				
Are the loading and unloading areas clean?				
Are areas around containers clean?				
Is the area around the covered salt storage area free of significant salt?				
Is there a buildup of oil and grease in the parking lots or equipment storage areas?				
Are there leaks or stains around drums or aboveground storage tanks?				
Are the drainage swales, catch basins and/or grates clean of debris (leaves, paper, etc.)?				
<b><u>OTHER OBSERVATIONS:</u></b>				

Promptly forward a copy of this form to Geauga SWCD at [cshale@geauga.oh.gov](mailto:cshale@geauga.oh.gov) and Geauga County Engineer, 12665 Merritt Road, Chardon, OH 44024 when completed. The original should be kept onsite.

Inspected by: \_\_\_\_\_

Signature: \_\_\_\_\_

**Annual Site Inspection Form**

Township and County Facility/Operations Pollution Prevention/Good Housekeeping Program  
Geauga County SWMP

**Owner of Site: (circle one below)**

**Name of Site:** \_\_\_\_\_

**Geauga County**

**Bainbridge Township**

**Chester Township**

**Russell Township**

To be completed by March 1<sup>st</sup> of each year for the Annual Report submittal. Revisions to the PPGHP recommended by this inspection shall be completed within 90 days of the date of the inspection.

Location: \_\_\_\_\_

Date/Time of Inspection: \_\_\_\_\_

**I. STORM WATER MONITORING PROGRAM COMPLIANCE**

1. Have non-storm water inspections been performed and documented? Yes/No  
If no, indicate reason: \_\_\_\_\_

\_\_\_\_\_

2. Have storm water inspections been performed and commented? Yes/No  
Give dates: \_\_\_\_\_  
If no, indicate reason: \_\_\_\_\_

\_\_\_\_\_

3. Have there been any corrective actions recommended as a result of site inspections? Yes/No  
If yes, have the actions been included in updates to the SWPPP/SWMP? Yes/No  
If corrective action updates have not been made, indicate reason: \_\_\_\_\_

\_\_\_\_\_

**II. REVIEW SITE STORM WATER POLLUTION CONTROL PROGRAM (PPGHP)**

1. Are there any changes to the site operations/activities? Yes/No

2. Are there any changes to storm water BMPs? Yes/No

3. Are there any changes to potential pollutant sources or activities? Yes/No

4. Are there any changes to storm water program personnel? Yes/No

5. Has employee training been conducted and documented? Yes/No  
If no, indicate reason: \_\_\_\_\_

**III. SITE INSPECTION**

1. Are preventive maintenance activities being implemented and documented? Yes/No  
(catch basins cleaned, parking areas cleaned, etc.?)  
If no, indicate reason: \_\_\_\_\_



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- 
2. Are housekeeping activities being implemented (covered trash bins, wipe up drips and spills, place drip pans under leaking vehicles, clean oily parts before storing outside, etc.)? Yes/No  
If no, indicate reason: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
  3. Are any special storm water BMPs being implemented (sediment erosion, curbs, spill prevention, etc.)? Yes/No  
If no, indicate reason: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
  4. Have spill prevention and response procedures been implemented, and is spill prevention equipment operational and ready (secondary containment, personnel training, inspection of chemical storage areas, etc.)? Yes/No  
If no, indicate reason: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
  5. Have sediment erosion controls been implemented? Yes/No  
If no, indicate reason: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
  6. Are there any additional storm water controls recommended as a result of the site inspection? Yes/No  
If yes, describe here: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**IV. UPDATE STORM WATER POLLUTION CONTROL PROGRAM (PPGHP)**

1. Have all updates been made to the PPGHP? Yes/No  
If no, indicate reason: \_\_\_\_\_  
\_\_\_\_\_

**V. EVALUATION OF EXISTING BEST MANAGEMENT PRACTICES (BMPs)**

Inspect the facility using this list of existing BMPs:

BMP Description	Existing BMP (E)	New BMP	Status (FI, PI NI, NA)	Implementation Schedule
Keep vehicle maintenance areas clean				
Regular pavement sweeping				
Control spills				
Practice proper waste disposal				
Eliminate non-storm water discharges				
Properly store materials to minimize exposure				
Store wastes and recycling materials in proper place				
Cover road salt storage area				
Routinely clean catch basins				
Keep equipment and vehicles clean				
Use drip pans under parked, stored vehicles				
Implement construction BMPs as necessary				
Wash equipment and vehicles in designated areas				
Provide spill protection at the fuel islands				
Cover trash bins				

E = Existing BMP  
 FI = Fully Implemented  
 PI = Partially Implemented  
 NI = Not Implemented  
 NA = Not Applicable

**From the table above, answer the following questions:**

1. Do the existing BMPs appear to be effective in reducing the potential for storm water pollution? Yes/No  
 If no, indicate reason: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2. Are additional BMPs needed to address sources of pollutants at the site (i.e., more frequent inspections of certain areas of operations, changes in operations, etc.)? Yes/No  
 If yes, describe the BMPs needed to address sources of pollutants and a time schedule for implementation: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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**General Comments:**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

Promptly forward a copy of this form to Geauga SWCD at [cshale@geauga.oh.gov](mailto:cshale@geauga.oh.gov) and Geauga County Engineer, 12665 Merritt Road , Chardon, OH 44024 when completed. The original should be kept onsite.