

**Lucas County & Others Stormwater Management Plan  
1049 South McCord Road  
Holland, Ohio 43528**

**Including Waterville, Sylvania, Springfield, Washington, Jerusalem, Spencer and  
Monclova Townships  
City of Waterville  
Village of Holland  
Village of Whitehouse**

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## Introduction and Background

### Purpose

Phase I and Phase II communities are required to develop stormwater management programs (SWMP) designed to reduce the discharge of pollutants from the municipal separate storm sewer systems (MS4) to the maximum extent practicable while also improving stream and water quality and protecting the health and welfare of the public. Additionally, these SWMP must include measurable goals and implement needed stormwater management controls. These goals and controls are to be designed to reduce the discharge of pollutants to the MEP.

Phase I was issued in 1999 and applies to medium and large cities with populations of 100,000 or more. Phase II was issued in 1999 and requires regulated small MS4s in urbanized areas to obtain NPDES coverage for their stormwater discharges. Lucas County is among approximately 6,700 Phase II MS4s.

According to US EPA, stormwater runoff is, "Rain or snowmelt that flows over land and does not percolate into the soil," (US EPA 2). This is a naturally occurring phenomena, however, the imposition of man-made impervious surfaces such as parking lots, buildings, and roads can, "Significantly alter the natural hydrology of the land by increasing volume, velocity, and temperature of runoff and by decreasing its infiltration capacity," (US EPA 2). It is because of these anthropogenic changes that a SWMP is necessitated - human alterations have hindered the watersheds' and streams' abilities to naturally assimilate pollutants and flows.

Common pollutants include pesticides, fertilizers, and other chemicals from residential lawn application; sediment from construction and development; bacteria from failing septic systems and combined sewer overflows (CSO); and debris and garbage that have been carelessly discarded. All of these pollutants make their way, untreated, to waters of the state via MS4 discharges, impairing recreational and biological uses and affecting potable water supplies.

Lucas County and its co-permittees are required by the Ohio EPA General NPDES Permit to, "Develop, implement, and enforce an SWMP designed to reduce the discharge of pollutants from your small MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Ohio Revised Code (ORC) 6111 and the Clean Water Act," (Part III.A.1). Resultantly, "The SWMP should include management practices; control techniques and system, design, and engineering methods; and shall be modified to include provisions as Ohio EPA determines appropriate after its review of the program for the control of such pollutants," (Part III.A.1).

Part III.B of the NPDES Permit requires that Lucas County and Others implement six minimum control measures (MCM) which are to be included and outlined in the SWMP. The six MCM are:

- 1) Public Education and Outreach
- 2) Public Involvement/Participation
- 3) Illicit Discharge Detection and Elimination
- 4) Construction Site Storm Water Runoff Control
- 5) Post-Construction Storm Water Management in New Development and Re-development
- 6) Pollution Prevention/Good Housekeeping for Municipal Operations

Each MCM will include best management practices (BMP) that will address impairments as identified in a US EPA approved TMDL recommendation report for identified water quality problems associated with MS4 discharges within Lucas County's MS4 watersheds. The applicable TMDL reports, *Swan Creek Watershed* (Ohio EPA 2010) and *Maumee River (lower) and Lake Erie Tributaries* (Ohio EPA 2012) have been utilized in the design of Lucas County's SWMP.

The SWMP also overlaps with other congruent county objectives, including: home sewage treatment system (HSTS) failures, improving and expanding digital natural resource data available to land managers, addressing conservation management with the agricultural community and others. These converging objectives are considered when developing and managing Lucas County's SWMP. Intragovernmental coordination of the county agencies and departments having purview over stormwater-related issues is fundamental to implementing a successful SWMP. In order to facilitate coordination and cooperation, the Lucas County Engineer's Office has been designated lead agency in implementing Lucas County and Others SWMP.

Urban stormwater management looks to address the following causes of water degradation: soil erosion, home sewage treatment system failure and mismanagement, channelization and stream alterations, runoff from parking lots, development, and roads, the retention and conservation of riparian areas fertilizer and pesticide use, household hazardous waste and illegal dumping.

### **Community Description**

Lucas County, Ohio is situated in the northwest corner of the state. As of the 2010 United States Census, Lucas County had a population of 441,815 people. The 2015 Census Bureau population estimate is 433,689. The east and northern portions of the

county are dominated by urban and suburban development while the southern and western portion is decidedly rural in nature.

Lucas County's SWMP is concerned with the urbanized areas outside of the City of Toledo, City of Maumee, City of Sylvania, and the Village of Ottawa Hills. The Lucas SWMP area is estimated to have a population of 70,000 residents.

The coverage area of the Lucas County SWMP is largely suburban to rural. Areas of Sylvania, Springfield, and Washington Townships adjacent to the cities of Sylvania, and Toledo are dominated by residential subdivisions, moderate density commercial development with some light industry. Most of these areas have been developed within the past twenty years, with intense development occurring after the year 1990.

At the same time, sections of Monclova and Waterville Townships are suburban, with new subdivisions in the past 25 years. Large parts of both townships are rural.

Finally, Spencer and Jerusalem Townships are largely rural. Both are dominated by family farms and homesteads, with small urban neighborhoods mixed throughout.

The Lucas County SWMP covers Swan Creek, and Wolf Creek Frontal Lake Erie which is in the Maumee River (lower) Tributaries and Lake Erie Tributaries TMDL Area.

### **Limitations of the SWMP Plan**

The activities outlined in this plan guide the Lucas County Stormwater Management Program toward implementing a comprehensive program this not only meets minimum permit requirements, but also results in improvements to water quality within unincorporated Lucas County. As county resources are limited, there may be times where the minimum requirements are met but the activities as outlined in this plan are not fully addressed.

The audience of this plan is elected officials, township and county agency staff, Ohio EPA and the general public. Whenever possible, the language and format of the plan is written and intended for a broad audience. To understand the specifics of the MS4 stormwater general permit, interested parties need to read the most current permits.

### **Closing Comments**

It is the intent of Ohio's Small MS4 NPDES Permit program that communities develop a program to address their stormwater management needs. In order to develop this SWMP, Lucas County has carefully considered the various geographic, hydrologic, and demographic characteristics of Lucas County and its partner townships, villages and city. It is recognized by this SWMP that a comprehensive and holistic stormwater program will benefit the quality of life and sustainability of our communities all while meeting state and federal requirements

## **Lucas County & Others Stormwater Management Program**

## Public Education and Public Outreach

### Introduction

Public education and outreach is a key component of any effective stormwater management program. Minimum control measure (MCM) number one requires Lucas County and its co-permittees to implement a public education and outreach program that informs the public about the impact of stormwater discharges on water bodies and the steps they can take to reduce pollutants in stormwater runoff. At the same time, Lucas County's purpose in fostering public education and conducting outreach is to encourage volunteerism, public comment and input on policy, as well as activism in the community. Moreover, the goals of Lucas County's education and outreach program are designed to address the specific issues as outlined in *Swan Creek TMDL Report* (Ohio EPA 2010), and *Total Maximum Daily Loads for the Maumee River (Lower) Tributaries and Lake Erie Tributaries Watershed* (Ohio EPA 2012) as well as other areas defined by Lucas County that are prescriptive and required by the NPDES Permit or will impact other areas and communities deemed to be of importance by Lucas County.

The benefits of an effective education and outreach program are the implementation of a successful SWMP, increased community involvement in the governmental and regulatory process, and an increase in citizens taking responsibility for their role in the community.

Summarized Requirements of the Ohio EPA Small MS4 NPDES Permit:

- Lucas County and Others are to develop a plan to inform individuals and households about the steps they can take to reduce stormwater pollution including measurable goals, target audiences, target pollutants, and outreach strategy. Five different stormwater themes or messages need to be targeted over the permit term. One of the five messages must be targeted at the development community (Part III.B.1 Ohio EPA Small MS4 NPDES Permit).
- Lucas County and Others are to develop a rationale for target areas and pollutants that will have the greatest impact on stormwater quality.
- Lucas County and Others must utilize at least two mechanisms (e.g., printed brochures, newspapers ads/articles, workshops, etc.) to reach targeted audiences over the permit terms.
- Lucas County and Others must reach 50% of the population of its coverage area over the permit term.
- Lucas County and Others must develop a method for evaluating the success or failure of best management practices (BMP) implemented for MCM 1, including how the measurable goal has been selected for each BMP.

## **Decision Process**

The Lucas County and others SWMP has various opportunities and avenues through which to disseminate information to its residents, businesses, and landowners. For instance, the Lucas County Engineer has a website through which information can be provided. Co-permittees also have websites with which to spread information. Information can be provided via these as well as social media.

Lucas SWMP has also worked to foster partnerships with various agencies that have a greater county-wide footprint with regard to environmental education. Via agreements with Lucas Soil and Water Conservation District (LSWCD), Toledo Metropolitan Area Council of Governments (TMACOG), Toledo Lucas County Health Department (TLCHD), as well as watershed groups such as Partners for Clean Streams (PCS), Lucas SWMP will work to increase public awareness of the chose themes via these organizations by providing materials, talking points, themes and other relevant educational materials to them. Moreover, these groups will provide great access to residents, business and landowners, increasing Lucas SMWP's chances of reaching them.

As a result, BMP were selected to be able to cater to these realities. Print media can be provided via websites, social media, presentations, and other means rather easily. Different groups have been targeted because of their impact on specific impairments of water quality. Additionally, themes have been selected that will help Lucas SWMP address specific impacts and impairments to water quality in its coverage area. These pollutant sources and impairments are a result of using the guidance put forth in *Total Maximum Daily Loads for the Maumee River (Lower) Tributaries and Lake Erie Tributaries Watershed* (Ohio EPA 2012) and *Swan Creek TMDL Report* (Ohio EPA 2010).

## **Best Management Practices**

The following BMP's will be used for public education

1. Stormwater Coalition Membership
2. Stormwater Coalition Newsletters
3. LSWCD Education Programs
4. Rain Garden Initiative
5. Conservation News Newsletters
6. Developer and Contractor Meetings

## **Stormwater Coalition:**

### **Theme:**

Stormwater Coalition is a group of interested parties that meet bi-monthly in an open forum to discuss current issues for regulated stormwater communities. The Stormwater Coalition provides a forum for local governments to address the minimum control measures, on a regional cooperative watershed basis.

By targeting each MCM throughout the year, E.coli, Phosphorus, and TSS will be addressed throughout the year.

### **Target Audiences:**

City Leaders, County Leaders, Stormwater Managers, Stormwater Engineers, Concerned Citizens, Non-Profits, and Watershed Groups.

### **Measurable Goals and Planned Activities**

Stormwater Coalition will meet Bi-Monthly, and all Co-Permittees under Lucas County and Others will maintain their membership in the Coalition.

Planned activity is to maintain the bi-monthly meeting schedule, and maintain 100% membership in SWC by Lucas County and co-permittees, through the end of the permit cycle.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Responsible Party and Legal Authority**

Stormwater Coalition is hosted by TMACOG. Each member sends a voting member and additional staff to each meeting. Lucas County Engineer's office represents the townships, while each Village and the City sends their own member.

## **Stormwater Coalition Newsletters:**

### **Theme:**

Newsletters are made available online for easy access, the themes addressed in previous letters include: water conservation, salt usage for deicing, sustainable lawn care, utilizing native plantings, limiting waste to storm sewers and ditches, leaf collection and management, and pet waste.

E.coli, Phosphorus, and TSS will be addressed throughout the year with the use of the articles.

### **Target Audiences:**

Residents living within the MS4 Area.

### **Measurable Goals and Planned Activities**

Newsletter articles to be provided to municipalities and jurisdictions within the Phase II area for reproduction and distribution.

Planned activities include placing a link to the newsletters on the Lucas County Engineer's website, as well as including the link in newsletters sent out by co-permittees.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Responsible Party and Legal Authority**

Stormwater Coalition is hosted by TMACOG, and TMACOG develops the newsletter. The newsletter article is then posted on the TMACOG website, for members to access.

## **LSWCD Education Programs:**

### **Theme:**

The Lucas Soil and Water Conservation District performs education and outreach in various forms throughout each year. The Education Specialist gives presentations and classroom lessons from preschool to senior citizen age groups. Some of the topics that are covered include: Enviroscope stormwater model, water quality, soils, composting, stormwater, and groundwater contamination.

By using various methods to teach about stormwater and effects of stormwater on the environment, TSS, Phosphorus, and E-Coli will all be addressed.

### **Target Audiences:**

The target audiences for the presentations include students, parents, teachers and adults.

### **Measurable Goals and Planned Activities**

Goal is to reach 7500 individuals within each calendar year. This is done by classroom visits, giving presentations to various groups, as well as tabling events and public meetings.

Planned activities are to continue the program as in the previous permit cycles, as well as expand the program into new schools in the MS4 area by the end of the permit term.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Responsible Party and Legal Authority**

Lucas Soil and Water Conservation is the responsible party for this BMP. Lucas County and Others have a MOU with the LSWCD to perform education and outreach in the Phase II areas that are covered under this permit.

## **Rain Garden Initiative:**

### **Theme:**

The Rain Garden Initiative is a group of many different organizations. The main theme of the RGI is to promote the use of Rain gardens in both residential and commercial settings. Additionally, members are available to answer questions regarding rain gardens, from proper design to maintenance.

By increasing the knowledge and use of rain gardens as a way to treat stormwater runoff, phosphorus and TSS are addressed.

### **Target Audiences:**

The target audiences include local decision makers, homeowners, developers, nurseries, businesses, and other governmental agencies.

### **Measurable Goals and Planned Activities**

Goal is to maintain a Facebook page in order to maintain contact with the public through a popular media, as well as reach 10% of the population each year.

The Rain Garden Initiative tables popular events throughout Lucas County. All of these events are well attended by citizens of Lucas County, including the Townships, Villages and City.

Planned activities are to maintain presence at events, continue to have public education events, and increase the number of people signed up via Facebook through sharing the page and linking to it at events and newsletters.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Responsible Party and Legal Authority**

Lucas Soil and Water Conservation is the responsible party for this BMP, the Rain Garden Initiative is housed within the LSWCD, with many local agencies and partners being members.

## **LSWCD Conservation News Newsletters:**

### **Theme:**

The Lucas Soil and Water Conservation District sends out a quarterly newsletter via e-mail and traditional mail. Each of the newsletters contains information and articles that pertain to stormwater. Past articles include: rainwater harvesting, green infrastructure, maintenance of native plantings, and various stormwater articles.

With each newsletter having an article addressing stormwater, TSS, Phosphorus, and E-Coli will all be addressed.

### **Target Audiences:**

The target audiences for the newsletter include the general public and government agencies.

### **Measurable Goals and Planned Activities**

Goal is to send out a newsletter quarterly, with a stormwater article included. Currently the mailing list is at about 4000 individuals.

Planned activities are to continue the newsletter as in previous permit cycles, grow the list by 5% each year, and to continue to place stormwater articles and information in the newsletters.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Responsible Party and Legal Authority**

Lucas Soil and Water Conservation is the responsible party for this BMP.

### **Developer and Contractor Meetings:**

The Lucas County Engineer's Office is responsible for reviewing any new development that occurs within the county, and as such is invited to pre-construction meetings held for new developments. Additionally, Lucas County Engineer has a note in all reviewed plans, stating to contact the office before breaking ground on a new project. By meeting with the developer and contractor before ground is broken, proper BMP implementation can be addressed before construction begins.

By meeting with the responsible parties on a construction site prior to BMP implementation, TSS and Phosphorus can both be addressed.

### **Target Audiences:**

The target audiences for the meetings include landowners, developers and contractors.

### **Measurable Goals and Planned Activities**

Goal is to meet with each project that disturbs more than one acre of ground prior to the project beginning.

Planned activities include holding pre-construction meetings as in previous permit cycles.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Responsible Party and Legal Authority**

Lucas County Engineers Office is the responsible part for this BMP. A MOU is in place with the City of Waterville. Additionally, as the Village of Whitehouse is now a co-permittee, a MOU will be drafted to give the Lucas County Engineers Office responsibility for all aspects of construction projects

## **Public Involvement and Participation**

### **Introduction**

An involved public will be more likely to support a stormwater program both in terms of helping implement the program as well as paying for it in the long run. Minimum control measure (MCM) number two requires Lucas County and Others to engage the public for input and involvement in the County SWMP. Involvement is most effectively coupled with education and outreach to ensure satisfactory compliance with state and federal regulations. The anticipated benefits are broader public support, improvements to the program plan and implementation, shorter implementation schedules, additional resources, and greater benefits to water quality.

Inclusive processes increase awareness and understanding of issues and challenges, generate more data, help determine priorities, increase support for remediation programs and generally enhance the likelihood of program success.

Benefits to Lucas County include identification of resources and opportunities outside of existing county operations.

Summarized Requirements of the Ohio EPA Small MS4 NPDES Permit:

- Lucas County must comply with State and local notice requirements.
- Lucas County must describe public involvement and participation opportunities in developing its SWMP.
- Lucas County must describe its target audiences for public involvement, including: residents, business, landowners, educational organizations and community groups.
- Lucas County must undertake a minimum of five public involvement and participation activities over the permit term.

### **A. Decision Process**

To address this minimum control measure, Lucas County and Others will engage in a SWMP that encourages community participation. In order to achieve broad-based community action, Lucas County SWMP will continue to engage elected officials in its management footprint to gain popularly elected official support. For instance, township trustees often have close ties with local residents ensuring their support of the program will increase the public's understanding of what Lucas County SWMP is attempting to accomplish.

After the initial draft of the SWMP is developed, it will be made available to stakeholders for their comment and review. Stakeholders are identified as residents, business,

landowners, educational organizations and community groups. Stakeholder input will assist in further development of activities and targets. Once the program has had an opportunity for public comment, comments received will be recorded and addressed. All township trustee meetings comply with Ohio public notice and open records laws.

### **Best Management Practices**

The following BMP's will be used for public education and outreach

- i. SWMP Public Input
- ii. Student Watershed Watch
- iii. Storm drain Stenciling
- iv. Clean Your Streams

## **SWMP Public Input:**

### **Theme:**

Public input on the Lucas County and Others' SWMP is required by the Ohio EPA. To fulfill this requirement, the SWMP will be posted on the Lucas County website, as well as the applicable websites of each of the co-permittees.

### **Target Audiences:**

The target audience for SWMP input includes citizens of the Phase II area, as well as other interested parties

### **Measurable Goals and Planned Activities**

Goal is to have the SWMP on each of the co-permittee's website, take public comments, respond to comments and integrate comments if appropriate.

Planned activities include placing the SWMP in the Stormwater section of the Lucas County Engineer's website, as well as the other applicable co-permittees' websites, while giving a phone number and e-mail address with which to respond with comments. As comments come in, they will be addressed, and if appropriate, integrated into the SWMP. At the end of each year, the comments and responses will be compiled and included as an addendum to the SWMP.

### **Responsible Party and Legal Authority**

The LCE will be responsible for posting and taking comments on the SWMP for all of the townships on the LCE Website. The Village of Holland and Whitehouse, as well as the City of Waterville will post SWMP on each respective website, and direct comments to the Lucas County Engineers Office.

## **Student Watershed Watch:**

### **Theme:**

The Student Watershed Watch helps our region's young students appreciate our water resources, so that they may become stewards of the environment. The students learn about water quality, and learn about how stormwater runoff effects the quality of the region's streams and rivers.

This BMP addressed the TMDL's of E-Coli, TSS and Phosphorus.

### **Target Audiences:**

The target audience for SWW are students that are from 5<sup>th</sup> to 12<sup>th</sup> grade. Teachers and parents are also involved in the SWW.

### **Measurable Goals and Planned Activities**

Goal is to hold SWW yearly, with an attendance of 500 people.

Sampling is conducted throughout the year, and the students present their findings at the SWW Summit, where presentations are ranked, and students are given networking opportunities with industry professionals.

Planned activities are to continue holding the Student Watershed Watch, in the same manner as previous permit cycles.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Responsible Party and Legal Authority**

TMACOG is responsible for holding the Student Watershed Watch, with sponsorship from the Lucas County Stormwater Utility. Lucas County and Others have a MOU with TMACOG.

## **Storm drain Stenciling:**

### **Theme:**

Storm drain stenciling is a method to involve and educate the public on the eventual route that storm sewers take. By stenciling educational messages, letting citizens know that the storm sewer drains to a waterway, public awareness is increased. The stenciling is performed by volunteer groups.

TMDL's addressed include TSS, phosphorus, and e-coli.

### **Target Audiences:**

The target audience for storm drain stenciling includes citizens, as well as the volunteers who help to stencil.

### **Measurable Goals and Planned Activities**

Goal is to stencil 350 catch basins and pass out 550 flyers in even numbered years.

Plan is to continue to hold storm drain stenciling and flyer events on even numbered years in the Phase II area of the Lucas County and Others MS4 Permit.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Responsible Party and Legal Authority**

The LCE will be responsible for coordinating this activity, through Robert Neubert, who is an employee at the office.

## **Clean Your Streams:**

### **Theme:**

Educate and involve youth and adults in cleaning up the streams in their area. This includes education and orientation on how trash affects stormwater quality.

TMDL's addressed include e-coli, TSS and phosphorus.

### **Target Audiences:**

The target audience for Clean Your Streams include students, teachers, residents, businesses and industry.

### **Measurable Goals and Planned Activities**

Goal is to hold a Clean Your Streams event once a year, with 1,000 individuals participating.

Planned activities is to continue the Clean Your Streams campaign and day as in the previous permit cycles.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Responsible Party and Legal Authority**

Partners for Clean Streams is the responsible party for this event. Lucas County and Others have a MOU with PCS to perform this work. The Lucas County Stormwater Utility helps to sponsor the event.

## Illicit Discharge Detection and Elimination

### Introduction

As defined by Ohio EPA, an illicit discharge is any discharge to an MS4 that is not composed entirely of stormwater, except those discharges specifically authorized under an existing NPDES Permit and discharges from firefighting activities. Said discharges enter the system either through direct connections (e.g. wastewater pipe connected to storm drains) or through indirect connections (e.g. infiltration from leaky wastewater systems, spills, dumping into storm drains, etc.) Similarly, Lucas County is required by the Small MS4 Permit to develop a list of exceptions that are not considered illicit discharges. The following are not considered illicit discharges:

Waterline Flushing	Landscape Irrigation	Diverted Stream Flows
Rising Ground Waters	Groundwater Infiltration	Uncontaminated Pumped Groundwater
Discharges from Potable Water Sources	Foundation Drains	Air Conditioning Condensate
Irrigation Water	Springs	Water from Crawl Space Pumps
Footing Drains	Lawn Watering	Individual Residential Car Washing
Flows from Riparian Habitats and Wetlands	De-Chlorinated Swimming Pool Discharges	Street Wash Water

Minimum control measure (MCM) number three requires Lucas County and Others to implement and enforce a program designed to eliminate illicit discharges. MCM 3 also requires Lucas County and Others to develop a comprehensive storm sewer system map, a map containing the location of all home sewerage treatment systems (HSTS), and a map of all of the MS4 outfalls. In addition to the mapping requirements, MCM 3 requires Lucas County and Others to develop a resolution prohibiting illicit discharges to the MS4, a plan to eliminate illicit discharges, and a plan to inspect each identified outfall once throughout the permit term.

Identifying and actively addressing water quality issues at the local level supports the recognition of Lucas County as a “green” community, ensures that this remains a great place to live, and serves as a regional example for improving water quality for other counties and townships.

## Summarized Requirements of the Ohio EPA Small MS4 NPDES Permit:

- Lucas County and others must develop, implement, and enforce a program to detect and eliminate illicit discharges into its small MS4.
- Lucas County and Others must compile a comprehensive storm sewer system map showing the location of all outfalls and the names and location of all surface waters of the State that receive discharges from said outfalls. The map must also include County and Township storm sewers including: catch basins, pipes, ditches, flood control facilities (detention/retention ponds), post-construction BMP, and private post-construction BMP. The map must be updated annually and on an as-needed basis.
- Lucas County's mapping efforts must also include a list of all Home Sewage Treatment Systems (HSTS) that discharge to County, City, Village or Township MS4. The map must include details on the type and size of conduits/ditches in County or Township MS4 that receive discharges from HSTS in addition to the water bodies receiving discharges from County or Township MS4.
- Lucas County and Others must prohibit, via ordinance or other regulatory mechanism, illicit discharges into the storm sewer system and implement appropriate enforcement procedures and actions.
- Lucas County and Others must develop and implement a plan to detect and eliminate non-stormwater discharges, including illegal dumping, to County and Township MS4.
- Lucas County and Others must identify residences with existing individual discharging HSTS that can be legally, feasibly, and economically connected to sanitary sewers.
- Lucas County and Others must develop or enhance an operation and maintenance program that determines if existing HSTS are operating as designed as intended and if not, then a program that requires elimination, upgrade or replacement of said systems.
- Lucas County and Others must investigate the source of contamination in outfalls identified during dry weather outfall screening.
- Lucas County and Others must work with local wastewater authorities to evaluate the planned or possible future installation of sewers for areas which contain high densities of discharging HSTS.

- Lucas County and Others must inform and educate public employees, businesses, and the general public on the hazards associated with illegal and illicit discharges and improper waste disposal.

## **Decision Process**

While the US Census urbanized areas are the focus of Lucas County's MS4 NPDES Permit, Lucas SWMP views illicit discharge as an issue that requires a county-wide approach. Indeed, it is necessitated from a local regulatory standpoint: watersheds and courses do not begin and terminate at township or corporate boundaries, and, therefore, neither do illicit discharges. Moreover, through our partnership with the Toledo Lucas County Health Department, the Lucas County SWMP's illicit discharge focus has expanded out of the urbanized area.

The Lucas County Engineer's office has had success in mapping and documenting natural drainage features. Additionally, the Lucas County Engineer's Office has partnered with the Toledo Lucas County Health Department to address the mapping and logging of HSTS, addressing educational concerns to owners and managers of HSTS, as well as dry weather outfall screening.

## **Summary of Planned Activities**

The following describes how Lucas County and others plan to proceed with the requirements as outlined in MCM #3 of the MS4 NPDES Permit:

- i. Continue to ensure public and county employee awareness on how to recognize and address illicit discharges of all types through public education and proper documentation and handling of illegal dumping and pollution complaints.
- ii. Review IDDE activities completed, data collected, and expand efforts to address failing HSTS to maintain compliance with Lucas County's MS4 NPDES Permit.
- iii. Update storm sewer map on an annual basis.
- iv. Continue dry-weather outfall screening through each of the townships.
- v. Continue active investigations of HSTS in areas identified in the analysis to be conducted. These investigations will include an evaluation of the systems as well as consideration of various options for resolving malfunctioning systems, including:
  - a. Repairing, altering or replacing illicit discharges and/or failed HSTS causing public health nuisances in unincorporated geographical areas or subdivisions without access to sanitary sewers to operate as designed and intended;

- b. Requiring continuous inspection, operation, and maintenance programs for all existing HSTS;
- vi. Evaluate the effectiveness of existing IDDE activities,

### **Responsible Party and Legal Authority**

The responsible party for this work is the Toledo Lucas County Health Department. Lucas County and Others have a MOU with the Health Department to conduct this work. The Health Department has legal authority under OAC Chapter 3701-29.

### **Non-HSTS Discharges**

Local law enforcement as defined in ORC 2935.03 can enforce ORC 6111 which states: no person shall recklessly cause pollution or place or cause to be placed any sewage, industrial waste, or other wastes in a location where they cause pollution to any Waters of the State without a valid or unexpired permit issued by the director of the Ohio EPA. Grab samples may be taken by the Ohio EPA, local law enforcement or other officials during the investigations of these crimes and have them analyzed for evidence. The authority is granted to local law enforcement to file charges on violators of ORC 6111 by the authority granted under ORC 2935.03.

### **HSTS Illicit Discharges and Public Health Nuisances**

The Toledo Lucas County Health Department (TLCHD) staff has the authority to enforce Ohio Revised Code 3718.011 to meet the requirements of the Lucas County NPDES Phase II Permit in the area of illicit discharge and elimination. TLCHD has authority to regulate sewage treatment systems (STS) under ORC 3718. While ORC 3718 does not use the specific term “illicit discharge”, the authority to address public health nuisance conditions is covered by this statute.

- TLCHD sanitarians will investigate and issue a Notice of Violation (NOV) if a nuisance condition is verified by observation and/or water testing of effluent as defined in ORC 3718.011;
- If compliance is not achieved through issuing NOV, staff sanitarians will provide recommendations to the Board of Health requesting an Order from the Board of Health declaring the existing conditions a nuisance and ordering the owner/responsible party to abate such conditions which may include repair or alteration of the existing HSTS or installation of a new HSTS or if applicable, connecting to sanitary sewer;
- In addition, this Order will also allow staff sanitarians to refer this matter to the Lucas County Prosecuting Attorney for further legal actions if compliance is not obtained the Board of Health Order;

- A civil action will be filed in Lucas County Common Pleas Court to seek injunctive relief and permanent injunction against the owner and/or responsible party and the real property where a violation is occurring;
- The court in which such an action is file has jurisdiction to grant such relief upon showing evidence that the nuisance conditions exist on the real property and the defendant(s) named in the complaint in violation of the Ohio Revised Code;
- Additional motions include contempt for which the penalty can be daily fines and/or jail time for the defendant(s);
- Finally, accumulated daily fines can be reduced to a judgment and assessed against the real property. As a possible last remedy, the Board of Health may also authorize the prosecutor to file foreclosure against the property in order to collect the lien and force a sheriff sale of the property.

### **Best Management Practices**

The following BMP's will be used for IDDE Program

1. Ordinance or Other Regulatory Mechanism
2. Storm Sewer System Map
3. HSTS Mapping and List
4. IDDE Plan
5. Dry-Weather Screening of Outfalls

## **Ordinance or Other Regulatory Mechanism:**

### **Responsible Party and Legal Authority:**

The responsible part for the enforcement of the ordinance or other regulatory mechanism BMP is the Toledo Lucas County Health Department. TLCHD has authority under OAC 3701-29 as well as ORC 3718.011 to perform this work. Lucas County and Others have a MOU with the TLCHD to perform this work.

### **Measureable Goal:**

Enforce standards for the installation, design, alteration, operation and maintenance of HSTS. Enforce ORC 3718.011 when applicable to stop an illicit discharge that is a public health nuisance.

The TMDL of e-coli will be addressed with this BMP.

### **Local Codes Being Used:**

OAC 3701-29 as well as ORC 3718.011.

### **Planned Activities:**

Planned activities for this BMP include maintaining and updating the code if necessary.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

## **Storm Sewer System Map:**

### **Responsible Party and Legal Authority:**

The responsible party for the storm sewer map is the Lucas County Engineers Office for the townships. In the past LCE has contracted with the Village of Holland and the City of Waterville to map the Storm Sewer Systems in those municipalities.

### **Measureable Goal:**

Have 100% of storm sewers, catch basins, ditches and post construction BMP's shown on GIS in the MS4 Phase II Area.

The TMDL of e-coli will be addressed with this BMP.

### **Summary of Planned Activities or Updates:**

Planned activities include updating the storm sewer map annually, showing catch basins, storm sewers, ditches and post construction BMP's in the Phase II urbanized areas of the townships, as in previous permit cycles.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

## **HSTS Mapping and List:**

### **Responsible Party and Legal Authority:**

The responsible party for the HSTS Mapping and List is the Toledo Lucas County Health Department. Lucas County and Other have a MOU with TLCHD to perform this work in the Phase II UA.

### **Measureable Goal:**

Show 100% of HSTS on map on GIS within the Phase II Area.

The TMDL of e-coli will be addressed with this BMP.

### **Summary of Planned Activities or Updates:**

Planned activities include updating the HSTS map on an annual basis for the Phase II Area.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

## **Illicit Discharge Detection and Elimination Plan:**

### **Responsible Party and Legal Authority:**

The responsible party for the HSTS and household illicit discharge portion of the IDDE Plan is the Toledo Lucas County Health Department. Lucas County and Others have a MOU with the TLCHD to perform this work in the Phase II Urbanized Area. For other complaints, the Lucas County Engineer's Office is the responsible party.

### **Measureable Goal:**

Detect systems that are illegally discharging to the Phase II MS4

Follow up on 100% of complaints of illicit discharge.

The TMDL of e-coli will be addressed with this BMP.

### **Summary of Planned Activities or Updates:**

The TLCHD will continue to perform inspections of households and businesses for illicit discharges to the MS4 system, performing random inspections, inspections in areas of known issues, and performing dye tests, as in previous permit cycles.

The LCEO will continue to follow up on other illicit discharge complaints, and document those in the annual report, as in previous permit cycles.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

## **Dry-Weather Screening of Outfalls:**

### **Responsible Party and Legal Authority:**

The responsible party for the dry weather screening of outfalls is the Toledo Lucas County Health Department. Lucas County and Others have a MOU with the TLCHD to perform this work in the Phase II Urbanized Area.

### **Measureable Goal:**

Screen all of the outfalls in the Phase II area in the permit term.

Follow-up on 100% of dry weather flows when identified.

The TMDL of e-coli will be addressed with this BMP.

### **Summary of Planned Activities or Updates:**

The TLCHD will perform inspections of 100% of the outfalls in the MS4 Phase II area by the end of the permit term.

Any dry weather flows identified will be investigated by the TLCHD for possible Illicit Discharge.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

## Construction Site Stormwater Runoff Control

### Introduction

Construction sites can be significant sources of sediment for MS4, especially when installation and maintenance of erosion and sediment controls are not required or adequately enforced. Runoff from unstabilized construction sites can result in the loss of approximately 35-45 tons of sediment per acre each year (US EPA 2). Minimum control measure number four requires Lucas County and others to develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to County, Township, City or Village MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. However, areas under one acre are to be included in the program if they are part of a common plan of development, e.g. individual lots in residential subdivisions. The terminology used to distinguish stormwater practices used during site construction (normally referred to as “construction stormwater”) from those used on a permanent basis to control runoff once construction is complete (“post-construction”).

Erosion and sediment controls should address how stormwater is retained and released during and after precipitation events and how erosion can be minimized through the use of site design techniques, management and timing of construction activity and the proper use of erosion control practices until the site has been permanently stabilized with vegetation.

The benefits to construction site stormwater runoff control are a reduction of sediment in ditches, streams and waterways of Lucas County. Additionally, reducing sediment will greatly improve overall water quality, allowing for their use in fishing and recreation and ensuring their continued use as a potable water supply.

Summarized Requirements of the Ohio EPA Small MS4 NPDES Permit:

- Lucas County and others must develop an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as penalties to enforce in the case of non-compliance. The regulation must be equivalent to the technical requirements outlined in Ohio EPA’s Construction General Permit (OHC000004).
- Lucas County and others must require construction site operators to implement appropriate erosion and sediment control BMP.
- Lucas County and others must require construction site operators to control construction site waste that may adversely impact water quality.

- Lucas County and others must develop procedures for stormwater pollution prevention plan (SWP3 or SWPPP) review which incorporate consideration of potential water quality impacts.
- Lucas County and others must develop procedures for the receipt and consideration of information submitted by the public with regard to construction site controls.
- Lucas County and others must develop procedures for construction site inspection and for the enforcement of control measures in the event of non-compliance with sediment and erosion control requirements.

## **Decision Process**

Lucas County established its construction site runoff control program in 2003. This program is coordinated and led by the Lucas County Engineer's Office with assistance from the co-permittees. As construction activity has increased, it has become apparent that a centralized review and inspection process is necessary for consistency among co-permittees. The Lucas County Engineer's Office performs SWPPP review for all of the co-permittee townships. The City of Waterville has a MOU with LCEO to perform this work, and the Village of Whitehouse will be passing a MOU stating the same in 2017.

## **Responsible Party and Legal Authority**

The Lucas County Engineer's Office is primarily responsible for the overall management of minimum control measure four with some added assistance from the Partner Townships, Villages and City. The townships, villages and city are the gatekeepers of the initial process as they are more readily aware of a proposed development as developers will seek out township, village and city zoning staff early in the process to avail themselves of any zoning requirements.

Similarly, townships that participate in the Lucas County SWMP are precluded from submitting zoning permits for developments over one acre (being part of a single or common plan of development) until the Lucas County Engineer has approved the submitted SWPPP. Any floodplain, access or drive tile permits that come to the LCEO are reviewed to determine total earth disturbed area. If it is determined that the total earth disturbed area is more than one acre, those permits are not issued until a complete SWPPP has been reviewed and approved by the LCEO, as well as a NOI being filed with OEPA. Ultimately, Lucas County employs numerous fail-safes to

ensure that developments that meet the criteria participate in the SWPPP submittal and review procedures.

After a proposed development has been granted SWPPP approval by the Lucas County Engineer, it then moves into the inspection phase of ensuring construction site compliance. This portion of minimum control measure four is also the primary responsibility of the Lucas County Engineer's Office. Once earth disturbance has commenced, staff from the Lucas County Engineer's Office will inspect the site monthly until it has achieved final grade and has been satisfactorily stabilized.

Concurrently, the Lucas County Engineer is also responsible for issuing notices of violation during the inspection phase. If a portion of the site is not in compliance with an approved SWPPP or another aspect of Lucas County's Erosion and Sediment Control regulation, Lucas County will issue a notice of violation (NOV). After the first NOV, the Permittee will have thirty days to bring the site into compliance. If the Permittee fails to do so within the thirty day window, a second NOV is issued granting the Permittee fifteen additional days to correct the issue. If the non-compliance is not rectified after the first and second NOV, a stop work order can be issued in addition to the levying of fines.

Ohio Revised Code Section 307.79 outlines the procedures for instituting a construction site erosion control program for counties and townships. This allows Lucas County to establish the legal authority to carry out the strictures outlined in MCM #4.

Whitehouse, Waterville and Holland will be addressed in detail in the addendums at the end of the document.

### **Best Management Practices**

The following BMP's will be used for MCM #4

1. Ordinance or Other Regulatory Mechanism
2. Complaint Process
3. Site Review Procedures
4. Site Inspection Procedures
5. Enforcement Procedures

## **Ordinance or Other Regulatory Mechanism:**

### **Responsible Party and Legal Authority:**

The responsible party for the enforcement of the ordinance or other regulatory mechanism BMP for the townships is the Lucas County Engineer's Office, given authority under ORC 307.79.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Measureable Goal:**

Have a resolution in place that provides requirements for sediment and erosion control on sites that disturb more than one acre, or is part of a larger common plan of development that will disturb more than one acre.

This BMP will address TSS and Phosphorus TMDL's.

### **Local Codes Being Used:**

Subdivision Code 703, Lucas County Commissioners Resolution 12-196 passed by the Lucas County Commissioners in 2012, and ORC 307.79.

### **Planned Activities:**

In the past, Lucas County has relied on ORC 307.79, Resolution 12-196 as well as the Subdivision Code 703 to maintain compliance with MCM #4 and #5.

After a few case studies of continued non-compliance with approved SWPPP's, it has become apparent that Lucas County must adopt a more stringent resolution, in order to meet its requirements as a Phase II Small MS4.

In 2017, Lucas County will pass a resolution that will have requirements as stringent as the current Ohio EPA Construction General Permit which will be updated as new Construction General Permits are applicable.

Enforcement by the County is still under the limitations of ORC 307.79, however with an updated, stringent resolution passed by Lucas County, non-compliance will be addressed with more regulatory standing than in the past.

## **Complaint Process:**

### **Responsible Party and Legal Authority:**

The responsible party for the complaint process BMP for the townships is the Lucas County Engineer's Office, given authority under ORC 307.79.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Measureable Goal:**

The Lucas County Engineer's Office will follow up on 100% of all construction sediment and erosion control complaints in the MS4 Phase II Area.

A log of complaints will be kept, and the number of complaints will be recorded in the Annual Report to Ohio EPA.

This BMP will address TSS and Phosphorus TMDL's.

### **Planned Activities:**

Whenever a complaint about construction activity is received in the Phase II area, a representative with the Lucas County Engineer will follow up on the complaint in a timely manner.

If a violation of Resolution 12-196 or Subdivision Code 703 is found, a Notice of Violation will be sent to the owner of the property, informing them of the requirements for sediment and erosion control.

The complaint will be documented, and reported in the Annual Report yearly.

## **Site Plan Review Procedures:**

### **Responsible Party and Legal Authority:**

The responsible party for the Site Plan Review Procedures BMP for the townships is the Lucas County Engineer's Office, given authority under ORC 307.79.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Measureable Goal:**

Review 100% of construction projects in the Phase II Area that disturb more than one acre, or are part of a larger common plan of development that disturb more than one acre.

Continue to require the Ohio EPA checklist to be completed by the plan submitter, as well as the documents put together by TMACOG for regional consistency.

This BMP will address TSS and Phosphorus TMDL's.

### **Planned Activities:**

Review plans that disturb more than an acre of ground, or are part of a larger common plan of development in the Phase II Urbanized Area.

Multiple individuals review the SWPPP for compliance.

With the passage of a new resolution in 2017, SWPPP compliance will be compared to requirements in resolution.

Continue to require Ohio EPA checklist to be completed, and the TMACOG documents.

## **Site Inspection Procedures:**

### **Responsible Party and Legal Authority:**

The responsible party for the Site Inspection BMP for the townships is the Lucas County Engineer's Office, given authority under ORC 307.79.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Measureable Goal:**

Inspect construction sites that disturb more than one acre, or are part of a larger common plan of development that will disturb more than one acre. Inspect these sites initially, and monthly, as required by the MS4 Permit.

After each inspection, send an inspection report to the project permittee and any co-permittees and subcontractors.

This BMP will address TSS and phosphorus.

### **Planned Activities:**

Continue to inspect sites initially and once a month as in previous permit cycles.

Use SWPPPTTrack application to ensure consistency in inspections, as the application uses a checklist that covers SWPPP compliance onsite.

Send report to permittee, co-permittee and applicable subcontractors after inspection is performed.

## **Enforcement Procedures:**

### **Responsible Party and Legal Authority:**

The responsible party for the Enforcement Procedures BMP for the townships is the Lucas County Engineer's Office, given authority under ORC 307.79.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Measureable Goal:**

Follow the ORC 307.79 for sites that are not in compliance.

Send NOVs when applicable in events of non-compliance.

### **Planned Activities:**

Current enforcement procedures include withholding zoning permits, platting subdivisions and occupancy permits.

With the passage of a new resolution in 2017, Lucas County will have an improved procedure. While still being held to ORC 307.79, administrative fees may be levied against non-compliant projects.

NOV's and follow-up will be sent and performed within the timeframe listed in ORC 307.79.

The number of violation letters and enforcement actions will be recorded in the MS4 Annual Report.

# Post-Construction Stormwater Management in New Development and Redevelopment

## Introduction

Effectively managing stormwater over the long-term is a challenge and is necessary because runoff from newly developed and redeveloping areas has been shown to significantly affect receiving water bodies, while at the same time presenting a host of opportunities to install structural runoff controls at both the site and regional scale. The terminology used to distinguish stormwater practices used during site construction (normally referred to as “construction stormwater”) from those used on a permanent basis to control runoff once construction is complete (“post-construction”).

Water quality impacts from urban runoff can be significant. Many streams, lakes, and estuaries in urban areas are impaired due to urban runoff. With the added impact of impervious surfaces, disturbed soils, and managed turf, urban development can have multiple impacts on water quality and aquatic life. Additionally, post-construction runoff has effects on stream hydrology as imperviousness increases the runoff volume, which increases peak discharge and decreases the amount of stormwater infiltrated naturally.

Well designed and maintained post-construction stormwater management addresses both water quantity and quality for the long-term. In order to do this, land owners and developers must consider structural (ponds) and non-structural (placement of green space) best management practices (BMP). Permanent stormwater management practices and site design features store, treat, infiltrate or reduce the volume of runoff from development sites.

Benefits of managed stormwater runoff include increased infiltration for groundwater recharge, decreased stream and bank erosion through reduction in stormwater volumes, and improved water quality by capturing pollutants from runoff using well designed sites and BMP.

Summarized Requirements of the Ohio EPA Small MS4 NPDES Permit:

- Lucas County and others must develop, implement and enforce a program to address runoff from new development and redevelopment projects that disturb great than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale.
- Lucas County and others must develop and implement strategies that include a combination of structural and non-structural BMP.

- Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under state or local law. The ordinance or regulatory mechanism will, at a minimum, be equivalent with the technical requirements set forth in the applicable Ohio EPA NPDES General Stormwater Permit for Construction (CGP) (OHC000004).
- Lucas County must ensure adequate long-term maintenance and operation of post-construction BMP.

## **Decision Process**

Lucas County and others will address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre including projects that are under one acre but part of a common plan of development.

Moreover, all developments in Lucas County that disturb one or more acre are required to have a post-construction BMP by virtue of the Ohio EPA Construction General Permit requirements.

When applicable, post-construction BMP should be aligned to watershed and watershed impairment considerations.

Lucas County and others will make increased efforts to tailor post-construction requirements to the unique and specific environmental and water quality issues facing the County. At the same time, the County will increase efforts to increase non-structural BMP implementation and encourage the adoption of green infrastructure and conservation development practices.

## **Responsible Party and Legal Authority**

The Lucas County Engineer's Office is primarily responsible for the overall management of minimum control measure five with some added assistance from the Partner Townships, Villages and City. The townships, villages and city are the gatekeepers of the initial process as they are more readily aware of a proposed development as developers will seek out township, village and city zoning staff early in the process to avail themselves of any zoning requirements.

Similarly, townships that participate in the Lucas County SWMP are precluded from submitting zoning permits for developments over one acre (being part of a single or common plan of development) until the Lucas County Engineer has approved the submitted SWPPP. Any floodplain, access or drive tile permits that come to the LCEO are reviewed to determine total earth disturbed area. If it is determined that the total earth disturbed area is more than one acre, those permits are not issued until a

complete SWPPP has been reviewed and approved by the LCEO, as well as a NOI being filed with OEPA. Ultimately, Lucas County employs numerous fail-safes to ensure that developments that meet the criteria participate in the post construction requirement of projects disturbing more than one acre.

Whitehouse, Waterville and Holland will be addressed in detail in the addendums at the end of the document.

### **Best Management Practices**

The following BMP's will be used for MCM #5

1. Ordinance or Other Regulatory Mechanism
2. Site Plan Review Procedures
3. Site Inspection Procedures
4. Enforcement Procedures
5. Long Term Operation and Maintenance Agreements

**Ordinance or Other Regulatory Mechanism:**

**Responsible Party and Legal Authority:**

The responsible party for the enforcement of the ordinance or other regulatory mechanism BMP for the townships is the Lucas County Engineer's Office, given authority under ORC 307.79.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

**Measureable Goal:**

Have a resolution in place that provides requirements for post construction stormwater management on sites that disturb more than one acre, or is part of a larger common plan of development that will disturb more than one acre.

This BMP will address TSS, and Phosphorus TMDL's.

**Local Codes Being Used:**

Subdivision Code 703, Lucas County Commissioners Resolution 12-196 passed by the Lucas County Commissioners in 2012, and ORC 307.79.

**Planned Activities:**

In the past, Lucas County has relied on ORC 307.79, Resolution 12-196 as well as the Subdivision Code 703 to maintain compliance with MCM #5.

After a few case studies of continued non-compliance with approved SWPPP's, it has become apparent that Lucas County must adopt a more stringent resolution, in order to meet its requirements as a Phase II Small MS4.

In 2017, Lucas County will pass a resolution that will have requirements as stringent as the current Ohio EPA Construction General Permit which will be updated as new Construction General Permits are applicable.

Enforcement by the County is still under the limitations of ORC 307.79, however with an updated, stringent resolution passed by Lucas County, non-compliance will be addressed with more regulatory standing than in the past, with provisions for Post Construction included in the resolution.

## **Site Plan Review Procedures:**

### **Responsible Party and Legal Authority:**

The responsible party for the Site Plan Review Procedures BMP for the townships is the Lucas County Engineer's Office, given authority under ORC 307.79.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Measureable Goal:**

Review 100% of construction projects in the Phase II Area that disturb more than one acre, or are part of a larger common plan of development that disturb more than one acre.

Continue to require the Ohio EPA checklist to be completed by the plan submitter, as well as the documents put together by TMACOG for regional congruity.

Ensure that post-construction BMP's are correct.

This BMP will address TSS and Phosphorus TMDL's.

### **Planned Activities:**

Review plans that disturb more than an acre of ground, or are part of a larger common plan of development in the Phase II Urbanized Area.

Multiple individuals review the SWPPP for compliance.

With the passage of a new resolution in 2017, SWPPP compliance will be compared to requirements in resolution.

Continue to require Ohio EPA checklist to be completed, and the TMACOG documents.

## **Site Inspection Procedures:**

### **Responsible Party and Legal Authority:**

The responsible party for the Site Inspection BMP for the townships is the Lucas County Engineer's Office, given authority under ORC 307.79.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Measureable Goal:**

Inspect post construction BMP's once a year, as required by the MS4 Permit.

If any issues are found with the performance of the BMP, notify the owner of the BMP.

This BMP will address TSS and phosphorus.

### **Planned Activities:**

Continue to inspect post construction BMP's once a year.

Beginning in 2017, utilize SWPPPTrack to perform these inspections, using the post-construction BMP checklist developed with input from Lucas County.

If any issues are found, follow up with the owner.

## **Enforcement Procedures:**

### **Responsible Party and Legal Authority:**

The responsible party for the Enforcement Procedures BMP for the townships is the Lucas County Engineer's Office, given authority under ORC 307.79.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Measureable Goal:**

Follow the ORC 307.79 for sites that are not in compliance.

Send NOV's for post construction BMPs that are not in compliance with the Operation and Maintenance Agreement on file with the Lucas County Engineer's Office.

If post construction BMP has not been corrected, utilized the O&M agreement for the County to perform work required, and charge owner for work performed.

### **Planned Activities:**

Upon discovery of post construction BMP not functioning as designed, send NOV to owner of said BMP.

If no action is performed by owner, utilize O&M agreement to correct BMP, and charge owner for work performed.

With passage of a new resolution in 2017, post construction BMP's will be part of Lucas County's SWPPP requirements, instead of relying on Ohio EPA requirements to meet post-construction requirements.

## **Long Term Operation and Maintenance Agreements:**

### **Responsible Party and Legal Authority:**

The responsible party for the Long Term Operation BMP for the townships is the Lucas County Engineer's Office.

Whitehouse, Waterville and Holland will be addressed in the addendums at the end of this document.

### **Measureable Goal:**

Have an Operation and Maintenance Agreement for every post construction BMP that is constructed in the Phase II Urbanized Area.

### **Planned Activities:**

Continue to require O&M agreements for post construction BMP's, as in previous permit cycles.

## **Pollution Prevention and Good Housekeeping**

### **Introduction**

The pollution prevention and good housekeeping for municipal (county) operations minimum control measure is an important element of any jurisdiction's small MS4 program. Ideally, the goal is to reduce and prevent pollutant runoff from MS4 operations, covering activities such as park and open spaces owner and operated by the jurisdiction, fleet and building maintenance, MS4 maintenance, in addition to jurisdiction initiated new construction (road or bridge projects), and other initiated land disturbances. In order to ensure pollution does not occur from jurisdiction sponsored activities, Lucas County must develop and implement an operation and maintenance (O & M) program designed with best management practices designed to address stormwater impairment.

As a result, Lucas County must examine and alter its actions to help ensure a reduction in the amount and type of pollution that: collects on to roads and streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways. Similarly, pollution that results from environmentally damaging land development and flood management practices or poor maintenance of existing storm sewers. As a result, the pollution prevention and good housekeeping minimum control measure will address sources of pollution from all County-sponsored maintenance and development activities.

At the same time, effective MS4 management programs begin with their own employees. It is because of this that pollution prevention and good housekeeping obliges Lucas County to educate its staff on their and their employer's impact on water quality and what they can do to help.

Summarized Requirements of the Ohio EPA Small MS4 NPDES Permit:

- Lucas County is required to implement an employee training program to reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm sewer maintenance.
- For facilities not requiring a separate NPDES Industrial Permit that conduct activities described in 40 CFR 122.26 (b)(14) such as vehicle maintenance facilities, fueling stations, salt storage, waste transfer stations, composting facilities, and bus terminals, a stormwater pollution prevention plan (SWPPP), must be developed and implemented using the industrial permit SWPPP as a guide.

- Lucas County must adopt maintenance activities, schedules, inspection procedures and proper waste disposal techniques that will reduce pollution.
- New flood management projects must be assessed for impacts on water quality. Existing projects should also be evaluated for opportunities to incorporate additional water quality protection devices and practices.

## **Decision Process**

Implementing the requirements of MCM #6 presents some challenges to the Lucas County and others SWMP given the nature of the program and the diversity of membership. Moreover, time and resources are often limited and must be taken into consideration on a facility-by-facility basis. Lucas County and Others in previous permit cycles have developed SWPPPs for maintenance facilities requiring them.

Moving forward, it will be the focus of the Lucas County Engineer's Office to update these SWPPP's, as well as create a new SWPPP for the Lucas County Engineer's new maintenance facility.

In the past, this BMP has been a challenge for Lucas County and Others, and as such will be a main focus moving forward.

## **Best Management Practices**

The following BMP's will be used for MCM #6

1. Employee Training Program
2. Facility O&M Procedures and Inspections
3. MS4 Maintenance
4. Road Salt
5. Pesticide, Herbicide, and Fertilizer Usage
6. Street Sweeping
7. Flood Management

## **Employee Training Program:**

### **Responsible Party and Legal Authority:**

The responsible party for the Employee Training Program BMP is the Lucas County Engineer's Office.

Whitehouse, Waterville and Holland will be addressed in the addendum at the end of this document.

### **Measureable Goal:**

Measureable goal is to provide a training for employees of all co-permittees to attend, once a year.

This BMP will address e-coli, TSS and phosphorus.

### **Topics:**

Topics will include material storage, spill response, vehicle and equipment refueling and repair, waste management, and other stormwater topics.

### **Targeted Audience:**

Employees of Lucas County and co-permittees.

### **Planned Activities:**

Hold training for employees once a year, rotating topics.

## **Facility O&M Procedures and Inspections:**

### **Responsible Party and Legal Authority:**

The responsible party for the Facility O&M Procedures and Inspections BMP is the Lucas County Engineer's Office.

Whitehouse, Waterville, and Holland will be addressed in the addendum at the end of this document.

### **Measureable Goal:**

Measureable goal is to complete O&M procedures for municipal (county) facilities that are subject to the program, and inspect those facilities twice a year for compliance with approved O&M procedures.

This BMP will address TSS, e-coli and phosphorus TMDLs.

### **List of Facilities Subject to Program:**

Lucas County Road Maintenance Department

Lucas County Sanitary Engineer Department

Lucas County Maumee Water Resource and Recovery Facility

Sylvania Township Road Maintenance Garage

Springfield Township Road Maintenance Garage

Lucas County MRDD Garage

### **Planned Activities:**

In 2017, update O&M agreements for all facilities subject to program.

In 2017, inspect these facilities twice.

In 2018, if deficiencies are found in 2017 inspections, address and complete work to correct deficiencies.

## **MS4 Maintenance:**

### **Responsible Party and Legal Authority:**

The responsible party for the MS4 Maintenance BMP are each of the co-permittees under Lucas County and Others.

Whitehouse will be addressed in the addendum at the end of this document.

### **Measureable Goal:**

Measureable goal is to report the number of catch basins cleaned, number of catch basins replaced, and miles of storm sewer cleaned.

This BMP will address TSS, e-coli and phosphorus TMDLs.

### **Planned Activities:**

Continue to perform maintenance on the MS4 as in previous permit cycles.

Report the total numbers in the annual report to the Ohio EPA.

## **Road Salt:**

### **Responsible Party and Legal Authority:**

The responsible party for the Road Salt BMP are each of the co-permittees under Lucas County and Others.

Whitehouse will be addressed in the addendum at the end of this document.

### **Measureable Goal:**

Measureable goal is to report the amount of salt spread on our roads each year. Additionally, to report the amount of brine used on our roads each year.

Goal is to use the least amount of salt product required, to minimize the impact on waters in the MS4 Phase II UA.

### **Planned Activities:**

Continue to utilize computerized hydraulics on trucks to limit the amount of salt used as in previous permit cycles.

Use salt brine to limit the amount of salt usage as in previous permit cycles.

In 2018, hold a training for operators to discuss salt usage and calibration.

## **Pesticide, Herbicide, and Fertilizer Usage:**

### **Responsible Party and Legal Authority:**

The responsible party for the Pesticide, Herbicide and Fertilizer Usage BMP are each of the co-permittees under Lucas County and Others.

Whitehouse will be addressed in the addendum at the end of this document.

### **Measureable Goal:**

Use pesticides, herbicides and fertilizers minimally, minimize the release of these products into the Small MS4 Phase II Area.

### **Planned Activities:**

Hold a training in 2018 with interested parties on usage of the above products.

Most of this work is contracted out, determine applicability for township, county and municipal staff.

## **Street Sweeping:**

### **Responsible Party and Legal Authority:**

The responsible party for the Street Sweeping BMP is the Lucas County Engineers Office.

Whitehouse will be addressed in the addendum at the end of this document.

### **Measureable Goal:**

Measureable goal is to report the amount of material collected each year.

This BMP will address TSS, e-coli and phosphorus TMDLs.

### **Planned Activities:**

Continue to report on the amount of street sweeping collected from Lucas County and others on the Ohio EPA Annual report.

Street sweepings are collected on a dewatering pad at the Lucas County Engineer's Maintenance garage. That dewatering pad is connected to the sanitary sewer. Once the material is dewatered, the material is put in a dumpster and treated as a waste.

## **Flood Management Projects:**

### **Responsible Party and Legal Authority:**

The responsible party for the Flood Management Projects BMP is the Lucas County Engineer's Office.

### **Measureable Goal:**

Measureable goal is to ensure that any floodplain project that disturbs more than an acre has a complete SWPPP and follow all necessary requirements.

### **Planned Activities:**

Continue to require that any floodplain project that disturbs more than one acre submits a complete SWPPP.

In 2018, meet with co-permittee floodplain managers to go over requirements.

## **Village of Whitehouse Addendum:**

The Village of Whitehouse received notification by Ohio EPA on July 15, 2016 of being identified as a Small MS4. The Village of Whitehouse has made the decision to join the Lucas County and Others Small MS4 Permit, for the sake of regionalization, and combination of resources among Designated Small MS4 areas.

All of the following activities have already been aligned with the appropriate TMDLs, or will be created and implemented with the appropriate TMDLs in consideration.

In order to fully meet the standards of the MS4 program, The Village of Whitehouse plans to conduct the following activities, with the approximate implementation dates noted:

### **Minimum Control Measure #1:**

- Year 1:
  - Become a member of Storm water Coalition
  - Include a storm water newsletter article once in the quarterly newsletter sent out to citizens.
  - Lucas Soil and Water Conservation District is already in the Anthony Wayne Local School District performing education and outreach, no additional work needs to be performed.
  - Rain Garden Initiative is already involved in the Village, no additional work needs to be performed.
  - Some citizens of the Village receive the Conservation News Newsletter, no additional work needs to be performed.
  - Hold developer and contractor meetings for any site within the Village Urbanized Area that disturbs more than an acre of ground. This work will be performed by the Lucas County Engineer's Office, and the Village will include this work in the MOU being drafted with LCEO.
- Year 2:
  - Continue membership in SWC
  - Continue including newsletter article in quarterly newsletter.
  - Continue support of LSWCD

- Continue support of RGI
- Continue support of Conservation News Newsletter
- Continue support for developer and contractor meetings with LCEO
  
- Year 3:
  - Continue membership in SWC
  - Continue including newsletter article in quarterly newsletter.
  - Continue support of LSWCD
  - Continue support of RGI
  - Continue support of Conservation News Newsletter
  - Continue support for developer and contractor meetings with LCEO
- Year 4:
  - Continue membership in SWC
  - Continue including newsletter article in quarterly newsletter.
  - Continue support of LSWCD
  - Continue support of RGI
  - Continue support of Conservation News Newsletter
  - Continue support for developer and contractor meetings with LCEO
  - Identify any new areas/themes for outreach and education.
- Year 5:
  - Continue membership in SWC
  - Continue including newsletter article in quarterly newsletter.
  - Continue support of LSWCD
  - Continue support of RGI
  - Continue support of Conservation News Newsletter
  - Continue support for developer and contractor meetings with LCEO
  - Implement any new areas/themes identified for outreach and education

## **Minimum Control Measure #2:**

- Year 1:
  - Publish the SWMP on the Village of Whitehouse website, listing Mike Melnyk with Lucas County Engineer's Office as contact for comments or input.
  - Support ongoing efforts of Lucas County and Others with Student Watershed Watch.
  - Support ongoing efforts of Lucas County and Others with Clean Your Streams.
- Year 2:
  - Continue to host the SWMP on the Village website.
  - Support Student Watershed Watch.
  - Identify areas for storm drain stenciling, or medallion placement.
  - Support Clean Your Streams.
- Year 3:
  - Continue to host the SWMP on the Village website.
  - Support Student Watershed Watch
  - Begin storm drain stenciling program, or medallion placement.
  - Support Clean Your Streams.
- Year 4:
  - Continue to host the SWMP on the Village website.
  - Support Student Watershed Watch
  - Continue storm drain stenciling program, or medallion placement.
  - Support Clean Your Streams.
  - Identify any new areas/events to encourage public involvement.
- Year 5:
  - Continue to host the SWMP on the Village website.
  - Support Student Watershed Watch
  - Continue storm drain stenciling program, or medallion placement.
  - Support Clean Your Streams.
  - Implement new areas/events to encourage public involvement identified.

### **Minimum Control Measure #3:**

- Year 1:
  - Provide information in quarterly newsletter, letting citizens and businesses know about illegal dumping and discharges, and who to contact if citizens see a suspected violation.
  - Meet with TLCHD to go over responsibilities and jurisdiction.
- Year 2:
  - Continue to provide information to citizens and businesses via newsletter.
  - Compile a list of all HSTS in the Village of Whitehouse Urbanized Area.
- Year 3:
  - Continue to provide information to citizens and businesses via newsletter
  - Begin mapping the storm sewers, outfalls, catch basins, pipes, ditches, flood control facilities, and post construction BMP's.
  - Begin mapping HSTS identified in year 2.
  - Pass IDDE Ordinance.
- Year 4:
  - Continue to provide information to citizens and businesses via newsletter
  - Continue mapping the storm sewers, outfalls, catch basins, pipes, ditches, flood control facilities, and post construction BMP's.
  - Continue mapping HSTS identified in year 2.
  - Begin dry-weather screening of outfalls.
  - Enforce IDDE Ordinance when required.
- Year 5:
  - Continue to provide information to citizens and businesses via newsletter
  - Complete mapping the storm sewers, outfalls, catch basins, pipes, ditches, flood control facilities, and post construction BMP's.
  - Complete mapping HSTS identified in year 2.
  - Complete dry-weather screening of outfalls.
  - Enforce IDDE Ordinance when required.

## Minimum Control Measure #4

- Year 1:
  - Draft and pass ordinance to require erosion and sediment controls, as well as penalties to enforce in the case of non-compliance. The regulation must be equivalent to the technical requirements outlined in Ohio EPA's Construction General Permit.
  - Adopt SWPPP submittal requirements produced by TMACOG Storm water Coalition.
  - Draft and pass MOU with the Lucas County Engineer's Office, delegating responsibility for the construction site storm water runoff control MCM to the LCEO.
  - Keep a record of any construction related complaints, and include those in annual report to Ohio EPA.
  - LCEO to begin SWPPP review and required initial and monthly inspection.
  - Village of Whitehouse to enforce ordinance as needed.
- Year 2:
  - Continue enforcement of ordinance passed in year 1, check for updates.
  - Continue using TMACOG SWPPP submittal requirements.
  - Continue MOU with LCEO, update if needed.
  - Continue complaint record keeping
  - Continue support of LCEO in inspections and notification.
- Year 3:
  - Continue enforcement of ordinance passed in year 1, check for updates.
  - Continue using TMACOG SWPPP submittal requirements.
  - Continue MOU with LCEO, update if needed.
  - Continue complaint record keeping
  - Continue support of LCEO in inspections and notification.
- Year 4:
  - Continue enforcement of ordinance passed in year 1, check for updates.
  - Continue using TMACOG SWPPP submittal requirements.
  - Continue MOU with LCEO, update if needed.
  - Continue complaint record keeping
  - Continue support of LCEO in inspections and notification.
- Year 5:
  - Continue enforcement of ordinance passed in year 1, check for updates.
  - Continue using TMACOG SWPPP submittal requirements.
  - Continue MOU with LCEO, update if needed.
  - Continue complaint record keeping
  - Continue support of LCEO in inspections and notification.

## **Minimum Control Measure #5:**

- Year 1:
  - Draft and pass ordinance to address post-construction runoff from new development and redevelopment projects to the extent allowable under state and local law. The ordinance will be equivalent with the technical requirements set forth in the Ohio Construction General Permit.
  - In ordinance above, include language requiring long term operation and maintenance agreements of post construction BMP's.
  - Review of required SWPPP plans will be included in the scope of work in MOU with the Lucas County Engineer's Office.
- Year 2:
  - Continue enforcement of ordinance passed in year 1, check for updates.
  - Continue MOU with LCEO, update if needed.
  - Map any post-construction BMP's from year 1.
  - MOU with LCEO to include inspection of post construction BMP's starting with projects completed in year 1.
  - Enforce O&M Agreements if needed.
- Year 3:
  - Continue enforcement of ordinance passed in year 1, check for updates.
  - Continue MOU with LCEO, update if needed.
  - Map any post-construction BMP's from year 2.
  - MOU with LCEO to include inspection of post construction BMP's starting with projects completed in year 1.
  - Enforce O&M Agreements if needed.
- Year 4:
  - Continue enforcement of ordinance passed in year 1, check for updates.
  - Continue MOU with LCEO, update if needed.
  - Map any post-construction BMP's from year 3.
  - MOU with LCEO to include inspection of post construction BMP's starting with projects completed in year 1.
  - Enforce O&M Agreements if needed.
- Year 5:
  - Continue enforcement of ordinance passed in year 1, check for updates.
  - Continue MOU with LCEO, update if needed.
  - Map any post-construction BMP's from year 4.
  - MOU with LCEO to include inspection of post construction BMP's starting with projects completed in year 1.
  - Enforce O&M Agreements if needed.

## Minimum Control Measure #6:

- Year 1:
  - Conduct employee training, sharing topics with Lucas County and Others.
  - Itemize street sweeping waste quantities for submittal on OEPA Annual Report.
  - Itemize storm sewers cleaned, catch basins cleaned, catch basins repaired, salt usage, and brine usage.
  - Identify areas for retrofitting of existing outlet structures, if needed.
- Year 2:
  - Continue employee training, sharing topics with Lucas County and Others.
  - Itemize street sweeping waste quantities for submittal on OEPA Annual Report.
  - Itemize storm sewers cleaned, catch basins cleaned, catch basins repaired, salt usage, and brine usage.
  - Begin drafting SWPPP for Village of Whitehouse Garage.
  - Identify areas for retrofitting of existing outlet structures, if needed.
- Year 3
  - Continue employee training, sharing topics with Lucas County and Others.
  - Itemize street sweeping waste quantities for submittal on OEPA Annual Report.
  - Itemize storm sewers cleaned, catch basins cleaned, catch basins repaired, salt usage, and brine usage.
  - Finish drafting SWPPP for Village of Whitehouse Garage.
  - Identify areas for retrofitting of existing outlet structures, if needed.
- Year 4
  - Continue employee training, sharing topics with Lucas County and Others.
  - Itemize street sweeping waste quantities for submittal on OEPA Annual Report.
  - Itemize storm sewers cleaned, catch basins cleaned, catch basins repaired, salt usage, and brine usage.
  - Perform two inspections of the SWPPP for Village of Whitehouse Garage.
  - Identify areas for retrofitting of existing outlet structures, if needed.
- Year 5
  - Continue employee training, sharing topics with Lucas County and Others.
  - Itemize street sweeping waste quantities for submittal on OEPA Annual Report.
  - Itemize storm sewers cleaned, catch basins cleaned, catch basins repaired, salt usage, and brine usage.
  - Perform two inspections of the SWPPP for Village of Whitehouse Garage.
  - Identify areas for retrofitting of existing outlet structures, if needed.

The Village of Whitehouse will work closely with the Lucas County Engineer's office and other agencies and co-permittees to ensure compliance with the Ohio EPA Small MS4 Permit. Much of the work is already present. The Village plans on instituting many of the regulatory portions of the MS4 Permit in the first year, so that compliance will be achieved by year 5 of the Village of Whitehouse MS4 Plan.

## **City of Waterville Addendum:**

City of Waterville is a co-permittee under the Lucas County and Others Small MS4 General Permit.

The City of Waterville takes credit for Minimum Control Measures #1 and #2, based on the idea that citizens from all of Lucas County take part in the events held, and as such do not hold any education or involvement events strictly with the City of Waterville Citizens in mind.

### **Minimum Control Measure #3:**

The City of Waterville in 2017 will adopt an ordinance for the purposes of eliminating and prohibiting illicit discharges into the storm sewer system, and implement appropriate enforcement procedures and actions.

The City of Waterville in 2017 will update their storm sewer mapping, and update annually as needed.

The City of Waterville in 2017 will identify any HSTS discharging to the MS4.

Outfalls will be screened by the end of the permit term.

### **Minimum Control Measure #4:**

The City of Waterville in 2016 passed Chapter 939 of Municipal Code. This is the ordinance or other regulatory mechanism required by the Ohio EPA for compliance with requirements for MCM #4 and MCM #5.

The City of Waterville has a MOU with the Lucas County Engineer's Office to perform all necessary work required under MCM #4. The Lucas County Engineer's Office conducts the work in the same manner as outlined in MCM #4 in the above plan. Any complaints regarding sediment and erosion control are directed to the Lucas County Engineer's Office, with assistance from City of Waterville Staff.

The City of Waterville is responsible for enforcement procedures of Municipal Code 939.

**Minimum Control Measure #5:**

The City of Waterville in 2016 passed Chapter 939 of Municipal Code. This is the ordinance or other regulatory mechanism required by the Ohio EPA for compliance with requirements for MCM #4 and MCM #5.

The City of Waterville has a MOU with the Lucas County Engineer's Office to perform all necessary work required under MCM #5. The Lucas County Engineer's Office conducts the work in the same manner as outlined in MCM #5 in the above plan. Any complaints regarding post construction BMP performance are directed to the Lucas County Engineer's Office.

The Lucas County Engineer's Office will begin post-construction inspections in 2017.

The City of Waterville is responsible for enforcement procedures of Municipal Code 939.

The City of Waterville is requiring the TMACOG SWC submittal package with each SWPPP submittal.

**Minimum Control Measure #6:**

The City of Waterville has one municipal facility that is required to have a SWPPP developed for operation and maintenance that was included in the 2010 Urbanized Area. A SWPPP will be developed in 2017 for the facility, and inspections will follow twice a year, starting in 2018.

Training of employees will be conducted once a year.

The number of catch basins cleaned, repaired, replaced, and the miles of storm sewers cleaned will continue to be reported to LCEO. Additionally, the amount of salt used on roads, and brine will be reported to LCEO for reporting in the annual report.

Street sweepings will continue to be reported to the LCEO

The City of Waterville will continue to identify, as needed, flood management projects for retrofit opportunities.

# Village of Holland Addendum

## BACKGROUND AND DESCRIPTIONS

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This Storm Water Management Plan (SWMP) was developed to enhance the integrity of surface water through management of storm water runoff within the Village of Holland. The SWMP describes the best management practices necessary to comply with the Ohio EPA's Storm Water Phase II Rule and the Lucas County NPDES permit, of which the Village of Holland is a co-permittee.

Under the Storm Water Phase II Rule, the following six control measures must be addressed by enacting local ordinances and activities designed to improve the quality of storm water. Each control measure will be addressed by use of best management practices (BMP's) having measurable goals. Each measurable goal must have a schedule of implementation and responsible department.

The six control measures and their BMP's are described below. More detailed descriptions of the measurable goals of each BMP follow.

### 1. Public Education and Outreach

Inform and educate the public of its role in protecting storm water from non-point pollution.

- a. Lawn and Garden Activities – reducing use of fertilizers, pesticides and other products; use of alternate products.
- b. Water Conservation – divert runoff from roofs and other impervious surfaces into rain gardens or other natural areas.
- c. Household Hazardous Waste- education on available drop off programs and locations
- d. Pet Waste Management – Inform residents on the effect of pet waste on the environment
- e. Business Outreach Education –develop a program to educate local businesses on ways they could improve storm water quality.

### 2. Public Involvement and Participation

Educate and involve the public of its role in protecting storm water from non-point pollution.

- a. Storm Drain Stenciling – paint messages on drain inlets reminding the public not to dump anything other than storm water into a drainage system.
- b. Support Local Watershed Programs – obtain educational materials and program information for distribution to residents/business from Partners for Clean Streams.
- c. Educational School Programs – coordinate with Lucas County Soil & Water Conservation presentations provided by them to Springfield Local School system.
- d. Participation and support of the Storm Water Coalition – the coalition brings many different organizations and municipalities together to address storm water concerns.

3. Illicit Discharge Detection and Elimination

Ordinance 19-2010 enacted to establish legal authority to inspect, monitor, and prohibit illicit discharges.

- a. Spill Response – coordinate training of employees using EPA protocols for spill response.
- b. Illicit Discharge Response Plan – develop plan, coordinate with Lucas County Engineers and Lucas County Health Department procedures for detecting, eliminating illicit discharges
- c. Mapping – coordinate updating of current drainage map with Lucas County to include outfall locations, water bodies affected by the outfalls and provide maps to all spill response staff.
- d. Participate in IDDE training with other jurisdictions through the Toledo Metropolitan Council of Governments.
- e. Educate public on spills, provide reporting information via different media.

4. Construction Site Storm Water Runoff Control

Ordinance 7-2004 adopting soil erosion and sediment controls rules was updated by Ordinance 1-2013. The updated version follows the model ordinance provided in *TMACOG Stormwater Standards Manual*.

- a. Educate the development community on the ordinance update.
- b. Enact a public complaint process utilizing print and internet media.
- c. Devise and implement written procedures for plan review and site inspections.
- d. Promote training for the development community.
- e. Promote training for plan review and inspection personnel.

5. Post Construction Storm Water Management

Post construction controls to ensure the maintenance of erosion and sediment controls installed during development are addressed in the soil erosion and sediment control legislation, Ordinance 1-2013.

- a. Devise and implement legislation designed to address the impairment of Wolf Creek using the 2009 TMDL as reference for type of contaminants.
- b. Implement training of municipal staff in erosion and sediment control measures.
- c. Create agreement with Lucas County Engineer's Office for assistance in field inspections and review of maintenance plans for installed control measures.

6. Pollution Prevention and Good Housekeeping for Municipal Operations

Municipal operations will be evaluated to assure minimal contamination of storm water discharges:

- a. Vehicle Washing/Maintenance – police vehicles are generally serviced by outside source, street vehicles are serviced in-house; exterior vehicle washing education
- b. Parking lot/Street Cleaning- generally performed by outside source
- c. Storm Drain/Catch Basin Cleaning – perform more frequently
- d. Hazardous Materials Storage – reinforce current procedures and regulations
- e. Spill Response & Prevention – reinforce current procedures and regulations
- f. Road Salt Application & Storage- investigate use of alternate deicers; in-house storage of salt procedures
- g. Employee Training- Educate village employees on best practices relative to storm water quality.

Village of Holland  
Storm water Organizational Chart



## PUBLIC EDUCATION BEST MANAGEMENT PRACTICES

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### 1. Lawn and Garden Activities

Annually      Rain barrel workshop at Strawberry Acres Park based on demand. Distribute information on rain barrels and rain gardens, sign up citizens for make your own rain barrel workshop. Coordinate with Rain Garden Initiative and Lucas County Soil & Water Conservation.

Addresses TMDLs of TSS and E-Coli.

### 2. Water Conservation

2017-2018      Distribute Give Water a Hand materials on household water conservation to 135 households (25% of total households) in the Village.

Follow up with survey to those same households. Use results of survey to revise materials as needed to ensure information being disseminated is understood.

### 3. Household Hazardous Waste

2018-2019      Distribute Give Water a Hand materials on household hazardous waste disposal; locations for disposal to 135 households. Send survey to same households to determine effectiveness of BMP and revise as needed.

Coordinate a drop-off event thru Keep Toledo Lucas County Beautiful and the Lucas County Solid Waste Division shortly after mailing materials.

Addresses TMDLs of TSS and E-Coli.

### 4. Pet Waste Management

Annually      Continue distribution of pet waste bags at Strawberry Acres Park. Document the frequency of replacing 200 bag rolls in the pet waste station.

Addresses TMDL of E-Coli.

### 5. Business Outreach

2019-2020      Distribute Give Water a Hand Materials to automotive businesses within the Village.

Send survey on oil and battery recycling to the 12 auto related businesses in the Village (175 total businesses) and amend BMP as needed.

## PUBLIC PARTICIPATION AND INVOLVEMENT MANAGEMENT PRACTICES

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### 1. Lawn and Garden Activities

Annually      Rain barrel Workshop at Strawberry Acres Park during community event  
Distribute information on rain barrels and rain gardens, sign up citizens for make your own rain barrel workshop based on demand. Coordinate with Rain Garden Initiative, Lucas County Soil & Water.

Addresses TMDLs of TSS and E-Coli.

### 2. Storm Drain Stenciling

Annually      Working with Partners for Clean Streams host an annual storm drain stenciling event for volunteer groups. Record the location and number of drains stenciled each year. Goal is to stencil 25-50 basins each year.

Addresses TMDLs of TSS and E-Coli.

### 3. Storm Water Coalition

Annually      Continue participation with the TMACOG Storm Water Coalition

Addresses TMDLs of TSS and E-Coli.

### 4. Educational School Programs

Annually      Working with Lucas County Soil and Water, promote and provide educational programs to the Springfield Local School system. Document number of programs held and number of attendees.

Addresses TMDLs of TSS and E-Coli.

## ILLICIT DISCHARGE BEST MANAGEMENT PRACTICES

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1. Mapping  
Annually      Continue working with Lucas County to update GIS maps showing locations of outfalls.
  
2. Inspections  
Annually      Continue working with Lucas County for annual inspection of outfalls by interns. Inspect existing taps into storm sewers during road construction projects. Coordinate with Lucas County Health as needed.  
  
Document number outfalls inspected; disconnections.  
  
Addresses TMDLs of TSS and E-Coli.
  
3. IDDE Training  
2017      Maintenance and police personnel trained on detecting illicit discharges and reporting such.  
  
Coordinate IDDE training with TMACOG.  
  
Document number of employees trained.  
  
Addresses TMDLs of TSS and E-Coli.
  
4. Spill Response Education  
Annually      Publish hotline information for residents thru various media.  
  
Document number and type of media distributed.  
  
Goal is to reach 25% of households/businesses with hotline information.  
  
Addresses TMDLs of TSS and E-Coli.
  
5. Spill Response Protocols  
Annually      Review procedures with staff; document number staff trained.  
  
Coordinate procedures with police, fire, EPA and other agencies.

## CONSTRUCTION SITE BEST MANAGEMENT PRACTICES

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### 1. Developer Training

Annually      Coordinate with Stormwater Coalition to advertise the availability of Developer training opportunities.

Addresses TMDL of TSS.

### 2. Public Complaint Process

Annually      Provide the public with a means to address concerns over activity at a Construction site that may affect stormwater.

Document number of complaints and actions taken in response.

### 3. SW3P Review & Inspections

Annually      Continue contract for outside review of submitted SW3P and inspections Of runoff control measures on construction sites.

Document number of plans submitted, reviewed.

Document number of and inspection results. Obtain from outside Contractor.

Addresses TMDL of TSS.

### 4. Contractor Training

Annually      Obtain documentation that outside contractors are adhering to the Training requirements of the NPDES.

## POST CONSTRUCTION BEST MANAGEMENT PRACTICES

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1. Storm Sewer Replacement/Rehabilitation

Annual                      Future road construction projects should continue to replace or  
Line existing storm sewers to bring current sewer system up to date.

Document linear feet of storm sewer replaced &/or lined annually.

2. Erosion/Sediment Control Measure Training

Annual                      Incorporate training of in-house staff on the correct construction for  
commonly seen erosion control measures used on construction sites;  
include information on reporting any deficiencies noted.

Addresses TMDL of TSS.

3. Post Construction Inspections

As needed                      Coordinate inspection of post construction BMPs with Lucas County  
Engineer's Office using the requirements of the site maintenance plans for  
post construction controls

4. Evaluate Existing Post Construction Control Measures

2016                      Review inspection logs, enforcement actions taken, and TMDL for Wolf  
Creek pollutants updates, update existing legislation as needed to address  
deficiencies in the inspection/enforcement procedures and to account for  
changes to the type of Wolf Creek contaminants.

Addresses TMDLs of TSS and E-Coli.

5. Land Use Policy

2017                      Implement a land use policy that addresses re-development and limiting its  
impact on water quality.

2017- Being updated with revision of zoning code

## POLLUTION PREVENTION BEST MANAGEMENT PRACTICES

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1. Street Sweeping  
Annually Contract with Perfect Sweep or other contractor to sweep curbed streets At least quarterly. Document number of times swept and obtain from Vendor the amount of debris collected and where disposed.
  
2. Vehicle Maintenance  
Annually Police vehicle service logs indicating service by qualified outside vendor. Police vehicle washing performed at local car washes. Maintenance vehicle service logs indicating service by outside and In-house staff. In-house work documented to show quantity of oil, Brake fluid and other possible pollutants and their method of disposal.
  
3. Storm Drain Cleaning  
Annually Inspect 25% of catch basins each year. Document amount of debris Cleaned from each basin and its method of disposal. Document improvements to storm sewer system during road projects.
  
4. Road Salt  
Annually Ensure that salt storage is contained within the building and on An impervious surface. Inspect salt trucks to ensure correctly gauged distribution mechanisms To reduce the amount of salt spread. Where possible, use environment friendly methods of de-icing such as On walking path, building entrances. Document amount of salt distributed with each winter event.
  
5. Staff Training  
Annually In-house staff training in hazardous materials storage, spill response, Exterior vehicle washing and overall pollution prevention methods. Use TMACOG's *"Pollution Prevention and Good Housekeeping Practices for Municipal Operations"* as reference for the training program. Document Training for each employee.