Clermont County
Storm Water Management Plan

Prepared in support of:
Ohio EPA NPDES Phase II General Permit OHQ000004

March 2022

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LIST OF ACRONYMS AND ABBREVIATIONS

ACSWD	Adams-Clermont Solid Waste District
BMP	Best Management Practice
CCPH	Clermont County Public Health
EFLMR	East Fork Little Miami River
GIS	Geographic Information System
HHW	Household Hazardous Waste
HSTS	Home Sewage Treatment System
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
OEPA	Ohio Environmental Protection Agency
OEQ	Clermont County Office of Environmental Quality
OPA	Operation Permit Assessment (Health District's inspection program and database for home sewage treatment systems)
ORSANCO	Ohio River Valley Water Sanitation Commission
RSWC	Regional Storm Water Collaborative
SWCD	Soil and Water Conservation District
SWMP	Storm Water Management Plan
SWP3	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
US EPA	United States Environmental Protection Agency
WMSC	Water Management and Sediment Control Regulations

Background

History of Storm Water Regulations
In 1987, amendments to the Clean Water Act required the US Environmental Protection Agency (US EPA) to develop a comprehensive phased program for regulating municipal and industrial storm water discharges under the National Pollutant Discharge Elimination System (NPDES) permit program. In response to this, US EPA instituted Phase I of the NPDES Storm Water Program in November 1990. The Phase I program addressed storm water discharges from medium to large municipal separate storm sewer systems (MS4s) serving communities having a population of at least 100,000 people, as well as storm water discharges from industrial activities. The ruling also placed permitting requirements on construction activities that disturb five or more acres of land.

The NPDES Phase II rule was promulgated in December 1999. The Phase II storm water program addresses small MS4s serving populations of less than 100,000 people in urbanized areas, and construction activities that disturb between one and five acres of land. Only those small MS4s located in urbanized areas as defined by the U.S. Bureau of the Census require a storm water permit. The designated permitting authority, which in the State of Ohio is the Ohio Environmental Protection Agency (OEPA), may also require small MS4s outside of urbanized areas to obtain a Small MS4 permit.

The Phase II rule required all regulated small MS4s apply for permit coverage and submit a Storm Water Management Plan to the permitting authority by March 10, 2003. The Storm Water Management Plan must address six Minimum Control Measures, including:

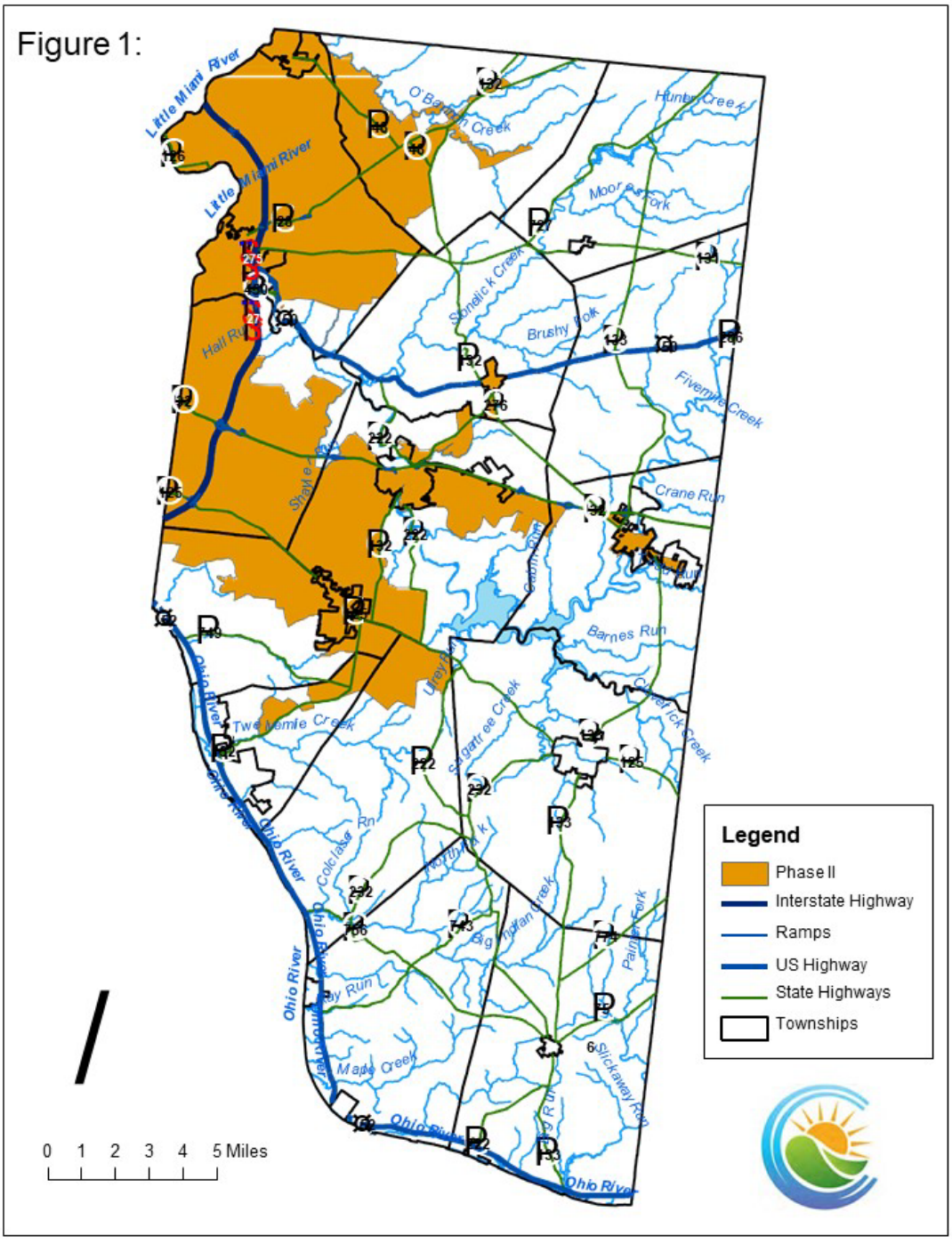
1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement / Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment
6. Pollution Prevention / Good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

Storm Water Management in Clermont County
Ohio EPA has designated 16 communities in Clermont County as small MS4s that must comply with the Phase II Storm Water regulations (see Figure 1). These communities are:

- Clermont County
- City of Loveland
- City of Milford
- Village of Batavia
- Village of Owensville
- Village of Williamsburg
- Batavia Township
- Goshen Township
- Miami Township
- Monroe Township
- Ohio Township
- Pierce Township
- Stonelick Township
- Tate Township
- Union Township
- Williamsburg Township

Clermont County Urbanized Area - Phase II Storm Water Permit

Figure 1:



Each of the communities listed above, with the exception of Loveland, have partnered to develop a regional Storm Water Management Plan (SWMP) and submit a joint application for permit coverage. Understandably, the City of Loveland opted to develop and implement its own storm water management program as the city is located in portions of three counties.

On March 7, 2003, the Clermont County Board of Commissioners adopted the regional Phase II Storm Water Management Plan and subsequently submitted it to Ohio EPA on behalf of the partnering communities. The plan was approved by Ohio EPA without condition on October 24, 2003. Clermont County and its partners have revised the plan after each permit renewal, with revised plans being completed and adopted in August 2010 and September 2016.

On April 1, 2021, Ohio EPA issued a revised Small MS4 General Permit, which represents the fourth permit cycle since the program began in 2003. The new permit requires small MS4 permittees to revise and update their existing SWMPs to reflect changes in the permit and the progress of their individual programs. This version of the Clermont County SWMP fulfills that requirement.

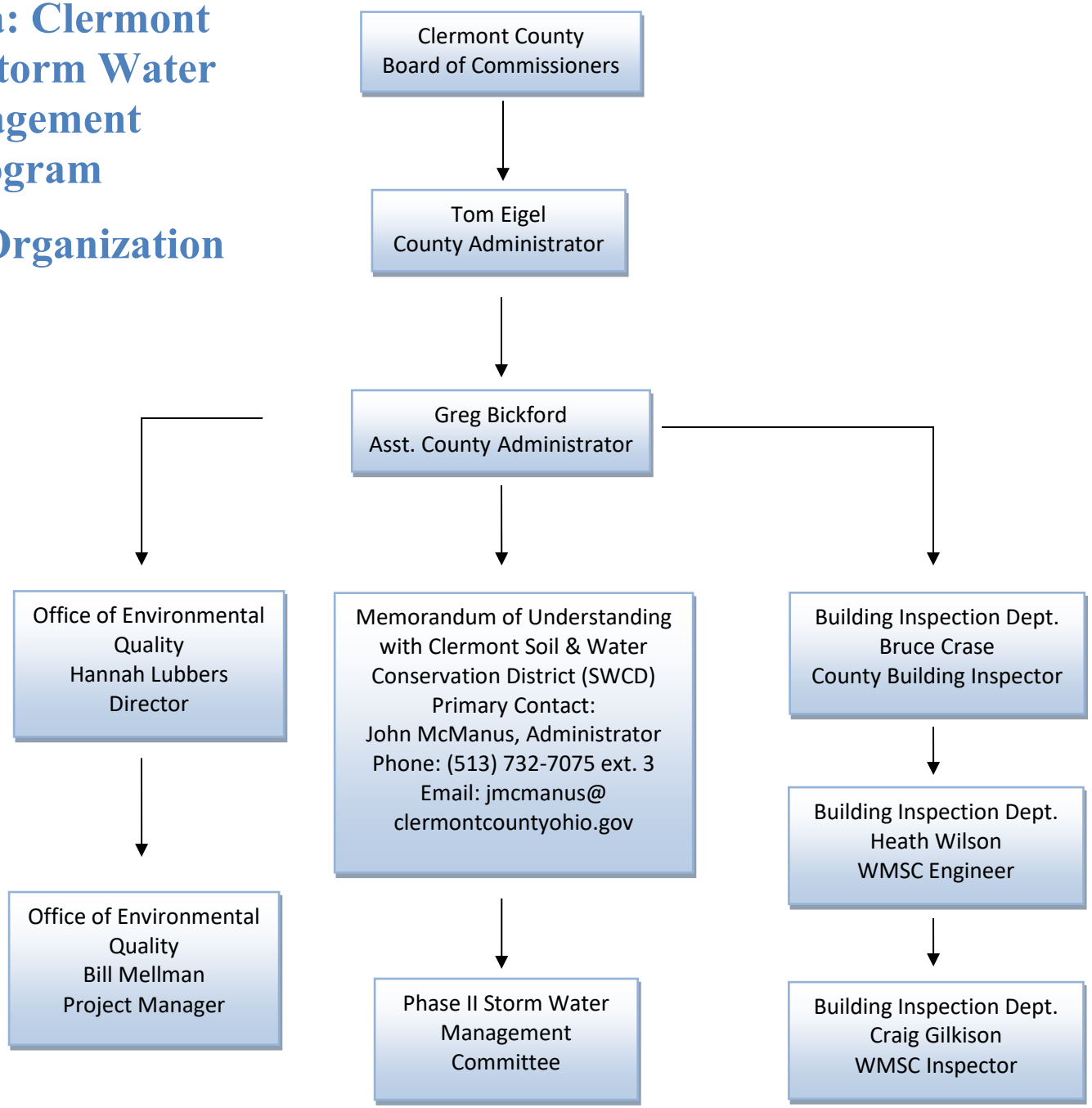
Legal Authority
Unless otherwise stated, Clermont County and the partnering municipalities and townships have the legal authority to implement the best management practices contained within this plan.

Table of Organization
Four municipalities (Batavia, Milford, Owensville and Williamsburg), ten townships (Batavia, Goshen, Miami, Monroe, Ohio, Pierce, Stonelick, Tate, Union and Williamsburg Townships) and Clermont County (including the County Commissioners, County Engineer and Park District) are listed as MS4 co-permittees. Each helps implement the activities contained in this management plan. The Clermont Soil & Water Conservation District (SWCD) supervises the implementation of the plan and serves as the primary point of contact with Ohio EPA. A Regional Storm Water Advisory Committee comprised of representatives from the MS4 co-permittees provides direction to the overall program and meets regularly to monitor the progress. A Table of Organization is provided in Figures 2a and 2b.

Annual Reporting
Clermont SWCD, on behalf of all MS4 co-permittees, will prepare annual reports summarizing program activities of the past year and planned activities for the following year, and submit these to Ohio EPA each year by April 1. All annual reports will be posted at www.clermontswcd.org/storm-water-reports/.

Figure 2a: Clermont County Storm Water Management Program

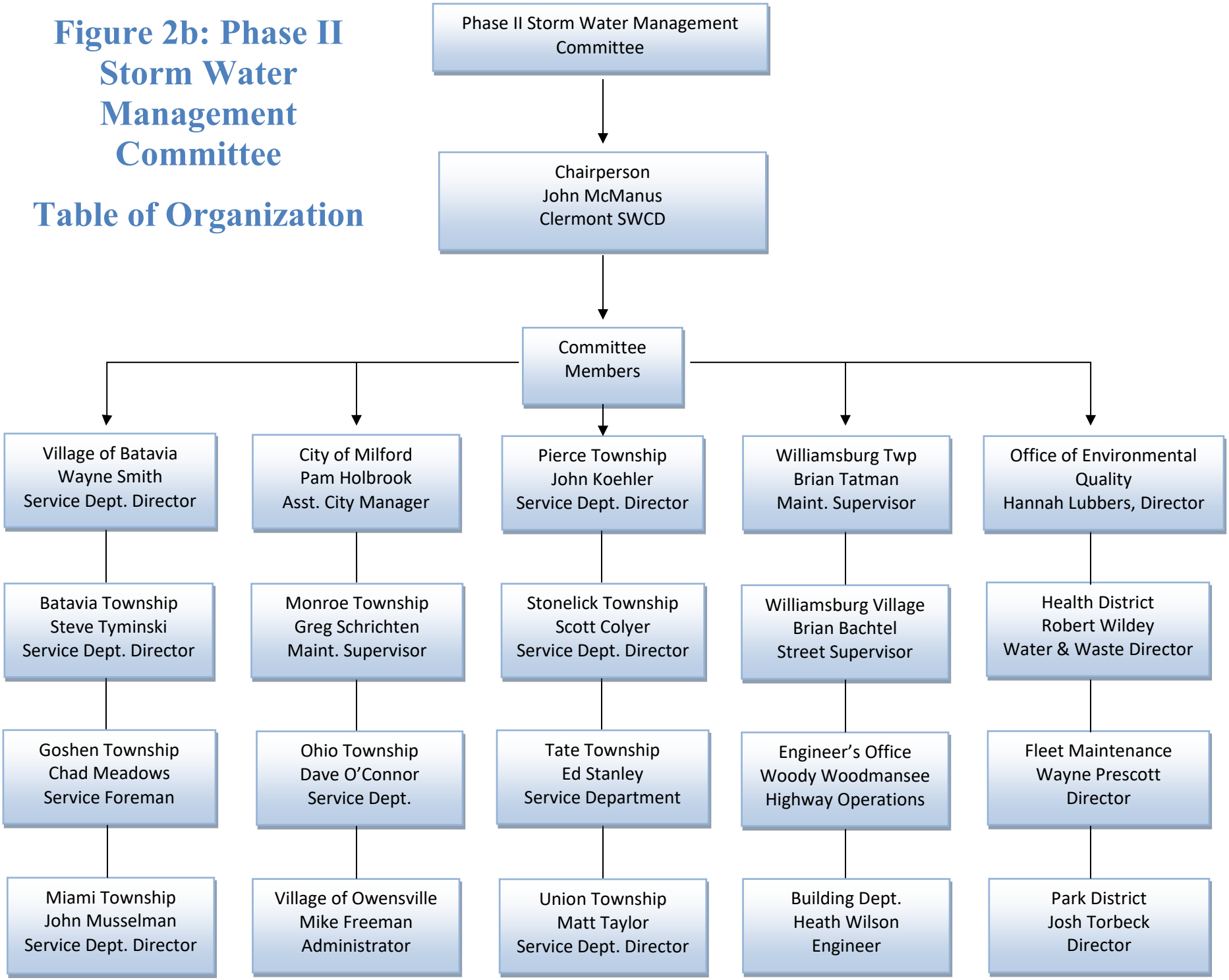
Table of Organization



As of March 28, 2022

Figure 2b: Phase II Storm Water Management Committee

Table of Organization



As of March 28, 2022

Status of TMDL Development

Clermont County contains three watersheds which are in various stages of total maximum daily load (TMDL) development – the Lower Little Miami River (including O'Bannon Creek), the East Fork Little Miami River, and direct tributaries to the Ohio River. Ohio EPA completed a TMDL for the Lower Little Miami in December 2012. Ohio EPA has completed a Technical Support Documents for both the East Fork and Southwest Ohio tributaries, and is the process of developing a TMDL for the East Fork watershed. As most of the Ohio River tributaries in Clermont County fully support their aquatic life use designations, it's not anticipated that a TMDL will be required.

Lower Little Miami River TMDL

The Lower Little Miami River TMDL report examined three HUC-12 watersheds that fall within Clermont County – O'Bannon Creek, Horner Run-Little Miami and Polk Run-Little Miami. The main stem of the Little Miami fully supports its warmwater habitat aquatic life use at all locations in Clermont County. It also fully supports its primary contact recreation use except for a stretch of river between the Kelly Nature Preserve in Clermont County and the Wooster Pike gage in Hamilton County, where data show it was fully supporting in 2007 but not supporting in 2008. Causes of impairment are listed as urban runoff, agricultural runoff and combined sewer overflows in the Hamilton County section.

O'Bannon Creek fully supported its aquatic life downstream of mile point 4.4. Above this point, it is in partial attainment, and in non attainment above mile point 10.1. Ohio EPA lists the causes of impairment as "natural (flow or habitat)," and as such, did not propose any restoration actions. The TMDL report states O'Bannon Creek fully supports its primary contact recreation use.

The Horner Run and Polk Run watersheds include areas on either side of the Little Miami main stem in Hamilton and Clermont counties (Polk Run itself is in Hamilton County). No sampling was conducted in Horner Run or other tributaries within Clermont County. The report lists causes of impairment for both watersheds as siltation, organic enrichment/low dissolved oxygen, flow alteration, habitat alteration and unknown toxicity; however, Ohio EPA did not recommend any restoration activities.

East Fork Little Miami River

Ohio EPA conducted biological, chemical and physical assessments of the East Fork Little Miami River (EFLMR) and its tributaries in 2012, and published the Technical Support Document summarizing the results of this study in May 2014. Ohio EPA is still in the process of developing a TMDL for the watershed. At the writing of this SWMP, Ohio EPA has completed a Loading Analysis Plan for the EFLMR (February 2021)

Fifty-two percent of the 88 stream sites sampled were biologically impaired. Ohio EPA lists the principal cause of impairment as low dissolved oxygen levels caused primarily by organic enrichment, and to a lesser extent nutrient enrichment in the upper watershed outside of the urban area. These problems are frequently exacerbated by naturally occurring low stream flow, and less frequently by poor habitat. Sources of organic and nutrient enrichment include wastewater treatment plants and diffuse pollution from agriculture and on-site sewage systems. Poor habitat was the driver of impairment at three sites, and urban storm water was responsible for impairing two sites (both on Hall Run in Union Township). Primary contact recreation use was not supported in 20 of the 24 stream segments sampled; however, no definitive links to direct sources of human origin were apparent.

Southwest Ohio River Tributaries

In 2014, Ohio EPA conducted chemical, physical, and biological sampling on 22 streams in the Southwest Ohio River Tributaries study area, including the Mill Creek watershed in Hamilton County and direct Ohio River tributaries in Clermont and Brown Counties. Within the Clermont County urbanized area, six sites in

the Nine Mile, Ten Mile and Twelve Mile Creek watersheds were assessed. Five of the six sites fully supported their Warmwater Habitat aquatic life use. The site on Twelve Mile Creek at Laurel-Lindale Road (outside of the urbanized area) was determined to be in partial support. The cause was determined to be natural – mostly intermittent flow over a bedrock substrate. No direct sources of human origin were apparent. As such, it is unlikely that a TMDL will be required for these streams. Elevated bacteria concentrations were found in the Nine Mile and Ten Mile watersheds. These did not support their primary contact recreation use.

SWMP Pollutants of Focus

While this SWMP will focus on multiple pollutants and causes of impairment, special attention will be given to management practices which reduce instream bacteria concentrations and the impacts from organic and nutrient enrichment, based on the information provided in the Lower Little Miami TMDL report and the two Technical Support Documents for the East Fork Little Miami River and the Southwest Ohio Tributaries.

I. Public Education and Outreach

Clermont County and its MS4 partners have developed a comprehensive program designed to educate the public about the impacts of storm water runoff on stream quality and steps they can take to reduce pollutants in storm water runoff. This section of the Storm Water Management Plan presents the details of the education and outreach program.

The MS4 permit requires the inclusion of at least five different storm water themes or messages over the permit term. Under this plan, the County will implement programs relating to six themes plus general education and outreach programs over the five year period. The following sections provide details on each educational theme, including: rationale for selection, specific educational activities, target audience, how the target audience will be reached, targeted pollution sources, and entities responsible for implementation. At the end of this chapter, a table is included that summarizes the activities to be conducted, the timeline for implementation and a list of responsible departments.

Clermont Soil and Water Conservation District (SWCD) will be responsible for implementing most of the education and outreach activities described in this section, while others will be conducted by the Regional Storm Water Collaborative, of which Clermont SWCD is an active member.

The Regional Storm Water Collaborative (RSWC) is composed of storm water districts, SWCDs, municipalities and townships in Southwest Ohio and Northern Kentucky. Its purpose is to raise awareness about water quality and storm water management issues in the region. The RSWC uses various methods to conduct its educational campaigns. Information is distributed through the Collaborative's web site (www.savelocalwaters.org) and social media outlets such as Facebook (www.facebook.com/SaveLocalWaters) and YouTube (www.youtube.com/user/projectearthcincy). Each year, the RSWC conducts at least one major outreach campaign using radio and/or television advertising. The RSWC also holds a minimum of one training workshop a year (topics vary). Collaborative partners meet on a regular basis (generally monthly) to plan educational campaigns, review the successes of recently completed efforts, and review possible program improvements.

Each year, Clermont County will report on the estimated number of people reached per activity, and provide an evaluation of programs conducted, along with recommendations for improvement if any are identified. By the end of the permit cycle, the Public Education and Outreach program as a whole will have reached at least 50 percent of the population within the urbanized area.

A. Riparian Zone Protection and Restoration

Rationale and Pollutants of Concern: Clermont County is located just east of Cincinnati/Hamilton County and has experienced a significant amount of development over the past 30 years. It can be reasonably expected that Clermont County will continue to grow in coming years. With increasing urbanization and associated impervious area, Clermont streams have significant problems with bed and bank erosion as they adjust to the higher volume and rate of runoff, especially in areas where the riparian vegetation has been eliminated. The EFLMR Technical Support Document (May 2014) states that "the lower reaches of small streams show the effects of excess runoff as evidenced by down-cutting and widening of the channel. This erosion leads to both increased sediment and phosphorus loadings to the stream," the primary pollutants of concern associated with streambank erosion.

Riparian landowners and members of the development community will be the primary target audience of the education programs described under this section, which are summarized below.

1. *Streambank Protection and Restoration Guide*: Clermont SWCD frequently provides guidance to riparian property owners who are experiencing streambank erosion problems. In 2022, Clermont SWCD will develop a streambank protection and restoration guide to help private property owners manage their riparian corridors. The guide will include information on practices that help prevent bank erosion and strategies to correct existing erosion problems. Hard copies will be made available during site inspections, at the Clermont SWCD office, Clermont County's Permit Central building, and at special events where Clermont SWCD displays a booth or table (e.g., the Clermont County Fair, OSU Extension's Perennial School). Clermont SWCD will also post an electronic copy of the guide on its website (www.clermontswcd.org).

2. *Presentation to Development Community*: During the course of the permit, Clermont SWCD will provide at least one presentation to a group of development professionals (including engineers, homebuilders, landscape architects and/or zoning professionals) about the problems of stream-bank erosion and the importance of maintaining riparian buffer zones. Possible audiences include the Ohio Valley Development Council, the Greater Cincinnati Homebuilders Association, the Clermont County Township Association and the Clermont County Planning Commission.

3. *Private Land Owner Site Visits*: Upon request from riparian landowners, Clermont SWCD staff will continue to conduct site visits and provide guidance and technical assistance on issues related to streambank erosion and riparian zone management. Streambank Restoration and Protection Guides will be shared with the property owners during these visits.

4. *Media Campaign*: Clermont SWCD will prepare and distribute articles and press releases related to the benefits of establishing riparian buffer zones. Beginning in 2022, at least one press release, newsletter article or social media post each year will focus on riparian zone protection and restoration.

   One year during the permit cycle, the RSWC will develop an education and awareness campaign that shows streamside land owners how to properly manage the riparian zone, and what steps they can take to reduce bank erosion.

B. Yard Care / Residential Runoff

Rationale and Pollutants of Concern: Clermont County, located just to the east of Hamilton County and the City of Cincinnati, is a highly residential community. Of the 68,286 parcels in the 2010 urbanized area, 59,221, or 87 percent, are zoned residential (Clermont County GIS, January 2022). As such, the potential for pollutant loadings via residential landscapes is considerable. Pollutants of concern include BOD, nutrients (phosphorus and nitrogen), pesticides and bacteria. In addition to chemical and biological pollutants, increases in the volume and flow rate of storm water runoff (over that received from forested, open field or agricultural land) are a concern, as they contribute to stream bank erosion and habitat modifications. During the current permit cycle, Clermont County will develop an educational program that focuses on storm water runoff from residential properties. The target audience will be residential property owners in the county. Details of the program are provided below:

1. *Rain Gardens / Rain Barrels*: Rain gardens and rain barrels are effective at reducing runoff rates and volumes, which in turn helps minimize stream bed and bank erosion and sediment and nutrient loadings that result from this. Rain gardens also remove sediment, nutrients and other pollutants directly through nutrient cycling or by sequestering pollutants in the soil or in the plants themselves. Rain gardens are suitable as treatment practices for small runoff volumes (such as that coming from a residential rooftop) or larger volumes (for example, runoff from a commercial parking lot). The target audiences of the rain garden education programs listed below are residential property owners, commercial developers, design engineers and landscape architects. Program specifics are provided below:

    a. *Rain Garden/Rain Barrel Web Site*: Clermont SWCD will maintain its web site devoted to rain gardens and rain barrels (www.clermontswcd.org/rain-gardens-barrels/).The page includes detailed information on how to construct a rain garden, native plants that are suitable for rain gardens, PDFs of rain garden brochures and manuals, information on where rain barrels can be purchased, and links to other resources.

    b. *Rain Garden Quick Guide Brochure:* Clermont SWCD utilizes a two-page how-to guide ("A Quick Guide to Planning and Installing Rain Gardens") developed by the Franklin SWCD to provide simple step-by-step instructions to anyone interested in creating their own rain garden. The guide can be downloaded from Clermont SWCD's rain garden home page. Clermont SWCD will distribute hard copies at all rain garden workshops and at special events such as OSU Extension's annual Perennial School.

    c. *Demonstration Rain Gardens* – Clermont SWCD and the Clermont County Park District will maintain two public demonstration rain gardens, including those located at the Clermont SWCD offices at the Clermont County Fairgrounds in Owensville and at Shor Park in Union Township. Clermont SWCD and the Park District will work together to create at least one new public demonstration rain garden over the current permit cycle. Clermont SWCD will also work with a local business to create at least one new rain garden at a commercial site in Clermont County.

    d. *Master Rain Gardener Program*: In 2021, Clermont SWCD began working with the Regional Storm Water Collaborative to establish a Master Rain Gardeners program for the Greater Cincinnati area based on a program developed by Washtenaw County, MI. This will be a five-day course which takes place over a six-week period. The first class will include 25 participants and take place in Spring 2022. The Clermont SWCD Education Coordinator will assist with the web site, social media and marketing, assembling course materials, and working with volunteers after they complete the program. More details on the program are available at www.cincyraingardener.org. After the 2022 course, Clermont SWCD and the RSWC will assess the success of the program and decide whether the program should continue and if so, what changes should be made. Changes will be reported in MS4 annual reports.

    e. *Rain Garden Workshop for Landscape Professionals* – Over the next five years, Clermont SWCD will conduct at least one rain garden workshop for professionals at which it will present information on how to design and construct a rain garden. This may be done in conjunction with the Regional Storm Water Collaborative.

f. *Rain Barrel Art Event:* In 2022, the RSWC will host its annual Rain Barrel Art Project, an event first held in 2013. The RSWC created the event to promote the use of rain barrels throughout the greater Cincinnati area through a creative and educational medium. Rain barrels continue to grow in popularity; however, one of the biggest drawbacks is their dull appearance. The RSWC believes that producing beautiful artistic rain barrels that have unique painted details will make them more desirable and naturally increase interest in their use.

Local artists will be invited to submit their rain barrel artwork at the beginning of the year. From these, the RSWC will select up to 40 designs for the rain barrels. After the artwork has been selected, the RSWC will hold a workshop for the artists where they will learn the painting techniques and pick up their rain barrels. The barrels will be displayed at the Cincinnati Zoo and Botanical Gardens from April 1 until the date of the event, at which time they will be auctioned during the Zoo's "Party for the Planet," which is attended by 3,000-5,000 people each year. Proceeds from the auction will be divided equally between the Collaborative and the Cincinnati Zoo. All proceeds received by the RSWC will be used for future education and awareness campaigns. After 2022, the RSWC will conduct a re-evaluation and decide if it will continue to host the Rain Barrel Art Project in subsequent years.

g. *Technical Assistance*: As it has for several years, Clermont SWCD staff will provide technical assistance and offer site inspections to any resident interested in creating a rain garden and/or installing a rain barrel.

2. *Lawn Care/Landscaping*: Significant amounts of fertilizers and pesticides can find their way into local waters from residential yards. Increased runoff from compacted soils along with impervious rooftops, driveways, sidewalks and streets can also contribute to streambank erosion and habitat degradation. Clermont County's lawn care and landscaping education program will seek to reduce fertilizer and pesticide runoff and improve infiltration in residential areas by promoting soil testing, the benefits of pesticide-free yards, native landscaping over turf grass, and disconnecting storm water runoff.

    a. *Shrink Your Lawn*: In 2022, Clermont SWCD will work with the RSWC to develop and implement a "Shrink Your Lawn" education and outreach program. The program will seek to encourage homeowners to replace sections of turf grass with native perennials, shrubs and trees. The deep root systems of native plants would help improve infiltration rates, and eliminating sections of turf grass would help reduce the runoff of fertilizer commonly applied to lawns.

    b. *Media Campaign: Newsletter Articles/Press Releases*: Clermont SWCD will prepare annual press releases/newsletter articles related to a variety of lawn care issues, such as pesticide/fertilizer use, soil testing, trees and native plants as storm water best management practices (BMPs), disconnecting downspouts and pet waste. Each press release will be used as an article in Clermont SWCD's quarterly newsletter. The article will be shared with the county's co-permittees so they may use it in their newsletters, web sites and/or social media sites.

During one year of the permit cycle, the RSWC will conduct an advertising campaign related to yard care practices that help reduce pollutant loadings to the MS4. Specific topics may include soil testing, proper fertilizer and pesticide use, use of native plants instead of turf grass, rain gardens, and pet waste management.

c. *Soil Testing*: Clermont SWCD will promote soil testing offered by the local Ohio State University Extension Office. The standard soil test includes soil pH, available phosphorus, potassium, calcium, and magnesium levels as well as recommendations for lime and fertilizer. Armed with this information, residents can apply only what the soil needs and avoid over-fertilization, which leads to excess nutrients entering local streams. Clermont SWCD will post information about this program on its web site, including a video it produced with OSU Extension on how to collect a soil sample. The number of soil tests conducted each year will be included in the Annual Report.

d. *Pollution Prevention Brochures:* Clermont SWCD developed three pollution prevention brochures related to residential storm water pollution, including:

- Lawn Care: Keeping it Environmentally Friendly in Clermont County (https://clermontswcd.org/wp-content/uploads/sites/23/2016/08/lawncarebrochure2011.pdf)
- Protect Our Rivers: Stop, Stoop and Scoop (https://clermontswcd.org/wp-content/uploads/sites/23/2016/09/petwastebrochure.pdf)
- Household Illicit Discharge and Pollution Prevention Guide (https://clermontswcd.org/wp-content/uploads/sites/23/2016/09/idhouseholdguide.pdf)

Clermont SWCD will continue to maintain these on its web site, and have hard copies available at various special events (e.g., rain garden workshops, OSU Extension Perennial School, Clermont County Fair).

e. *Conservation Plant Sale:* Clermont SWCD will continue to hold its annual conservation plant sale through the current permit cycle. A variety of tree seedlings and native perennials will be offered in the spring of each year, along with rain barrels. Order forms are included in Clermont SWCD's winter newsletter. When promoting the plant sale, Clermont SWCD will include information about the importance of trees as storm water BMPs, and how native plants can be used in riparian plantings and rain gardens.

C. Erosion & Sediment Control BMPs

Rationale and Pollutants of Concern: Clermont County continues to develop at a rapid pace. Uncontrolled runoff from construction sites can result in large volumes of silt and sediment entering nearby streams, causing a number of problems. Sediment can clog catch basins and storm drains, which increases the potential for localized flooding. Sediment buildup in the stream bed can destroy habitat for aquatic organisms. Nutrients attached to sediments can drive harmful algal blooms. Also, excessive sediment in streams and lakes that serve as sources of drinking water can drive up costs at the treatment plant and result in taste and odor problems. Clermont SWCD and the Regional Storm Water Collaborative will develop an educational program that focuses on management practices that reduce

erosion and sediment runoff. The target audience will be members of the development community and municipal and township public works departments. Details of the program are provided below:

1. *Storm Water Management Field Day*: Each year since 2017, the RSWC has hosted a Storm Water Management Field Day, during which installation and maintenance aspects of different construction (and post-construction) BMPs are highlighted. The RSWC will hold a minimum of two Field Days over the course of the 2021-2026 permit cycle. After the second event, the RSWC will conduct a re-evaluation and decide if it will continue to host the event in future years.

2. *ESC Controls for Transportation Projects:* Clermont SWCD will host one workshop during the permit cycle focusing on erosion and sediment control regulations and management practices for transportation projects. The target audience will be the public works departments for the Clermont County MS4 co-permittees.

D. Post Construction BMPs

Rationale and Pollutants of Concern: As land use changes from agricultural/open field to residential/ commercial, the amount of impervious area increases. This results in increased volumes and rates of storm water runoff, which, if not properly managed, could result in significant bed and bank erosion in the receiving streams. A study conducted by the Clermont County Office of Environmental Quality (OEQ) found that stream flashiness was strongly correlated to responses in the fish community (*A National Demonstration Project for Watershed Management*, June 2007). Additionally, urban storm water runoff can carry various types of pollutants, such as lawn fertilizers and pesticides, pet waste, oils and metals from roadways and parking lots, and much more. For these reasons, post construction storm water management has been identified as one of the themes of the County's Public Education and Outreach program. The target audiences of this program are members of the development community, homeowners associations, local businesses and homeowners.

1. *Post-Construction BMP Management Guides*: The Clermont County Water Management and Sediment Control (WMSC) Regulations require a developer to provide maintenance plans for all post-construction BMPs, including detention and retention basins, to the post-construction BMP operator. During the previous permit cycle, Clermont SWCD developed management guidebooks for detention and retention basins that can be used by the developer to meet the WMSC requirements. Copies of the guidebooks are also directly mailed to basin owners/ operators and posted on the District's web site. Clermont SWCD will continue to make copies of the guidebooks available electronically and as a hard copy. Information on how to obtain a copy will be included in any maintenance notification letters sent out as part of the County's inspection program.

2. *Post-Construction BMP Management Videos:* By the end of 2024, Clermont SWCD will create educational videos that review management practices for both detention and retention basins. The videos will be posted on the SWCD web site and YouTube channel.

3. *Pond Management Clinic*: In 2010, Clermont SWCD added a retention basin component to its annual pond management clinic and began advertising the event to homeowners associations and other owners of retention ponds. Clermont SWCD will continue to conduct annual clinics that also address retention basins over the course of the permit cycle. Attendees will be

provided information on the purposes and functions of storm water retention basins and how to properly maintain them.

4. *Storm Water Management Field Day*: The Storm Water Management Field Day described above highlights post-construction as well as construction BMPs. The RSWC will hold a minimum of two Field Days over the course of the 2021-2026 permit cycle. After the second event, the RSWC will conduct a re-evaluation and decide if it will continue to host the event in future years.

E. Plastic Littering

Rationale and Pollutants of Concern: With a mass of plastic in the Pacific Ocean larger than Texas, there has been a great deal of attention given to the plastic litter problem. A recent study showed that of the 8.3 billion metric tons of plastic materials produced worldwide, 6.3 billion metric tons becomes plastic waste. Of that, only nine percent is recycled, and 79% ends up in a landfill or in the natural environment as litter (Geyer et. al., Science Advances, July 2017). Clermont County is no exception to this. Local streamside cleanups show that by volume, single-use plastic products comprise the majority of the litter collected. For these reasons, reducing the amount of plastic litter found in and along our streams has been identified as one of the themes of the County's Public Education and Outreach program. The target audience of this program are those living and doing business in Clermont County.

1. *Single Use Plastic Conservation Action Initiative:* In 2022, The RSWC will partner with the WAVE Foundation of the Newport Aquarium to institute a Conservation Action Initiative in the greater Cincinnati area to reduce the amount of single use plastics in the waste stream and found along the banks of local waterways. As part of the Initiative, WAVE Foundation staff will share information on the problems associated with single use plastics with families visiting the Aquarium, and then ask them to commit to reducing the amount of plastic used in their household. Families that sign a commitment form will be given an "infrastructure kit" that includes materials such as reusable flatware, sandwich bags and straws to help them meet their commitment. After the 2022 initiative, RSWC and the WAVE Foundation will evaluate its success, and decide whether to continue, adjust or eliminate the program.

2. *Litterati app:* In 2022, Clermont SWCD and the RSWC will promote volunteer litter clean-ups through the use of the Litterati mobile app (www.litterati.org). With this app, users can take photos of pieces of litter they collect, and the app identifies the item and geo-tags it. The app also allows subscribers – in this case, Clermont SWCD and the Collaborative – to invite others to participate or create challenges/competitions. The RSWC will obtain a subscription for 2022 and work with its partners to use it at different events. Clermont SWCD will utilize the app during the 2022 Spring Litter Clean-up. Both Clermont SWCD and the RSWC will evaluate the app's effectiveness at the end of 2022, and decide whether to continue or discontinue its use.

3. *Promotion of Plastics Recycling Centers*: In an effort to reduce plastic litter, Clermont SWCD will work with the Adams-Clermont Solid Waste District (ACSWD) to promote the location of recycling centers in the county that accept various plastics, including centers operated by the Solid Waste District, grocery stores that accept used plastic bags, and others. ACSWD will maintain a map of recycling stations on its web site (www.oeq.net). Recycling stations will also be promoted through press releases, newsletter articles and social media postings.

F. Home Sewage Treatment System (HSTS) Education Programs

Rationale and Pollutants of Concern: While much of the urbanized area is served by public sewers, there are still 21,979 homes, businesses and other buildings served by home sewage treatment systems as of December 2020. If these systems are not properly maintained, they can be significant contributors of the primary pollutants identified in the Lower Little Miami River TMDL report – *E. coli*, BOD (organic enrichment) and excessive nutrients.

Clermont County Public Health has developed an education program designed to help HSTS owners take better care of their systems. There are four different components to Public Health's HSTS education program. These include:

1. the preparation and distribution educational postcards to HSTS owners prior to an inspection,
2. the maintenance of information contained on the Public Health HSTS web pages located at https://ccphohio.org/septic-system-operation-permits/. Information includes various care and maintenance fact sheets, educational videos, code enforcement, Clermont County's septic rehab program and more.
3. the conduct of training sessions for HSTS installers as needed, and
4. training sessions for Millennium mound service providers.

Clermont County Public Health will continue to distribute educational postcards and maintain information on its web site, and will conduct at least one training session for HSTS system owners during the permit cycle. Training sessions for HSTS installers and Millennium mound service providers will be provided as needed.

G. Community Outreach and Education Programs

Rationale and Pollutants of Concern: In order to reduce pollutant loads in storm water runoff to the maximum extent practical, Clermont County will need those living and doing business in the county to take action. Clermont SWCD will develop and implement a community outreach and education program that encourages people to adopt and maintain behaviors that will result in reducing storm water pollutant loads. Priority pollutants to be addressed include sediment, nutrients, and pathogens. In addition, Clermont SWCD will encourage residents and land owners to take steps to reduce the volume and rate of storm water runoff.

1. *In-School Education Programs:* Clermont SWCD has presented in-class conservation programs to county school children since the early 1990s, and will continue to do so over the course of the 2021-2026 permit cycle. At a minimum, Clermont SWCD's Education Coordinator will:

    - conduct a minimum of 20 storm water-related in-school programs annually (if not precluded by the COVID-19 pandemic),
    - present programs in at least five of the county's nine school district's each year, reaching all nine districts by April 2026,
    - develop curriculum for five new programs by April 2026.

    The Education Coordinator also works with educators from other SWCDs to maintain the Southwest Ohio Ed Resources web site (https://sites.google.com/view/swcd/home), where virtual lessons are posted for area educators to use. Clermont SWCD will continue to post storm

water-related education programs on the website as they are developed. A minimum of five new programs will be posted by April 2026.

2. *Group Education Programs*: In addition to school programs, Clermont SWCD and the Clermont Park District will host a minimum of three storm water-related educational programs annually for private groups such as scout troops, libraries, church groups, non-profit organizations and others. Clermont SWCD and the Park District will seek to give a program to at least one new group each year.

3. *Project SIGNS*: In 2004, as part of greater Cincinnati area campaign known as Project SIGNS (Signage Inspires Great Neighborhood Streams), Clermont SWCD partnered with the County Engineer's Office and the MS4 co-permittees to install signs at stream crossings that identify the stream and the watershed in which it is located, along with a "Keep It Clean" message. The signs help people identify with the streams in their neighborhood and hopefully encourage them to take steps as individuals to protect these important resources. Signs were installed at 32 stream crossings in the county, including:

    - four stream crossings in Batavia Township,
    - one stream crossing in the Village of Batavia,
    - six stream crossings in Goshen Township,
    - three stream crossings in Miami Township,
    - five stream crossings in the City of Milford,
    - three stream crossings in Stonelick Township,
    - ten stream crossings in Union Township, and

    The signs will be maintained by the entity responsible for the bridge/stream crossing through the duration of the 2021-2026 permit cycle. As requests are made, Clermont SWCD will work with interested parties in printing and posting new stream crossing signs.

4. *Newsletters:* Four times a year, Clermont SWCD publishes an electronic newsletter entitled "Clermont Conservation Quarterly." The newsletter is emailed to those who subscribe and posted on the SWCD website. Hard copies are available upon request. At least three storm water-related articles will be included in the newsletter on an annual basis. Clermont SWCD will share the articles with all permit partners so that they may include them in their newsletters, on their web sites, or on their social media platforms.

5. *Web Sites*: Clermont SWCD will continue to provide education materials and information about the County's storm water management program on its web site at www.clermontswcd.org. Some of the information that can be found on the web site includes:

    - A summary of school education programs offered by the SWCD Education Coordinator
    - Detailed information about rain gardens and rain barrels
    - Pollution prevention fact sheets for a variety of topics
    - Information on how to identify and report spills or illicit discharges

- A list of items for which Clermont SWCD offers technical services and landowner assistance, including erosion problems, pond management, land preservation and wetland management.
- Information about the East Fork Watershed Management Program, including links to approved NPS-IS watershed action plans
- Information about state and local environmental and storm water regulations
- Copies of the Storm Water Management Plan and past annual reports.

Clermont SWCD will keep its web site up-to-date with the most recent information available, and will track and report the number of visitors to key web site pages on an annual basis.

6. *Social Media Postings* – Clermont SWCD maintains both a Facebook page and Twitter account. The Clermont SWCD Education Coordinator also posts monthly articles on The Green Classroom blog (https://greenclassroomforteachers.wordpress.com/). Clermont SWCD will post a minimum of three storm water-related articles on its social media sites annually. All storm water related information from the Clermont Environmental Quarterly newsletter will be shared on Facebook and Twitter. At least one of the monthly postings on the Green Classroom blog each year will address storm water management issues.

5. *Water & Sewer Bill Educational Tips* – The Clermont County Water Resources Department distributes water and sewer utility bills to its 44,000+ customers on a bi-monthly basis. At least once a year, a short, 2-3 sentence storm water educational message will be placed in the comment field on the utility bill. The message may include home storm water management tips, news about upcoming events, information about local storm water regulations, or other storm water-related messages.

6. *Storm Water Response Line* – Clermont SWCD maintains a response line (513-732-7075) where any interested party may ask questions about any aspect of storm water management, or pass on information about an illicit discharge or other water quality problem. During office hours (8 a.m. to 4:30 p.m. Monday-Friday), the phone is either directly answered by a staff person, or the caller is sent to voice mail where he or she may leave a message. Callers may also leave messages on voice mail after hours. District staff will respond to messages left on voice mail as soon as practical, typically within one business day.

H. Program Evaluation

To evaluate the overall successes of the program, the Regional Storm Water Collaborative will conduct a minimum of two surveys to measure general public awareness and involvement in regards to storm water management issues. The first survey will be conducted at the beginning of the permit cycle, and the second at the end. Questions will be designed in a way to identify and track changes in behavior.

I. Measureable Goals

Theme #1: Riparian Zone Protection and Restoration			
Measureable Goal	**Schedule & Frequency**	**Responsible Party**	**Target Audience**
Streambank Protection & Restoration Guide	By Dec. 2022	Clermont SWCD	Riparian landowners
Presentation to development community	One by Dec. 2023	Clermont SWCD	Development community
Land owner site visits	Ongoing, upon request	Clermont SWCD	Riparian landowners
Articles / press releases	One per year	Clermont SWCD	General public
Media advertising campaign	Once during permit term	RSWC	General public

Theme #2: Lawn Care / Landscaping			
Measureable Goal	**Schedule & Frequency**	**Responsible Party**	**Target Audience**
"Shrink Your Lawn" campaign	2022	Clermont SWCD RSWC	Private land owners
Articles / press releases	One per year	Clermont SWCD	General public
Media advertising campaign	Once during permit term	RSWC	General public
Soil testing	Ongoing, upon request	OSU Extension Clermont SWCD	Private land owners
Pollution prevention brochures	Ongoing	Clermont SWCD	General public
Conservation Plant Sale	Annually, April	Clermont SWCD	General public

Theme #3: Erosion & Sediment Control BMPs			
Measureable Goal	**Schedule & Frequency**	**Responsible Party**	**Target Audience**
Storm Water Management Field Day	Once in 2022 and 2023	RSWCD	Developers, MS4 operators
Workshop - Erosion & Sediment Control for Transportation Projects	Once during permit term	Clermont SWCD	Clermont County MS4s

Theme #4: Post-Construction BMPs			
Measureable Goal	**Schedule & Frequency**	**Responsible Party**	**Target Audience**
Post-Construction BMP Management Guides	Always available	Clermont SWCD	BMP owners and operators
Detention and Retention Basin Management Videos	By Dec 2024	Clermont SWCD	Basin owners and operators
Storm Water Management Field Day	Twice during permit cycle	RSWC	Developers, MS4 operators

Theme #5: Plastic Littering			
Measureable Goal	**Schedule & Frequency**	**Responsible Party**	**Target Audience**
Single Use Plastic Conservation Action Initiative	2022-2023	RSWC WAVE Foundation	General public
Litterati mobile app	2022	Clermont SWCD RSWC	General public
Promotion of plastic recycling centers	Ongoing	Clermont SWCD ACSWD	General public

Theme #6: Home Sewage Treatment Systems			
Measureable Goal	**Schedule & Frequency**	**Responsible Party**	**Target Audience**
Education postcards	Ongoing, before inspections	Clermont County Public Health	HSTS owners
Care and maintenance fact sheets	Available online	Clermont County Public Health	HSTS owners
HSTS O&M Training Sessions	One per permit term	Clermont County Public Health	HSTS owners
HSTS Installer Training Sessions	As needed	Clermont County Public Health	HSTS installers

Theme #7: Community Education and Outreach Programs			
Measureable Goal	**Schedule & Frequency**	**Responsible Party**	**Target Audience**
K-12 School Programs	20 programs in 5 districts annually	Clermont SWCD	K-12 students
Develop curricula for new K-12 storm water programs	5 over permit cycle	Clermont SWCD	K-12 teachers & students
Group education programs	Three per year	Clermont SWCD	General public
Project SIGNS – maintain existing signs	Ongoing	Clermont County MS4s	General public
Clermont Conservation Quarterly newsletter articles	Three per year	Clermont SWCD	General public
Web Site educational materials	Ongoing	Clermont SWCD	General public
Social media postings	Three per year	Clermont SWCD	General public
Green Classroom blog postings	One per year	Clermont SWCD	Educators
Water & sewer bill education tips	One per year	Clermont SWCD Clermont Water Resources Dept.	County water & sewer customers
Storm Water Response Line	Mon.-Fri. 8 am-4:30 pm	Clermont SWCD	General public

Program Evaluation			
Measureable Goal	**Schedule & Frequency**	**Responsible Party**	**Target Audience**
General program assessment	Annually	Clermont SWCD RSWC Clermont County Public Health	N/A
General Public Surveys	2022 and 2026	Clermont SWCD RSWC	General public

II. Public Involvement/Participation

This chapter outlines the approach that the County and its MS4 permit partners intend to take in order to provide opportunities for Clermont citizens and other stakeholders to participate in the development and implementation of the County's Storm Water Management Plan. Details of each activity are provided below, including the activity theme, the target audience and how it will be reached, and the parties responsible for conducting the activity. The end of this chapter includes a table that summarizes the activities to be conducted, the timeline for implementation and a list of responsible departments.

Each year, the annual report will include a brief description of each activity and an estimate of how many people participated. The annual report will also include an evaluation of the Public Involvement/ Participation program and recommendations for improvement, if any are necessary.

In general, all local governments participating in the County's regional storm water management program will comply with State and local public notice requirements as they relate to the activities contained within this plan.

A. Revision of Clermont County Storm Water Management Plan

Since the inception of the County's regional storm water management program in 2003, the program has evolved and grown considerably. Significant changes include the formation of the Storm Water Management Department in 2004, the merger of this department with the Clermont Soil & Water Conservation District in 2013, the completion of the storm sewer system inventory for the entire county, the development of a successful illicit discharge program, the institution of a post-construction BMP inspection program, enhancements to the public education and involvement programs, and the drafting of storm water pollution prevention plans for each permit partner. Program changes were reflected in revisions to the Clermont County Storm Water Management Plan (SWMP) in August 2010 and September 2016, and are further updated in this revision.

Clermont SWCD coordinated the current effort to revise the SWMP. On April 27, 2021, a press release was issued requesting public comments on the County's existing SWMP. The comment period remained open through June 1. No comments were received. Clermont SWCD then discussed potential changes with the Storm Water Advisory Committee, and based on feedback received, Clermont SWCD completed a draft of the revised plan. The draft was forwarded to each of the MS4 co-permittees for review and comment. Following this, Clermont SWCD incorporated changes into a final draft.

Clermont SWCD presented the final draft to the Clermont County Township Association at its meeting in Pierce Township on February 17. The plan was well received and there were no request for changes. On February 22, Clermont County issued a press release requesting public comment on the final draft. The comment period ran through March 25 and again, no comments were received. The final draft was presented to and approved by the Board of County Commissioners during its regular session on March 28, 2022 (all regular sessions are recorded and can be viewed on Clermont County's YouTube channel).

B. Revision of Water Management & Sediment Control Regulations

In November 2017, the Clermont County Board of Commissioners approved a comprehensive revision of its Water Management & Sediment Control Regulations, which includes all construction and post construction storm water management requirements for new developments and re-development.

Shortly after, Ohio EPA published a revised Construction General Permit in April 2018. Because the MS4 permit requires local storm water management regulations to be equivalent to the technical requirement set forth in the Construction General Permit, Clermont County will conduct a review its WMSC regulations and make the necessary revisions by April 1, 2022.

The review process will comply with applicable State and local regulations. The Clermont County Building Inspection Department, which is responsible for enforcement of the WMSC Regulations, will lead the effort to update them, with assistance from Clermont SWCD. Building Department and SWCD staff will compare the existing WMSC regulations to the Construction General Permit and identify areas where the County regulations are less stringent. Staff will also look for other opportunities to improve the effectiveness of the regulations.

In December 2021, Clermont SWCD and the Building Department presented a first draft of revisions to a WMSC public advisory committee review that included representatives from the target audience, including the development community, design engineers, environmental interest groups, planning personnel, municipal and township administrators and elected officials. A second draft was prepared to address comments received, and this was forwarded to the committee for their review in January 2022.

Once all comments from the advisory committee have been addressed, a final draft will be published for public comment, and two public hearings will be held in accordance with state and local law. Following the public hearings, the WMSC regulations will either undergo a second review and revision, or be presented to the Board of County Commissioners and City/Village Councils for adoption.

C. Revision of Clermont County Subdivision Regulations

Clermont County's Subdivision Regulations were last updated in 2005. During the 2021-2026 permit cycle, the Clermont County Department of Community and Economic Development will re-convene a committee comprised of various county officials and community stakeholders to review and recommend revisions to the Subdivision Regulations. Among other updates, the County is interested in making changes to the regulations that would provide a greater opportunity for developers to design and construct conservation or compact developments. Recommendations made by the committee will be incorporated into a draft revision which will be presented to the Clermont County Planning Commission for approval. Upon approval from the Planning Commission, at least one public hearing will be held before the Board of County Commissioners vote on adoption.

D. Volunteer Clean-ups

Clermont County and its co-permittees will work together to hold two annual volunteer litter clean-up events - the Spring Litter Clean-up and the Ohio River Sweep. The target audience for both events is all people living and doing business in Clermont County. Each volunteer clean-up is described in detail below.

1. *Spring Litter Clean-up:* For the next five years, Clermont SWCD, Clermont OEQ, and the Valley View Foundation will continue to conduct the annual Spring Litter Clean-up. The goal of the event is to utilize volunteer labor to help keep local lakes, streams and parks throughout the county free of trash and debris. Clean-up sites usually include the banks of East Fork and Stonelick Lakes, several segments of the East Fork Little Miami River, and numerous public parks in the county. Clermont SWCD, OEQ and Valley View will track and report the number of

participants and approximate cubic yards of trash collected per site during the Spring Litter Clean-up. To help promote the clean-up, the organizers will host an annual logo design contest each winter, where the winning artist will have his or her design used on a thank-you item given to volunteers.

2. *Ohio River Sweep:* Each year on the third Saturday in June, Clermont County partners with the Ohio River Valley Water Sanitation Commission (ORSANCO), the U.S. Army Corps of Engineers, and villages along the Clermont stretch of the Ohio River to conduct the Ohio River Sweep. This event is one of the largest clean-ups of its kind, covering six states along 981 miles of river. Similar to the Spring Litter Cleanup, the goal of the Ohio River Sweep is to clean the river banks of trash once a year and more importantly, to increase public awareness about litter and other water quality issues. The County will continue to partner with ORSANCO for as long as this event is held. Clermont OEQ will track and report the number of participants and approximate cubic yards of trash collected per site during each year's clean-up.

E. Storm Drain Labeling

At times, individuals dump oil, antifreeze, paint, trash and other pollutants into storm drains, sometimes unaware that they empty directly into nearby waterways. To help inform the public that storm sewers lead to streams, rivers and lakes and not a treatment plant, and to involve the public in this effort, Clermont SWCD will provide storm drain labels to any individual or group of volunteers interested in placing these on catch basins in their area. Clermont SWCD will promote the labeling program on its web site, social media site and in its newsletter. The goal of this program is to label at least 200 catch basins by the end of the permit term.

F. Master Rain Gardener Program

As described in Section I.B.1.e., Clermont SWCD will partner with the Regional Storm Water Collaborative to create a Master Rain Gardener program for the great Cincinnati area in 2022. The class will be open to 25 participants, who will be required to build a new rain garden or volunteer to maintain/rehab an existing rain garden for one year. Clermont SWCD and the RSWC will re-evaluate the program after the first year to determine if the program should continue and if so, what changes are needed. Changes from year to year will be reported in the MS4 Annual Report.

G. Rain Barrels

Rain Barrel Sales: Clermont SWCD will offer rain barrels for sale throughout the year, with special promotional efforts to be made during the District's annual conservation plant sale. An instructional video on how to install a rain barrel will be made available on the SWCD web site and YouTube channel.

Rain Barrel Art Event: In 2022, the Regional Storm Water Collaborative will organize and host the annual Rain Barrel Art Project, an event first held in 2013. Local artists will be invited to submit their rain barrel artwork at the beginning of each year. From these, the Collaborative will select up to 40 designs for the rain barrels, which, once painted, will be displayed and auctioned at the Cincinnati Zoo. After 2022, the Collaborative will evaluate the success of the event and make recommendations regarding the future of the program. For more information, see Section I.B.1.f.

H. Conservation Plant Sale

Clermont SWCD will continue to hold its annual conservation plant sale through the current permit cycle. As part of this sale, Clermont SWCD will offer native species that property owners can use in rain gardens, to help stabilize streambanks and build healthy riparian buffers. Order forms are typically available each February at www.clermontplantsale.com, and pickup available toward the end of April.

I. Soil Testing

The local Ohio State University Extension Office offers soil testing as a service to all county residents. The standard soil test includes soil pH, available phosphorus, potassium, calcium, and magnesium levels as well as recommendations for lime and fertilizer. Armed with this information, residents can apply only what the soil needs and avoid over-fertilization, which leads to excess nutrients entering local streams. Clermont SWCD will help promote this service, and include an instructional video on how to collect a soil sample on its web site.

J. Solid/Hazardous Waste Disposal

Without available, convenient disposal options for many types of household hazardous and solid wastes, illegal dumping of materials down storm drains and creek banks becomes more prevalent. Clermont County and its MS4 permit partners have established several programs that provide residents with convenient alternatives to safely recycle or dispose of unwanted materials. These are described below:

1. *Household Hazardous Waste Voucher Program*: In 2004, the Adams-Clermont Solid Waste District (ACSWD) established a program that issues vouchers to residents looking to safely dispose of certain household hazardous wastes (HHW). Under this program, homeowners who wish to dispose of HHW materials first call the District and provide a description of what they have, including type and amount of material. If possible, ACSWD will first refer the caller to a local disposal or recycling center. If the material in question cannot be recycled or properly disposed of locally, ACSWD will issue that resident a disposal voucher. The resident is then responsible for bringing the material to Environmental Enterprises in Cincinnati, which then bills ACSWD for the cost of disposal. The program is open to residents only; businesses are not eligible to participate. ACSWD will track the number of HHW disposal vouchers issued each year, and will advertise the program through its web site, electronic newsletters, and press releases.

2. *Antifreeze and Motor Oil Collection Program*: In 2002, Clermont County initiated an antifreeze recycling program for Clermont County residents. Under this program, Clermont County accepts used antifreeze from residents at no charge. The used antifreeze is recycled and reused in County vehicles.

   Also in 2002, the Clermont County Fleet Maintenance Department began accepting used motor oil and other automotive fluids from County residents, who may bring up to five gallons of waste fluids to the County garage on Filager Road. Clermont County will continue to offer both the antifreeze and motor oil recycling programs to Clermont County residents through the current permit cycle. The ACSWD will help advertise these programs through its web site, electronic newsletters and press releases.

3. *Mercury Collection Program*: Clermont OEQ offers a mercury collection program, where Clermont residents can obtain a disposal voucher through the HHW voucher program described above, or drop off items containing mercury (e.g. thermometers, thermostats, etc.) at the OEQ office, which in turn arranges for proper disposal. Clermont OEQ will continue to offer this program through the current permit cycle. An estimated amount of mercury collected will be reported annually. Clermont OEQ will advertise the collection program through its web site, electronic newsletters and press releases.

4. *Municipal/Township Clean-Up Days*: Each year, several villages and townships hold "Clean-Up" days, during which they offer residents an opportunity to properly dispose of unwanted materials that their regular waste removal company may not accommodate, such as furniture, appliances and other large items. There is typically no cost, but proof of residency is usually required. Notices for the Clean-up Days are listed in local papers and on the communities' respective web sites. These events help reduce instances of illegal dumping down hillsides, along creeks and in other areas. The following MS4 permittees will hold Clean-up Days in 2022: Batavia Township and Village, Goshen Township, Miami Township, Stonelick Township and Owensville Village, Union Township, and Williamsburg Village and Township. After 2022, each community will evaluate the effectiveness of the program annually and make a decision about whether to continue or discontinue the event.

K. Pierce Township Greenspace/Parks Committee

In March 2007, the Pierce Township Trustees created its Greenspace/Parks Committee and program. The mission of the greenspace program is to preserve land – via acquisition, conservation easement, conservation development, covenants or other methods – that has ecological or historical significance, natural corridor potential, aesthetic or scenic value, or inherent traits that contribute to the positive character of the Township. Pierce Township will hold monthly meetings of the Greenspace/Parks Committee.

L. Measurable Goals

Activity #1: Storm Water Management Plan Revisions		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Pre-draft public comment period	Apr-May 2021	Clermont SWCD
Final draft public comment period	Feb 2022	Clermont SWCD
Adoption / submittal of final SWMP	By April 1, 2022	Clermont County MS4s

Activity #2: WMSC regulations Revisions		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Public Advisory Committee meeting	4th Qtr 2021	Clermont Building Dept. Clermont SWCD
Public comment period/two public hearings for draft WMSC Regulations revisions	1st Qtr 2022	Clermont Co. Commissioners Clermont Building Dept.
Adoption of revised WMSC Regulations	By Apr 1, 2022	Clermont Co Commissioners Ms4 municipalities

Activity #3: Volunteer Stream Cleanups		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Spring Litter Cleanup	Annually in April or May	Clermont SWCD Clermont OEQ Clermont Park District
Ohio River Sweep	Annually, 3rd Sat. in June	Clermont OEQ Clermont Park District ORSANCO

Activity #4: Storm Drain Labeling		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Label 200 catch basins	By March 2026	Clermont County MS4s

Activity #5: Rain Barrels		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Public rain barrel sale	Annually, year-round	Clermont SWCD
Rain Barrel Art Event	April 2022	RSWC Clermont SWCD

Activity #6: Conservation Plant Sale		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Hold conservation plant sale for county residents	Annually, Feb-Apr	Clermont SWCD

Activity #7: Solid / Hazardous Waste Disposal		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Household hazardous waste voucher program	Mon-Fri, year-round	Clermont OEQ/Solid Waste
Antifreeze and motor oil recycling program	Mon-Fri, year-round	Clermont Fleet Maintenance Clermont OEQ/Solid Waste
Mercury collection program	Mon-Fri, year-round	Clermont OEQ/Solid Waste
Municipal/Township "Clean-up Days"	2022; re-evaluate on annual basis after this	Batavia Twp / Village Goshen Township Miami Township Stonelick Twp / Owensville Union Township Williamsburg Twp / Village

Activity #8: Green Space Committee		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Pierce Township Greenspace/Parks Committee meetings	Monthly	Pierce Township

III. Illicit Discharge Detection and Elimination

This chapter outlines the Illicit Discharge Detection and Elimination Program that has been established by Clermont County and its MS4 permit partners. The program includes the following components:

- Maintenance and enforcement of the County's illicit discharge regulations, established in July 2007 and revised in 2011 and 2017.
- Maintenance of the MS4 GIS database of the storm water conveyance system serving all of Clermont County (with the exception of the City of Loveland).
- Implementation of a program to detect illicit discharges and eliminate them when found.
- Maintenance of the map of home sewage treatment systems (HSTSs) connected to the MS4, and inspections of HSTSs to ensure that they are operating as designed and intended.
- Evaluation of possibilities for eliminating discharging HSTSs where they can be legally, feasibly and economically connected to central sewers.
- Implementation of a program to educate public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste.

The end of this chapter includes a table that summarizes the illicit discharge detection and elimination activities to be conducted, the timeline for implementation and a list of responsible departments.

Each year, the annual report will include the total number of outfalls, number of outfalls screened in dry weather, the number of dry weather flows identified, the number of illicit discharges identified, the number of illicit discharges eliminated, schedules for elimination of illicit discharges that have been identified but not yet eliminated, and a summary of any storm sewer mapping updates.

A. Illicit Discharge Regulations

Clermont County's Illicit Discharges and Illegal Connections regulations were adopted in June 2007 as Article 8.0 of the Water Management and Sediment Control (WMSC) regulations and subsequently updated in 2011 and 2017. The regulations are posted at https://permit.clermontcountyohio.gov/water-management-sediment-control-regulations/. These will be updated as part of the overall WMSC revisions by April 1, 2022.

The illicit discharge regulations state that "no person shall discharge or cause to be discharged into any portion of the CCS4 (Clermont County Separate Storm Sewer System) any pollutants, contaminants, or waters containing any pollutants or contaminants other than storm water…" A list of exemptions is also included. The regulations require that any person notify either the Building Inspection Department or Clermont SWCD of any spills or accidental discharges.

The regulations give the Enforcing Official (either Clermont SWCD or the Building Department) the authority to assess and inspect properties and facilities, and the right to require the discharger to allow the installation of monitoring equipment if necessary. If an illicit discharge or illegal connection is identified and not eliminated immediately, the Enforcing Official may order compliance by a written notice of violation. In addition to the elimination of the discharge, the notice may require monitoring and analyses, the abatement or remediation of any contamination caused by the discharge, or the implementation of best management practices. The Enforcing Official may petition the appropriate

court for injunctive relief to restrain continuing or threatened future violations and/or to compel the abatement of the activities leading to the violation, or to remediate the effects of any violation.

The illicit discharge regulations (along with the entirety of the WMSC Regulations) pertain to all unincorporated areas of Clermont County. The WMSC Regulations have been adopted by each of the MS4 municipalities, including Batavia, Milford, Owensville and Williamsburg. Clermont County is responsible for enforcing the regulations in the Villages of Batavia, Owensville and Williamsburg, while Milford enforces the regulations within its city limits.

B. Storm Sewer System Inventory and Condition Assessment

Clermont County completed a comprehensive inventory and condition assessment of all storm sewer systems serving the urbanized area in 2014, and of systems serving the remainder of the county in 2019. The inventory includes all components of storm sewer systems associated with pipes 12 inches in diameter or larger. All publicly owned and maintained systems were mapped, as were privately-owned systems downstream of any public storm sewers to the outfall/terminus. Two methods were used to conduct the inventory. If accurate and up-to-date construction drawings were available, they were georeferenced and used to create and attribute the storm water features in GIS. If plans were not available, features were gathered in the field utilizing GPS equipment.

The following structures were inventoried: catch basins, manholes, inlets, outfalls, culverts, connecting pipes and storm water BMPs. Also, ditch lines were created using the County's digital elevation model. Attribute information on size/diameter, material, condition, presence/ absence of flow, indications of illicit discharges and other information were also collected during field mapping. Components of the public system that are in need of rehabilitation or replacement were flagged, and this information was forwarded to the entity responsible for maintaining that portion of the system (township, municipality, County Engineer or ODOT).

Clermont SWCD will continue to maintain the GIS layer as older components of the system are replaced or new components are constructed. Construction and as-built drawings for replacement or new systems will primarily be used to update the geodatabase on a regular basis, with field verification conducted on an as-needed basis.

C. Illicit Discharge Detection Program

There are several components of Clermont County's illicit discharge detection program, including dry weather screening of storm water outfalls by Clermont SWCD, annual stream monitoring and sampling conducted by Clermont County OEQ and the East Fork Watershed Cooperative, field inspections conducted by county, municipal and township staff, and the illicit discharge and spill hotline. These are explained in more detail below.

1. *Dry Weather Field Screening*: Clermont SWCD will be responsible for conducting dry weather screening of storm water outfalls. The goal is to screen a minimum 250 outfalls each year, with a minimum 1,000 outfalls screened over the five year permit term. Unless there is a clear indication of an active illicit discharge, private outfalls will not be screened if access is denied by the property owner.

Additionally, Clermont SWCD has developed a list of outfalls that have been determined to have a high potential for illicit discharges. Factors used in developing the list include history of past discharges, age of system and types of businesses/industries tributary to the outfall, among others. Clermont SWCD will screen these outfalls during dry weather at least once a year.

2. *Illicit Discharge Screening at Industrial Locations*: At least once during the permit cycle, Clermont SWCD will conduct site inspections at industries within the urbanized area to determine the potential for spills or illicit discharges. If Clermont SWCD determines the potential is high at a particular industry, or if a discharge is identified, the industry will be added to the list of sites where annual screening is to be conducted. Additionally, the Industrial Pretreatment Program Coordinator for the County's Water Resource Department looks for indications of illicit discharges during annual Significant Industrial User facility inspections and drive by inspections. If an illicit discharge is noted, the Coordinator will either work directly with the responsible party to eliminate the discharge or notify Clermont SWCD, which will conduct follow-up inspections and enforcement.

3. *Restaurant inspections* – During inspections of restaurants and other food establishments, Clermont County Public Health (CCPH) inspectors will also look for signs of illicit discharges at and around solid waste and grease dumpsters outside of the facility. In particular, CCPH inspectors will ensure that dumpsters are water-tight and do not leak; that grease dumpsters have tight fitting lids; and that oil, grease or other pollutants aren't entering the MS4. CCPH will be responsible for enforcing any violations related to restaurant operations and waste disposal. If material is found to have entered the MS4, CCPH investigators will inform Clermont SWCD of the illicit discharge. Level 1 and 2 operations (primarily those that deal with pre-packaged foods) will be investigated on an annual basis, while Level 3 and 4 operations, including those that generate oil and grease wastes, will be inspected twice a year.

4. *Stream Monitoring and Sampling Program* - Since 1997, Clermont OEQ has conducted an annual stream monitoring and sampling program, primarily focused in the East Fork Little Miami River watershed. Around 2008, OEQ began coordinating its sampling efforts with those of U.S. EPA's Office of Research and Development and the U.S. Army Corps of Engineers. Some form of sampling is conducted year-round by the various partners in the East Fork Watershed Cooperative. Samples are collected and analyzed for a wide range of pollutants, including *E. coli*, nutrients, metals, solids, carbonaceous biological oxygen demand, chlorophyll-a and phycocyanin, dissolved oxygen, temperature, conductivity and pH and others. Rainfall data are collected through a network of rain gauges at different locations throughout the county. The program is designed to clearly identify and quantify the various causes and sources of stream impairment (including urban runoff and illicit discharges) in the East Fork watershed.

   While the specific elements of the program may change from year to year (and sometimes from season to season), members of the East Fork Watershed Cooperative will continue to conduct annual monitoring and sampling. Clermont County, as a Level 3 Quality Data Collector, will submit a plan covering the sampling conducted by OEQ on a frequency required by Ohio EPA. The Cooperative reviews results of sampling efforts and discusses possible adjustments to the program at each of its meetings, which are usually held quarterly.

5. *General Field Inspections* - County, municipal and township personnel involved in field work are instructed to be aware of and report signs of illicit discharges. These include personnel who

conduct field activities for CCPH, the County Engineer's Office, the Water Resources Department, the Building Inspections Department, OEQ, SWCD, and city, village and township service personnel. Although these people are generally in the field for matters unrelated to storm water management, they nevertheless provide an extra set of eyes for illicit discharges, especially those that may be temporary or intermittent in nature and therefore harder to detect. Each of the above agencies and communities are provided with copies of the County's "Field Strategies for Detecting Illicit Discharges" and the illicit discharge field data sheet, along with instructions on who to contact if a particular type of discharge is suspected.

6. *Public Complaint Response* – Because it is impossible for Clermont County and its partners to constantly monitor over 5,000 public and private outfalls for illicit discharges, it is important to utilize the general public as a means for detecting illicit discharges which may occur at any time. The Clermont SWCD web site contains information on how people should report a spill or a suspected illicit discharge (www.clermontswcd.org/reporting-spills-and-illicit-discharges/), and an on-line spill response form (https://www.clermontswcd.org/report-a-spill/). Anyone may call Clermont SWCD at (513) 732-7075 to report a suspected discharge, and SWCD staff will respond as soon as possible. Anyone may also report a suspected illicit discharge through the Regional Storm Water Collaborative's hotline at (513) 946-3999. Callers are asked to select the county in which the discharge is located. If the caller selects Clermont County, the call is immediately forwarded to Clermont SWCD.

D. Illicit Discharge Source Identification and Elimination Procedures

1. *Illicit Discharge Source Identification*: If the person or entity responsible for an illicit discharge is not immediately known, personnel will use existing storm sewer and stream maps, along with parcel information, land use, and topography information in GIS, and their own knowledge of the area to locate the source of the suspected discharge.

2. *Spill Notification*: Hazardous material spills reported to or identified by Clermont SWCD or OEQ are reported to the Clermont County Department of Public Safety Services, which in turn reports the spill to the County's Emergency Management Agency, the Local Emergency Planning Committee, the local fire department, and Ohio EPA's spills hotline in accordance with State regulations. If a spill poses an immediate threat to the health of Clermont County residents, 911 is called. For direct spills or those with the potential to impact the Ohio River, personnel will contact the ORSANCO spills hotline at (513) 231-7719.

   If illicit sanitary cross connections from industrial, commercial or multi-family sources are found to be actively contributing sewage to the small MS4, Ohio EPA's Southwest District Office will be notified within 24 hours of discovery. Ohio EPA will also be notified within 24 hours of any sanitary sewer overflow that may imminently and substantially endanger human health. This includes dry weather overflows, major line breaks, overflows that result in fish kills or other significant harm, overflows that expose the general public to contact with raw sewage, and overflow events that occur in sensitive waters and high exposure areas (such as protection areas for public drinking water intakes), and waters where primary contact recreation occurs. Notification will include the location, general description, date and approximate time the discharge was discovered.

3. *Elimination of Illicit Discharges*: In all instances, Clermont SWCD first works directly with the responsible party to arrange for voluntary elimination of the discharge. Based on past history, it is anticipated that this approach will address most problems. If voluntary elimination of the discharge cannot be accomplished, Clermont SWCD will follow the procedures contained in the County's Illicit Discharge regulations, with the first step being the issuance of a Notice of Violation to the responsible party. In addition to requiring elimination of the discharge, the Notice of Violation may require monitoring and analysis, the abatement or remediation of any contamination caused by the discharge, or the implementation of best management practices. If the discharge threatens the use attainment of a local waterbody, the Division may request assistance from Ohio EPA. Clermont SWCD will conduct follow-up screening to ensure the discharge is eliminated, and if necessary, will add the location to the list for annual inspections.

E. Home Sewage Treatment System (HSTS) Mapping:

Clermont County Public Health tracks both discharging and non-discharging home sewage treatment systems in its Operation Permit Assessment (OPA) database. For individual parcels, the OPA database includes such information as parcel identification number and owner, permit number, type of HSTS, its general location on the lot, inspection history (e.g., dates of inspection, pass/fail) and next scheduled inspection date. The database is linked to the County's GIS database, so HSTS locations, types and inspection data can be viewed geographically. As of December 2021, CCPH has identified 21,935 HSTSs throughout Clermont County. The status of an individual HSTS, including system type and date of next inspection can be obtained online at https://ccphohio.org/septic-system-operation-permits/. Public Health personnel continue to map and enter systems into the OPA database as part of their regular inspection program.

F. Home Sewage Treatment System Inspection Program

Public Health inspectors conduct their assessments on a township by township basis over a 19 month rotation period. The OPA database is utilized to schedule the assessments. Those with electrical components are scheduled for an assessment every 19 months. Those without electrical components such as traditional gravity systems are scheduled for an assessment once every 38 months. Small flow (<1,000 gal/day) commercial systems are assessed on the same schedule. Semi-public systems covered under a 110 contract with Ohio EPA are inspected annually. The inspection schedule for a particular HSTS can be obtained at https://ccphohio.org/septic-system-operation-permits/.

In 2010, CCPH established the "Acceptable Operation and Maintenance Program." Under this program, owners of HSTSs receive a pass on the next scheduled assessment if their system passes a routine assessment two consecutive times, thus doubling the interval between assessments. This provides an incentive to homeowners to maintain their system, and also helps CCPH technicians to focus their resources and efforts where they are most needed.

One month prior to scheduled assessments, CCPH mails a postcard to all HSTS owners in the township that will be assessed. The postcards include educational information and typically encourage people to perform maintenance and fix any problems prior to inspection.

After each assessment is made, CCPH provides a notice to each HSTS owner encouraging them to visit the CCPH website to review the appropriate care and maintenance fact sheets, depending upon the system. Public Health maintains care and maintenance fact sheets for the following: Aerobic Treatment

Units, Leach Lines, Mound Systems and Sand Filters. Each care and maintenance flyer is available at https://ccphohio.org/septic-system-operation-permits/septic-system-fact-sheets/, or CCPH will mail copies to homeowners upon request.

Every advanced technology systems installed after April 1, 2003 is required to have a service contract for operation and maintenance of the system. The contract must be maintained with an approved service provider for as long as that system is in operation. The duration of a contract is required to be at least one year. Advanced technology systems installed prior to April 1, 2003 are not required to have a contract with a service provider; however CCPH still highly recommends obtaining one.

G. Home Sewage Treatment System Code Enforcement

Violations that are found during initial assessments are documented on the inspection report and mailed to the system owner. A time limit of 30 days is given to correct the violation; however, this can vary depending on the type and severity of the violation.

At the end of the time frame, CCPH conducts a follow up assessment. If no corrections have been made, a Notice of Violation is sent via Certified Mail notifying the owner they have 30 days to correct the violation. Another follow up is conducted at the end of the time period. If the violation has still not been corrected, the matter is referred to the Board of Health to be declared a code violation or a nuisance. The Board of Health sends a certified notice that the matter has been declared a nuisance or code violation. An inspection is conducted 30 days after receipt of the notice and if the matter is not corrected, it is referred to the Clermont County Prosecutor's Office to take legal action against the system owner.

It is important to note that CCPH may be willing to accommodate various time frames given the seriousness of the nuisance or violation, the level of cooperation of the homeowner, the time of year, or the cost of the repair; however, this is considered on a case by case basis with input from field staff. For homeowners who lack the ability to pay for a complete system replacement, CCPH has developed the Remediation Program which allows homeowners to make gradual improvements to their systems. Full details on the program are given below:

1. *Remediation Program*: Complete system replacement may be the most expedient way to resolve a sewage nuisance, but it may not always be possible. In those cases, the Remediation Program provides homeowners with an opportunity to gradually make improvements to their system and possibly avoid or delay a full replacement of the septic system, as long as the plan abates the sewage nuisance. In short, the program allows for more flexibility in planning and provides an opportunity to manage costs.

   The goal of the Remediation Program is to effectively correct sewage nuisance problems at the lowest possible cost. To participate in the program, the homeowner first makes an application to CCPH for remediation. Once the application is made, CCPH personnel will visit the property and evaluate the system. After the evaluation, CCPH contacts the homeowner and presents all possible options. The homeowner then decides what plan to follow. The plan may include two, three or more phases, depending on the circumstances. Each subsequent phase will add more treatment or more control, or both, to the system. As much as possible, each phase will include steps that will be parts of the final system.

Phase 1 of the plan typically involves the following steps:

- Replace existing tank(s) with new, or modify/seal the existing tank(s) so that infiltration of ground or surface water is not going to affect the system.
- A commitment on the homeowner's part to conserve water and to look for and eliminate sources of extra water that may be going to the system.
- At least one additional step to get the sewage below the surface of the ground, unless conditions indicate that more than one additional step may be necessary.
- The choice of a final system for the site. The final system choice may be changed later, under the conditions that space is available and the soil is suitable.

After the plan is agreed upon, the resident is asked to sign off on that plan, and a copy is placed in the OPA file for later reference. The homeowner is provided a copy of the plan to give to registered installers so they can bid on the work to be conducted.

H. Evaluation of Eliminating Discharging Home Sewage Treatment Systems

Under ORC 6117.51, if CCPH determines that the reason for a new public sewer construction project is to reduce or eliminate an existing health problem or a hazard of water pollution, the Board of Health will pass a resolution stating such. Once such a resolution is passed, the Board of County Commissioners may require the owners of existing discharging HSTSs to connect to the public sewer, unless the property or situation is exempt under ORC 6117.51.

Clermont County Public Health and the Water Resources Department will continue to work together to identify residences with failing discharging HSTSs that can legally, feasibly and economically be connected to central sewers. Each year, the Water Resources Department reviews and updates its five-year capital improvement plan, which includes sewer extension projects to unserved areas. In addition, the Water Resources Department periodically prepares Master Plans to evaluate the feasibility of serving unsewered areas. During these planning efforts, CCPH is a stakeholder and assists with determining feasibility, priority and need. If connection to public sewer is not possible, CCPH will also examine the possibility of replacing failing discharging systems with soil absorption systems. Each year, the number of systems that have been eliminated will be included in the annual report.

I. Illicit Discharge Public Education Program

Clermont County has developed several informational brochures related to pollution prevention and illicit discharges, which are available on the SWCD website at https://www.clermontswcd.org/swcd-publications/. These include:

- When it Rains, Clermont Drains
- Spotting and Reporting Illicit Discharges
- Household Illegal Discharge and Pollution Prevention Guide
- Pollution Prevention for Automotive Maintenance and Repair
- Storm Water Pollution Control for Industrial Facilities
- Lawn Care: Keeping it Environmentally Friendly in Clermont County
- Protect Our Rivers: Stop Stoop and Scoop (pet waste)

In addition to the educational brochures, Clermont County has posted its illicit discharge regulations on line at https://permit.clermontcountyohio.gov/water-management-sediment-control-regulations/. Clermont SWCD also maintains a site where residents can report illegal dumping or spills online at https://www.clermontswcd.org/report-a-spill/.

At least once during the permit term, CCPH will conduct a training session for HSTS installers. Training sessions for Millennium mound service providers will be conducted as needed.

J. Program Evaluation and Assessment

At the end of each year, Clermont SWCD will work with the lead departments for each of the above tasks to review their effectiveness and make any changes that are deemed necessary. Any such changes will be included in the Annual Report to Ohio EPA.

K. Measurable Goals

Activity #1: Illicit Discharge Regulations		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Enforce Clermont County illicit discharge regulations	Ongoing	Clermont SWCD City of Milford

Activity #2: Storm Sewer System Inventory and Condition Assessment		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Maintain county-wide storm sewer system inventory	Ongoing	Clermont SWCD Clermont OEQ

Activity #3: Illicit Discharge Detection Program		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Dry weather field screening of outfalls	Minimum 250/year; 1000/permit term	Clermont SWCD
Dry weather field screening of all outfalls with high potential for illicit discharges	Annually	Clermont SWCD
Inspect industrial sites within urbanized area	Once every 5 years	Clermont SWCD Clermont Water Resources
Inspect restaurant sites	Level 1-2 operations annually; Level 3-4 operations 2x/year	Clermont Co Public Health
Conduct stream monitoring and sampling program	Annually	Clermont OEQ Clermont SWCD
Maintain spill report hotline and online reporting form	Ongoing	Clermont SWCD

Activity #4: Home Sewage Treatment System Mapping		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Maintain/update Operation Permit Assessment database of HSTSs	Ongoing	Clermont Co Public Health

Activity #5: Home Sewage Treatment System Inspections		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Inspect individual/commercial HSTSs with electrical components	Once every 19 months	Clermont Co Public Health
Inspect individual/commercial HSTSs without electrical components	Once every 38 months	Clermont Co Public Health
Mail pre-inspection postcards	Prior to each inspection	Clermont Co Public Health
Send post-inspection notices	After each inspection	Clermont Co Public Health

Activity #6: Home Sewage Treatment System Code Enforcement		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Enforce HSTS codes	Ongoing	Clermont Co Public Health
Accept Remediation Program applications	Annually	Clermont Co Public Health

Activity #7: Evaluate Elimination of Discharging HSTSs		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Conduct assessment of connecting homes served by discharging HSTSs to public sewer	Annually	Clermont Co Public Health Clermont Water Resources

Activity #8: Illicit Discharge Public Education Program		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Maintain online pollution prevention / illicit discharge fact sheets	Ongoing	Clermont SWCD Clermont Co Public Health
Conduct HSTS maintenance training for system owners	Once per permit term	Clermont Co Public Health
Conduct training sessions for HSTS installers	As needed	Clermont Co Public Health

IV. Construction Site Runoff Control

Clermont County has established and will continue to enforce the Water Management and Sediment Control (WMSC) Regulations to control erosion at construction sites to the maximum extent possible and to trap the sediment resulting from such erosion before it gets into local streams.

These regulations apply to all unincorporated areas of the county, as well as the MS4 municipalities of Batavia, Milford, Owensville, and Williamsburg, each of which has adopted them. The Clermont County Building Inspection Department is the entity responsible for enforcing the regulations in the townships and villages of Batavia, Owensville and Williamsburg, while the City of Milford enforces the regulations within its boundaries.

This chapter summarizes the key components of the WMSC regulations, discusses the design and construction plan review process, reviews the procedures for site inspections and enforcement, provides a synopsis of the data management system, and highlights education activities designed to promote the use and proper installation of various erosion and sediment control BMPs.

A. Clermont County Water Management and Sediment Control Regulations

The Clermont County WMSC regulations first became effective on April 2, 1990, and have been revised twice to meet the intent of the MS4 permit. This latest revision of the regulations went into effect on December 30, 2017. Following publication of the current Small MS4 permit (OHQ000004), Clermont County initiated a review and revision of the WMSC regulations to ensure that they are equivalent with the technical requirements set forth in Ohio EPA's Construction General Permit. In December 2021, a public stakeholder committee was assembled to provide input on possible changes (see Section II.B). After all comments from the committee have been addressed, Clermont County will publish a final draft and initiate a 30-day public comment period. All comments will be considered, with changes made to the draft where appropriate. Two public hearings will be held once the final draft has been completed. Revised regulations will be adopted by the Board of County Commissioners by April 1, 2022.

The following paragraphs provide a summary of key components of the regulations. A full copy can be obtained at https://permit.clermontcountyohio.gov/water-management-sediment-control-regulations/.

1. *Application of WMSC Regulations:* The WMSC Regulations apply to all non-farming earth disturbing activities performed on the unincorporated lands of Clermont County, and in those municipalities that have adopted the WMSC regulations. Activities that are exempt include strip mining and surface mining operations regulated under Sections 1513.01 and 1514.01 of the Ohio Revised Code. Additionally, public highways, transportation and drainage improvements undertaken by a government agency or political subdivision are exempt, provided they have obtained coverage under Ohio EPA's Construction General Permit.

2. *WMSC Plans and Permits:* Any activity that disturbs one or more acre of ground or moves more than 100 cubic yards of soil is required to obtain a WMSC permit through the Building Inspection Department. Sediment and erosion control plans are required for subdivisions, commercial developments, industrial developments, site developments for single commercial or industrial buildings (including additions and accessory buildings), construction of residential homes in approved subdivisions or on single lots, and any cut or fill activity that disturbs more than 100

cubic yards. Specific requirements of WMSC plans for different types of activities are listed in Article 4.0 of the WMSC Regulations.

Before any work can be started on subdivisions, commercial/industrial developments or buildings, an applicant must submit an erosion and sediment control plan to obtain a separate WMSC Site Preparation Permit. The approved erosion and sediment control measures must be installed prior to any clearing or grading work. A Building Permit will only be issued once the BMPs have been installed, inspected and approved by the Building Inspection Department.

3. *Erosion and Sediment Control Requirements*: Article 6 of the WMSC Regulations contains specific requirements related to erosion and sediment control measures. This section includes criteria and requirements for the following:

    - stabilization of denuded areas and soil stockpiles
    - protection of watercourses during construction
    - timing and stabilization of erosion and sediment control BMPs
    - cut and fill slope protection
    - storm sewer inlet protection
    - sediment settling ponds
    - design standards for various erosion and sediment control BMPs
    - BMP maintenance (additional maintenance requirements are contained in Section 730 of the WMSC Regulations)

4. *Enforcement Provisions*: Article 3, Section 330 of the WMSC Regulations contains the enforcement provisions. The provisions are summarized in Section IV.C below.

B. WMSC Plan Submittal and Review

The Clermont County WMSC Regulations separate earth disturbing activities that require a WMSC plan into four types of site development:

- Subdivisions, commercial developments and industrial developments
- Single commercial or industrial buildings (including additions and accessory buildings)
- Construction of residential homes on single lots (including additions and accessory buildings)
- Cut, fill or grading on existing parcels in excess of 100 cubic yards

The following paragraphs summarize the minimum WMSC plan requirements and review process for each of these. Formal checklists are used by both the Building Inspection Department and Clermont SWCD to review Storm Water Pollution Prevention Plans (SWP3s) that are submitted with WMSC design and construction plans. The Building Department may require more detailed design specifications or plans when a particular problem is identified or if a sensitive area may be jeopardized.

1. *Subdivisions, commercial developments and industrial developments*: These types of developments require a separate Site Development Permit prior to the issuance of a Building Permit. The Site Development Permit is issued upon approval of final construction plans that include the planned erosion and sediment control BMPs. These BMPs must be installed prior to any clearing or grading.

For these developments, a Preliminary (Design) Plan must first be submitted to the Clermont County Planning Department. Among other items, the Design Plan must show existing watercourses, a soils map, proposed locations for any component of the storm water conveyance system including BMPs, and the approximate limits of grading and stripping. Specific Design Plan requirements are listed in Section 410.1-1 of the WMSC Regulations. These plans are reviewed by members of the Building Department, the Planning Department, the Water Resources Department, the Engineer's Office and Clermont SWCD (subdivisions only). Once comments have been submitted, a review meeting is scheduled with the site developer and/or project engineer.

The next step is the submittal of a Final Construction Plan, which includes the SWP3. In addition to the items shown on the Design Plan, the Construction Plan must show existing and proposed final grades, location of all erosion and sediment control structural practices, erosion and sediment control notes related to construction sequence, seeding specifications, filter barrier and silt fence placement notes and details, among other items. Specific Construction Plan requirements are listed in Section 410.1-2 of the WMSC Regulations. These plans are reviewed by the same departments involved in Design Plan review, and as with design plans, a meeting is scheduled with the site developer and/or project engineer to review any comments submitted. Once all comments have been adequately addressed and the Final Construction Plan has been approved, a Site Development Permit may be issued. The applicant must notify the Building Department within seven days of the first earth disturbing activities.

2. *Single commercial or industrial buildings*: These types of developments do not require the submittal of a Preliminary (Design) Plan. The Final Construction Plan must include all items specified in Section 410.1-2 items A-O, which include the existing and proposed final grades, the location of all erosion and sediment control structural practices, and erosion and sediment control notes related to construction sequence, seeding specifications, filter barrier and silt fence placement notes and details, among other items. Construction Plans are reviewed by the Building Department/Water Resources Department engineer, and, if a portion of the storm water conveyance system is located within the road right-of-way, the Engineer's Office. Any comments are sent to the applicant in a plan review letter, and a face-to-face meeting may be held at the applicant's request. As with subdivisions and commercial/industrial developments, all sediment and erosion control measures must be in place before a Building Permit is issued.

3. *Construction of residential homes on single lots*: A preliminary plan is not required for these developments. A site plan indicating sediment and erosion control measures must be submitted with each set of building plans for one-, two-, and three-family dwellings. For these types of developments, review of the erosion and sediment control measures are typically handled in the field by the Building Department's site inspector.

4. C*ut, fill or grading on existing parcels in excess of 100 cubic yards*: A preliminary plan is not required for these activities. The site plan must indicate existing and proposed drainage systems and all sediment and erosion control measures. Similar to residential homes on single lots, review of the erosion and sediment control measures for cut, fill or grading activities on existing lots are typically handled in the field by the Building Department's site inspector.

5. *Milford Plan Review Process*: The City of Milford has adopted the Clermont County WMSC regulations as its own, but conducts its own enforcement within the city limits. Under Milford's plan review process, all types of development are handled the same way. The City Engineer reviews all development plans for compliance with the WMSC regulations. A formal checklist will be developed and used to review the plans. Comments are provided to the applicant and a review meeting may be scheduled. Ultimately, the development plans are submitted to the Milford Planning Commission for approval. After approval of the plans, permits are obtained through the Milford's Building Department, which is also run by the City Engineer. The appeals process is managed by the Board of Zoning Appeals in accordance with section 1131.01 of the Milford Zoning Ordinance.

C. Procedures for Receipt and Consideration of Public Comments

Any person can request information or submit comments on construction plans for new developments. Comments must be submitted in writing, and are considered during the normal plan review process. Additionally, Planning Commission meetings are always open to the public, and comments may be submitted either verbally or in writing during these meetings.

Any person can also submit complaints to the Building Department about erosion and sediment runoff from active development sites. As with construction plan comments, complaints must also be submitted in writing. Building Department inspectors will generally follow-up on written complaints within two business days.

D. Procedures for Site Inspection and Enforcement

All WMSC site inspections are conducted by the Clermont County Building Inspection Department, except in Milford, where inspections are conducted by city personnel. Three general types of inspections are conducted by Building Department staff. Formal inspection checklists are used for each inspection type. The first is the initial WMSC Site Preparation Inspection. For subdivisions, commercial and industrial developments, a Site Development Permit must be obtained prior to the issuance of a Building Permit. This permit requires that the approved erosion and sediment control measures be installed prior to any clearing or grading. Building Department inspectors will conduct inspections to ensure the necessary BMPs have been properly installed before allowing construction to begin. An immediate stop work order will be issued if the party clearing the land has failed to obtain the necessary permits for erosion and sediment control.

The second type of inspection is the WMSC Rough Inspection. During these site visits, Building Department personnel inspect the construction entrance, the sediment basin and all other erosion and sediment control BMPs to ensure that they have been properly installed, are functioning as intended, and are being maintained. These will be conducted at least once every 31 days until final stabilization has been achieved. Sites containing sensitive areas (e.g. highly erodible soils, wetlands) may receive higher prioritization. Inspection frequencies may be increased if violations are noted.

Once the storm water conveyance system is completed and functioning, and the site is at final grade, the Building Department will conduct a WMSC Final Inspection to ensure that final site stabilization has been achieved, the site has been seeded and mulched, and that the storm water conveyance system and post-construction BMPs have been constructed in accordance with the approved Construction Plan.

Article 3, Section 330 of the WMSC Regulations contains the enforcement provisions. If any deficiencies are noted, the Building Inspector will verbally notify the responsible party of the deficiency and require that measures be taken to correct the situation within a specified length of time. Verbal notifications are documented in the Energov database (see Section E below). If the permittee continues work in violation of the WMSC regulations, the Building Department will take action in accordance with Section 307.79 of the Ohio Revised Code. The Building Department will first issue a written a notice of violation. If, after a period of not less than 30 days has elapsed following the issuance of the notice of violation, and the violation continues, the Building Department will issue a second notice of violation. If, after a period of not less than fifteen days has elapsed following the issuance of the second notice of violation, and the violation continues, the Building Department may issue a stop work order. In addition to the actions specified under ORC 707.79, the Building Department may revoke the WMSC permit, or withhold the issuance of a Certificate of Occupancy for any building constructed on the project area until the required corrective action measures are taken.

A Performance/Maintenance Surety Bond of 130% will be required for work covered by the WMSC regulations before the record plat can be recorded for any subdivision and prior to the release of any permit by the Building Department. The bond is to remain in effect until all site inspections are completed and basin/BMP verification has been submitted to and approved by the Building Department. If inspections reveal the construction activities are not in compliance with the WMSC regulations, the Performance/Maintenance Bond may be forfeited to achieve compliance.

Milford site inspection/enforcement - The City Engineer or designee, administers and enforces the WMSC regulations within the Milford city limits. Inspections of erosion and sediment control measures and the construction of permanent structural BMPs are done in conjunction with other building inspections, including footer inspections, framing inspections and insulation inspections. WMSC-only inspections may be conducted if the City Engineer notices problems on the site or complaints are received. A final site inspection is completed when the site has been permanently stabilized. If problems are noted, verbal comments are given first, followed by a written letter with time constraints specified for each corrective action needed. If problems are still not rectified following the written notice, the City Building Department may issue a stop work order or a citation may be issued and the issue at hand is handled in the Mayor's Court.

E. WMSC Data Management

The Clermont County Building Department currently tracks all aspects of SWP3 review, site inspections and enforcement from the initial review to project close-out in its Energov database. Upon the submittal of a permit application, a Project Number is assigned in Energov. All WMSC plan reviewers post comments they have in Energov under the appropriate Project Number (except for the Engineer's Office and Clermont SWCD, which submit comments in writing to Planning Department staff, who then input the comments into Energov). At any time, the Planning Department or other Energov user can view any plan revisions that are still required before final approval is granted. Once construction begins, the Building Department tracks inspections through Energov, including any deficiencies noted and the status of any corrective measures that the Department's inspectors require. Prior to a site visit, inspectors can view the history of site inspections in Energov, along with any problems that have not yet been addressed. Inspection results are tracked in Energov until final site stabilization has been achieved and the project has been closed out.

F. Program Evaluation and Assessment

At the end of each year, the Building Inspection Department and Clermont SWCD will review the effectiveness of the tasks listed above and make any changes that are deemed necessary. Any such changes will be included in the Annual Report to Ohio EPA.

G. Measurable Goals

Activity #1: WMSC Regulations		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Create public advisory committee to provide comments on revisions to WMSC regulations	4th quarter 2021	Clermont Building Dept. Clermont SWCD
Conduct two public hearings on draft revisions to WMSC regulations	1st quarter 2022	Clermont Building Dept. Clermont SWCD
Adoption of revised WMSC regulations	By April 1, 2022	Clermont Co Commissioners MS4 municipalities

Activity #2: WMSC Plan Review		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Revise plan review checklists	By April 1, 2022	Clermont Building Dept. Clermont SWCD City of Milford
Evaluation of concept, design and construction plans as submitted	Ongoing	Clermont Building Dept. Clermont Planning Dept. Clermont Engineer's Office Clermont SWCD City of Milford

Activity #3: WMSC Site Inspection and Enforcement		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Revise site inspection checklist	By April 1, 2022	Clermont Building Dept. City of Milford
Inspect erosion and sediment control BMPs at construction sites disturbing ≥ 1 acre.	Once every 31 days	Clermont Building Dept. City of Milford
Enforcement of WMSC violations	As needed	Clermont Building Dept. City of Milford

Activity #4: WMSC Data Management		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Maintain WMSC plan review/inspection and enforcement database/records	Ongoing	Clermont Building Dept. City of Milford

V. Post-Construction Storm Water Management

As mentioned in Chapter 4, Clermont County has established and will continue to enforce the WMSC regulations, most recently adopted the Board of County Commissioners in December 2017. In addition to erosion and sediment control requirements, the WMSC regulations include rules and design criteria pertaining to post-construction BMPs.

This chapter summarizes the key components of the WMSC regulations relating to post-construction storm water management, including information on structural and non-structural BMPs, the pre-construction plan review process, inspections to ensure BMPs are built per requirements, procedures in place to ensure long-term operation and maintenance, information on BMP demonstration projects, and activities that raise awareness and promote the use of alternative post-construction BMPs.

A. Clermont County Water Management and Sediment Control Regulations

Clermont County utilizes its WMSC regulations as the mechanism for addressing storm water runoff from new development and re-development. A full copy of the current regulations can be found on the Building Inspection Department's web site at https://permit.clermontcountyohio.gov/water-management-sediment-control-regulations/. As stated in Section IV.A, Clermont County will update its regulations to reflect changes in Ohio EPA's 2018 Construction General Permit by April 1, 2022.

Article 3.0 of the WMSC regulations provides the requirements for on-site storm water detention, as well as maximum runoff velocity requirements for situations where on-site detention is not required. Chapter 3 also restricts detention or retention basins from being located in a natural watercourse.

Article 5.0 of the WMSC regulations contains the design criteria for various structural BMPs. Section 510 provides the criteria for defining the critical storm. The WMSC regulations state that the post-development peak rate of runoff from the critical storm and all more frequent storms shall not exceed the pre-development peak rate of runoff from a one-year storm of 24 hours duration. Storms occurring with less frequency than the critical storm shall have peak runoff rates equal or less than the peak rates of runoff for the same frequency storm under pre-development conditions.

Section 520 contains the design methods for determining the peak flow rate and volume of detention required for flood control and for the protection of stream channels. This section also requires that post-construction BMP be sized to treat the water quality volume defined in the Construction General Permit.

Section 530 contains design requirements and specifications for detention and retention basins. Basins must be designed to limit the critical storm flow from the basin to the one-year pre-developed rate. Basins must also have the capacity to store all storm frequencies greater than the critical storm up to the 100-year storm event and release the outflow at the pre-developed rate for like years. Section 530 provides target draw-down times for various extended detention and infiltration BMPs. This section also allows for the use of alternative structural BMPs, provided the permittee can demonstrate that it is equivalent in effectiveness to approved BMPs.

B. WMSC Plan Submittal and Review

The submittal and review process for design and construction plans for post-construction storm water management controls follows the same process for the submittal and review of erosion and sediment

control plans outlined above in Section IV.B. Storm water analysis calculations are required to be submitted with the construction plan. At this stage, analyses must indicate the design method, the critical storm calculations, calculations indicating the volume of detention needed for flood control, and the Water Quality Volume that must be treated. In addition, the construction plans must show the proposed location, design calculations and details for all post-construction BMPs. Easements for the BMPs must also be shown. Review of the plans by County staff follows the same procedures for the review of the erosion and sediment control measures contained in the SWP3.

C. Inspection of Post-Construction Storm Water BMPs

During construction, both the Building Inspection Department and the Engineer's Office inspect the installation of post-construction BMPs. Building Department personnel inspect BMPs along with erosion and sediment control measures during construction. After construction has been completed, the Clermont County Engineer's Office conducts a final inspection before releasing the performance bond.

Section 710 requires that a surveyor complete a field survey of detention and retention facilities to verify as-built elevations and dimensions. An as-built drawing of the facility must be provided to the Building Department along with a certification signed by a Professional Engineer and a Professional Surveyor stating that the facility has been constructed in accordance with the approved plans. The Record Plat will not be signed nor will a Certificate of Occupancy be issued until the certification is submitted to and approved by the Building Department.

D. Maintenance of Post-Construction Storm Water BMPs

To ensure that structural BMPs are maintained before ownership reverts to the individual or groups of property owners identified on the record plat, Section 720 of the WMSC Regulations states that all WMSC facilities be included in the Performance/Maintenance Surety (bond) required by the Clermont County Engineer. A Performance Bond of 130% is required for any remaining work covered by the regulations before the record plat can be recorded. Periodic inspections are required to ensure the site remains in compliance. Failure to maintain the BMPs could result in action against both the surety and the owner/developer.

Upon expiration of the Performance/Maintenance Surety Bond, the maintenance responsibility for all post-construction BMPs reverts to the individual(s) or group(s) of property owners as identified on the record plat. The maintenance responsibility is recorded on the deed for the property and on the record plat, and as such, transfers to new owners when the property changes hands. Section 730.4 requires the WMSC permittee to provide the post-construction operator with an Inspection and Maintenance plan upon completion of construction activities. Beginning in 2022, Clermont County will begin requiring owners of post-construction BMPs to sign a statement on the record plat that clearly identifies long-term operation and maintenance responsibilities. The statement will account for the transfer of responsibility in leases and/or deed transfers, allow Clermont County or its representative to conduct inspections of post-construction BMPs and perform necessary maintenance or corrective actions neglected by the owner, and to recover costs from the owner.

The WMSC permittee has the option of submitting a petition to the County for permanent maintenance of a facility through the creation of a public watercourse under ORC 6131 or the establishment of a storm water district under ORC 6117. The petition must be submitted to the Building Inspection Department and/or the Engineer's Office during the preliminary design stage of the project. Once

approved by the Board of County Commissioners, property tax assessments or user fees can then be charged to the individual lots that benefit from the WMSC facility. If the petition is approved, future inspection and maintenance of the facility are the responsibility of the County Engineer's Office.

For storm water basins in both the ditch petition and storm water district programs, the Engineer's Office performs a complete inspection of all aspects of the storm water basin once each year, typically in the spring, and any issues or problems are documented. One to two mowings are conducted during the growing season. Other types of maintenance are performed as needed.

Under an agreement with the Clermont County Board of Commissioners, Clermont SWCD conducts inspections of post-construction BMPs that are not the responsibility of the County Engineer. Clermont SWCD will conduct at least one inspection of each facility over the course of the permit term. If any maintenance or repair needs are noted during the inspection, Clermont SWCD will send a notice detailing the needs to the post-construction operator, and will conduct follow-up inspections to document any improvements made.

E. Clermont County Subdivision Regulations

The Clermont County Subdivision Regulations contain several requirements that help reduce impervious area in new developments and protect nearby watercourses or other sensitive areas from the impacts of storm water runoff. The Subdivision Regulations were most recently revised and enacted on October 1, 2005. A full copy of the Subdivision Regulations can be obtained at https://clermontcountyohio.gov/planning/subdivision-review/.

1. *Sensitive Development Areas:* The Clermont County Subdivision Regulations contains rules designed to protect "Sensitive Development Areas." These are defined as any land or soils that, if subjected to improper use or management, are otherwise determined to be incapable or unsuitable of urban use. They may also be lands that pose special hazards to development or the environment and may require special use, design and engineering restrictions. Sensitive Development Areas include:

    - the beds and banks of perennial and intermittent streams;
    - alluvial flood plains (soil types are specified);
    - lands in the floodway of any existing watercourse, as defined by the Federal Emergency Management Agency's Flood Hazard Boundary Maps, or by the U.S. Army Corps of Engineers;
    - lakes and ponds intermittently filled with water (soil types are specified);
    - wetlands;
    - surface and subsurface quarries and gravel pits;
    - bedrock escarpments; and
    - steep slopes and erosion hazards (percent slope and soil types are specified)

    If any of the above is present at the proposed development site, the applicant must demonstrate that satisfactory efforts have been made to mitigate any special hazards. If the development area contains alluvial soils or lands in an existing floodway, the applicant is required to delineate the 100-year flood plain and indicate this on the design plans, construction drawings and record plat. If wetlands or wetland soil types are present, a wetland delineation is required. The Clermont County Planning Commission may require conservation easements on lands designated as Sensitive Development Areas, open space or other areas deemed to be exceptional in character.

2. *Open Space:* The Subdivision Regulations encourage every applicant to provide open space. An applicant may designate all or part of a Sensitive Development Area as open space. Any lands dedicated for open space purposes shall contain appropriate covenants and be noted on the record plat, indicating that the intended use will continue in perpetuity, that future development of the open space will not be contrary to its stated use, and provisions for maintenance.

3. *Flood Plain Development:* Section 522 of the Subdivision Regulations states that if a stream flows through or adjacent to a proposed subdivision, the plat shall provide a storm water drainage easement sufficient to accommodate the 100-year storm event.

4. *Planned Unit Developments*: The Subdivision Regulations encourage the use of planned unit developments that are intended to be in harmony with the natural site features. Section 702 states that the Planning Commission may modify Article V standards for residential lots less than five acres provided that the modification will meet several objectives, including the conservation of natural amenities of the landscape and the provision of open space.

As stated in Section II.C, Clermont County will update the current regulations during the 2021-2026 permit cycle.

F. Milford Post-Construction BMP Credits Program

The City of Milford offers opportunities to non-residential property owners to obtain credits of up to 50 percent of their storm water utility fee if they establish and maintain one or more water quality best management practices. Types of BMPs eligible to receive credit include:

- Filter/buffer strips
- Infiltration trenches
- Water quality ponds
- Detention/retention ponds
- Dry wells
- Grass line conveyance
- Riparian buffers
- Stream restoration
- Active participation in Adopt-a-Road or Stream programs
- Storm water education programs

Those interested in receiving a BMP credit must submit an application along with supporting documentation to the City. To maintain a credit, the property owner must submit an annual management and maintenance report on each BMP for which credit has been granted. Failure to submit a report may result in cancellation of the credit. Details on the program are provided in the Storm Water Credits Application Form, which can be viewed at https://www.milfordohio.org/departments/public_works_department/stormwater.php.

G. Basin Retrofits

During the course of the 2021-2026 permit cycle, Clermont County will complete one retrofit of a storm water management basin in the Hall Run watershed, which has been designated as impaired by Ohio EPA due to urban storm water runoff. The basin retrofit project will be completed by the end of 2023.

H. Pierce Township Green Space Program

In March 2007, the Pierce Township Trustees established its Greenspace/Parks Committee and program. The mission of the program is to preserve land – via acquisition, conservation easement, conservation development, covenants or other methods – that has ecological or historical significance, natural corridor potential, aesthetic or scenic value, or inherent traits that contribute to the positive character of the Township. The Greenspace/Parks Committee will continue to meet monthly and provide guidance on acquiring new green space and managing existing green space. The Township will maintain a program web site at http://piercetownship.org/parks-and-greenspace/greenspace-committee/.

I. Post-Construction BMP Education Programs

Clermont County and its co-permittees will continue to implement and improve upon the various post-construction storm water education programs developed during previous MS4 permit cycles. Specific details regarding these programs are provided below. Some of these are also described in more detail in the Public Education chapter.

1. *Post-Construction BMP Management Guides*: The Clermont County WMSC Regulations require developers to provide maintenance plans for all post-construction BMPs, including detention and retention ponds, to the post-construction BMP operator. Clermont SWCD has developed templates of management plans for detention and retention basins that can be used to meet the WMSC requirements for new facilities. In 2018 and 2019, Clermont SWCD provided hard copies of the management guides to all known post-construction owners/operators of detention and retention basins. Copies of the guides can be found at https://www.clermontswcd.org/swcd-publications/.

2. *Pond Management Clinic*: Clermont SWCD will hold annual pond management clinics that will provide information on retention basins as well as ponds that have been constructed for purely aesthetic or recreational purposes. The clinic is typically held in April of each year. To complement the information provided during the annual pond clinic, Clermont SWCD will produce an educational video about the care and maintenance of retention ponds by 2023.

3. *Rain Garden and Bioretention Education Programs*: Activities to be conducted under the rain garden education program include: maintaining the Clermont County Rain Garden Central web site, conducting rain garden workshops for landscapers and the general public, maintaining public rain gardens, and providing technical assistance to those wanting to construct their own rain garden. Each of these is described in more detail in Section I.B.1 above.

4. *Presentation to Development Community*: During the course of the permit, Clermont SWCD will provide at least one presentation to a group of development professionals about the problems of stream-bank erosion and the importance of maintaining riparian buffer zones.

5. *Tools for Open Space Protection: Guidance and Options for Local Governments:* In June 2005, the Clermont County Planning Commission published a document entitled *Tools for Open Space Protection: Guidance and Options for Local Governments*. This document was created to provide local governments with an objective process that can be used to identify land areas with current and potential open space attributes; with guiding principles to compare the relative value of multiple open space parcels; and with a compilation of available tools which can be used to protect open

space. The report can be downloaded at http://ftp.clermontcountyohio.gov/SoilAndWater/ToolsForOpenSpaceProtection.pdf.

J. Program Evaluation and Assessment

At the end of each year, the Building Inspection Department and Clermont SWCD will review the effectiveness of each of the tasks listed above and make any changes that are deemed necessary. Any such changes will be included in the Annual Report to Ohio EPA.

K. Measurable Goals

Activity #1: WMSC Regulations		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Create public advisory committee to provide comments on revisions to WMSC regulations	4th quarter 2021	Clermont Building Dept. Clermont SWCD
Conduct two public hearings on draft revisions to WMSC regulations	1st quarter 2022	Clermont Building Dept. Clermont SWCD
Adoption of revised WMSC regulations	By April 1, 2022	Clermont Co Commissioners MS4 municipalities

Activity #2: WMSC Plan Review		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Revise plan review checklists	By April 1, 2022	Clermont Building Dept. Clermont SWCD City of Milford
Evaluation of post-construction storm water management plans for new development	Ongoing	Clermont Building Dept. Clermont Planning Dept. Clermont Engineer's Office Clermont SWCD City of Milford

Activity #3: Post-Construction BMP Inspection and Enforcement		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Revise site inspection checklist	By April 1, 2022	Clermont Building Dept. City of Milford
Inspect post-construction BMPs during and upon completion of construction.	Monthly inspections during construction, final inspection at completion	Clermont Building Dept. Clermont Engineer's Office City of Milford
Enforcement of WMSC violations	As needed	Clermont Building Dept. City of Milford

Activity #4: Post-Constriction BMP Maintenance		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Inspection of ditch petition / storm water district storm water basins	Once annually	Clermont Engineer's Office
Maintenance of ditch petition / storm water district storm water basins	As needed	Clermont Engineer's Office
Inspection of privately owned post-construction	Once every five years	Clermont SWCD

Activity #5: Storm Water Utility Credits for Post-Construction BMPs		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Evaluation of post-construction BMPs eligible for storm water utility credit	Annually	City of Milford

Activity #6: Basin Retrofits		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Retrofit one storm water management basin in the Hall Run watershed	By 2023	Clermont SWCD

Activity #6: Pierce Township Green Space Committee		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Pierce Township Green Space Committee meetings	Monthly	Pierce Township

Activity #7: Post Construction BMP Education Programs		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Maintain detention/retention basin maintenance manuals online	Ongoing	Clermont SWCD
Conduct pond management workshops	Annually	Clermont SWCD
Develop educational video on detention/ retention basin maintenance	By December 2023	Clermont SWCD
Presentation to development community on stream bank erosion and importance of riparian buffers	One by December 2023	Clermont SWCD

VI. Pollution Prevention / Good Housekeeping

Clermont County and its municipal and township co-permittees will continue to implement their individual inspection, operation and maintenance programs designed to reduce the discharge of pollutants into the MS4, and work together to examine and improve upon existing programs, and develop pollution prevention training programs for county, municipal and township personnel. Specific details regarding the different pollution prevention programs and activities are presented below.

A. Local Government Storm Water Pollution Prevention Plans

Storm Water Pollution Prevention Plans (SWP3) have been developed for the County Engineer's Office and those townships with full-service vehicle maintenance facilities. In 2022, a plan will be developed for a composting facility operated by the Village of Williamsburg, which is also inspected annually by Ohio EPA. There are no waste transfer stations in the county operated by any of the Clermont County MS4 permittees. Facilities for which SWP3s have been developed include:

- Clermont County Fleet Maintenance Facilities on Filager Road (includes maintenance for Clermont Transportation Connection buses and county impoundment lot)
- Clermont County Engineer's Office Highway Operations
- Miami Township Fleet Maintenance Operations
- Pierce Township Fleet Maintenance Operations
- Union Township Fleet Maintenance Operations

B. Good Housekeeping Plans

With the assistance of Clermont SWCD, each MS4 co-permittee has documented their individual operation and maintenance programs as they relate to storm water pollution prevention and developed Good Housekeeping Plans. Clermont SWCD will work with its partners to annually review and where necessary, revise the plans to ensure that they specifically address the following areas:

- maintenance activities, maintenance schedules and long-term inspection procedures for controls to reduce the discharge of floatables and other pollutants to the MS4 from roads, parking lots, maintenance and storage yards and sand/salt storage locations;
- descriptions of roadway and parking lot winterization plans, including application rates and controls to reduce the discharge of road salt or other products used to prevent ice build-up or remove ice and snow from roadways and parking lots;
- procedures for the proper management and disposal of waste removed from the MS4;
- procedures to minimize usage of pesticides and fertilizers, and
- procedures to ensure that flood management projects are assessed for impacts on water quality.

C. Road Winterization Programs

Each MS4 in Clermont County stores its road salt under cover, and each has taken steps to prevent problems with run-on and subsequent run-off of salt. Only three co-permittees utilize brine in treating the roads (Clermont County Engineer, Miami Township and Union Township). All three have storage tanks with secondary containment and/or barrier protection in place.

All 15 co-permittees have various measures in place to minimize the amount of salt usage while still protecting public safety. Measures differ among co-permittees, but range from training and dry weather runs before the winter season begins, careful monitoring of weather forecasts and road conditions, pre-treatment with brine, calibrating spreader equipment, minimizing settings on spreaders, narrow spreading along the road centerline, and treating only intersections, curves and hills. More information is contained in the individual SWP3s/good housekeeping plans.

D. MS4 Maintenance / Disposal of Wastes

Where ditch maintenance is performed, each co-permittee will apply soil stabilization controls to bare soils within seven days of reaching final grade if an area is to remain inactive for over 14 days. If ditch maintenance is performed within 50 feet of a surface water, soil stabilization measures will be applied within two days of reaching final grade, or if the area will remain inactive for over 14 days. All Clermont County co-permittees will have a program in place to meet these deadlines no later than April 1, 2023.

All co-permittees have procedures in place to properly manage waste collected from the MS4. Waste collected from the MS4 is disposed of in one of three ways. If the waste is uncontaminated soil/ sediment or vegetation, it may be used as fill or mulch on public properties such as parks and cemeteries (excluding swales, ditches and streams). Any garbage/trash collected will be disposed of as solid waste. Any waste contaminated with oil or other hazardous material will be disposed of as hazardous waste.

E. Pesticide and Fertilizer Usage

Not all co-permittees use pesticides and fertilizers. Eight of the 15 co-permittees did not use any pesticides in 2021. Those that do have developed procedures for proper application and to minimize use. Some co-permittees only use pesticides in very limited areas (such as around guardrails). Those that apply fertilizers will either obtain training needed to maintain their commercial applicators licenses, or contract with a licensed applicator. Applications will not be made during wet weather, or when significant rain is forecast, or during excessively windy conditions.

Many co-permittees do not use any fertilizers (eight applied none in 2021). Those that do may conduct the applications themselves or hire a contractor. Most apply fertilizers only in small specific areas, such as cemeteries when establishing graves sites. As with pesticides, applications are not conducted during wet weather events or if significant rain is in the forecast. Care is taken to avoid applications before, during and immediately after wet weather events, and windy conditions.

Specific management measures for both pesticides and fertilizers are contained in the individual SWP3/ good housekeeping plans.

F. Government Employee Training Programs

Each MS4 co-permittee will implement an annual training program for employees involved in activities related to storm water management. The training programs may address road winterization programs, spill response, parks and open space maintenance, pesticide and fertilizer applications, fleet and building maintenance, new construction and land disturbances, and maintenance of the MS4.

In 2022, Clermont SWCD will purchase a general storm water pollution prevention training video for public works departments, and will make the video available on loan to the County Engineer's office and municipal/township public works departments to conduct new employee training.

Clermont SWCD will prepare and distribute a Co-Permittee Handbook that will include a copy of the permit, individual SWP3s/good housekeeping guides, the illicit discharge detection guide and reporting form, among other items. Clermont SWCD will also host at least one pollution prevention/good housekeeping training program each year for its MS4 permit partners. The topics presented at the annual training sessions will vary from year to year.

G. Industrial Storm Water Education Program

At least once during the permit cycle, Clermont SWCD will offer a storm water pollution prevention training session for all entities within the county that hold an industrial storm water general permit. This training session may coincide with the one held for the County's MS4 permit partners. At the time this plan was prepared, a total of 30 entities held industrial general permits. Clermont SWCD will also offer to conduct site audits for permit holders, and provide guidance on any improvements that may be needed. For any situations that are beyond the experience of SWCD staff, the industrial permittee will be referred to Ohio EPA's Office of Compliance Assistance and Pollution Prevention.

H. Pollution Prevention Education Programs

Clermont SWCD will maintain a variety of web-based pollution prevention tips and information at https://www.clermontswcd.org/pollution-prevention/. The target audiences for this site are home owners and businesses – separate sections are included for each. The residential pollution prevention section includes information on auto care, home care and remodeling, household waste disposal, lawn and garden care, litter prevention, pet waste disposal and septic system care and maintenance. The pollution prevention section for commercial and industrial businesses includes information on general workplace practices and auto care. The web site also includes PDFs of the following brochures: "When it Rains, Clermont Drains," "Household Illegal Discharge and Pollution Prevention Guide," "Pollution Prevention for Automotive Repair and Maintenance," and "Storm Water Pollution Control for Industrial Facilities."

I. Program Evaluation and Assessment

The pollution prevention and good housekeeping program for each Clermont County MS4 permittee will be reviewed by local government staff throughout the year. Improvements may be made at any time. The Good Housekeeping Plans are reviewed at the end of each year in concert with the preparation of the annual report. Any significant changes will be included in the report.

J. Measurable Goals

Activity #1: Review of SWP3s and Good Housekeeping Plans		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Create SWP3 for Williamsburg Village composting facility	By December 2022	Williamsburg Village Clermont SWCD
Review of all SWP3s and good housekeeping plans, with updates if necessary	Annually	Clermont SWCD All MS4 co-permittees

Activity #2: MS4 Ditch Maintenance		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Create and implement programs to stabilize ditches after disturbance in accordance with MS4 permit requirements	By April 1, 2023	Clermont County Engineer MS4 municipalities MS4 townships

Activity #3: Pollution Prevention Training		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Purchase pollution prevention training video, make available to all c-permittees for new employee training	2022	Clermont SWCD
Pollution prevention training for storm water personnel of MS4 co-permittees	Annually	All MS4 co-permittees
Conduct county-wide storm water pollution prevention workshop	Annually	Clermont SWCD
Conduct SWP3 training sessions for industrial storm water general permit holders	Once during permit cycle	Clermont SWCD
Conduct site audits for industrial storm water general permit holders	As requested	Clermont SWCD

Activity #4: Pollution Prevention Education Programs		
Measureable Goal	**Schedule & Frequency**	**Responsible Party**
Maintain pollution prevention educational materials on web site	Ongoing	Clermont SWCD