Storm Water Management Program

Ohio EPA MS4 Permit Number OHQ000003
2014-2019

December 2016 Update
*Revised by City, November 2018*

City of Wilmington, Ohio
Storm Water Management Program

Prepared By:
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## CERTIFICATION

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

________________________________

Eric Green

WWTP Chief Operator

City of Wilmington, OH
Executive Summary

The previous National Pollutant Discharge Elimination System (NPDES) permit for authorization for small Municipal Separate Storm Sewer Systems (MS4s) to discharge storm water (NPDES Permit No. OHQ000002) required the development and implementation of a Storm Water Management Program (SWMP) that satisfied the appropriate water quality requirements of Ohio Revised Code (ORC) 6111 and the Clean Water Act. The SWMP document is intended to identify and describe the best management practices (BMPs) selected by the City of Wilmington (City) to meet the requirements of the six minimum control measures (MCMs) described in the permit, why those BMPs were selected in light of local water quality issues, and performance standards for BMP implementation. The six MCMs are:

1. Public Education and Outreach on Storm Water Impacts
2. Public Participation / Involvement
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

The NPDES small MS4 permit was reissued on September 11, 2014 (NPDES Permit No. OHQ000003), and requires MS4 communities which are renewing coverage under this permit to update their SWMP to be consistent with the permit and submit the updated SWMP to Ohio EPA for review. Permit No. OHQ000003 requires that where applicable, BMPs shall be selected to address U.S. EPA approved Total Maximum Daily Load (TMDL) recommendations for identified water quality problems associated with MS4 discharges within the City of Wilmington’s watershed(s).
System Overview and Total Maximum Daily Loads (TMDLs)

The City of Wilmington is located in Clinton County in southwest Ohio. The City has a population of approximately 12,500 people and covers 11 square miles within the Lower Little Miami River watershed. The City is partially contained in four HUC 12 watersheds:

- Headwaters Todd Fork (050902020602)
- Lytle Creek (050902020603)
- Headwaters Cowan Creek (050902020604)
- Wilson Creek-Cowan Creek (050902020605)

*City of Wilmington boundary (shown in red)*
The Lower Little Miami River Watershed TMDL report was approved by U.S. EPA on March 28, 2011. Information about each of the four sub-watersheds the City drains into is included within the Lower Little Miami River Watershed TMDL report. Information on each of the sub-watersheds and current TMDL status is described in the table below. The TMDL does include specific references to Wilmington’s MS4, particularly related to bacteria (E. coli) TMDLs at locations along Lytle Creek, Todd Fork, Turtle Creek, and the Lower Little Miami River. Although the ABX Airpark is located within the City limits, storm water runoff from the airport is regulated through its own NDPES discharge permit and has specific waste load allocations that are included in the Lower Little Miami River Watershed TMDL report. The requirements of the ABX Airpark are separate from the City of Wilmington MS4.

<table>
<thead>
<tr>
<th>Watershed</th>
<th>TMDL</th>
<th>Applicability and Cause/Source*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headwaters Todd Fork (50902020602)</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>Lytle Creek (050902020603)</td>
<td>E coli TMDL</td>
<td>E coli TMDL attributed to the WWTP, sanitary sewer overflows, urban runoff, and agricultural runoff. Sediment and nutrient impairment at RM 9.3, Townsend Field. <strong>Cause</strong>: sedimentation, nutrient/eutrophication biological indicators. <strong>Source</strong>: New Construction and permitted industrial/commercial storm water discharge. Non-attainment. Sediment and nutrient impairment at RM 7.01, Lytle Creek at Nelson Road. <strong>Cause</strong>: sedimentation, nutrient/eutrophication biological indicators. <strong>Source</strong>: permitted industrial/commercial storm water discharge. Partial attainment. Sediment and nutrient impairment at RM 5.95, Lytle Creek discharge from WWTP. <strong>Cause</strong>: sedimentation, nutrient/eutrophication biological indicators. <strong>Source</strong>: municipal point source discharges and permitted industrial/commercial storm water discharge. Partial attainment.</td>
</tr>
<tr>
<td>Headwaters Cowan Creek (050902020604)</td>
<td>Sediment TMDL</td>
<td>Sediment TMDL &amp; DO/COD TMDL are associated to ABX Airpark requirements and are not applicable to the City of Wilmington</td>
</tr>
<tr>
<td>Wilson Creek-Cowan Creek (050902020605)</td>
<td>None</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*RM = River Mile
The City of Wilmington’s MS4 program is implemented through various departments within the City as well as in coordination with various other agencies. The following organizational chart provides a visual representation of how these entities work collaboratively to accomplish the goals outlined in this Storm Water Management Program.

The overarching authority for the SWMP is the City Service/Safety Director. However, daily management of the stormwater utility and related SWMP activities is delegated to the Stormwater Administrator.
## Table of Organization

**Primary Point of Contact:** Eric Green, Storm Water Program Manager  
*Roles and Responsibilities: Program Oversight*

<table>
<thead>
<tr>
<th>Entity</th>
<th>Name, Title</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Services Department</td>
<td>Brian Shidaker, Service Director</td>
<td>Project Implementation; Education and Outreach;</td>
</tr>
<tr>
<td></td>
<td>Harry McVey, Wastewater Superintendent</td>
<td>Coordination with EPA; Coordination with County SWCD; Plan Review,</td>
</tr>
<tr>
<td></td>
<td>Rick Shaffer, Water Superintendent</td>
<td>HSTS; Education and Outreach; HSTS Inspection and Maintenance</td>
</tr>
<tr>
<td></td>
<td>Mike Crowe, Sanitation Superintendent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jerry Runk, Streets Superintendent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jermaine Isaac, Parks Director</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tony Morris, Taxi Superintendent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Michelle Horner, Building and Zoning</td>
<td></td>
</tr>
<tr>
<td>Clinton County Health</td>
<td>Pam Walker-Bauer, Health Commissioner</td>
<td>HSTS Education and Outreach; HSTS Inspection and Maintenance</td>
</tr>
<tr>
<td>District</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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*Revised by City, November 2018*
Minimum Control Measure 1:
Public Education and Outreach on Storm Water Impacts
Minimum Control Measure 1:
Public Education and Outreach on Storm Water Impacts

The City of Wilmington MS4 permit requires public education and outreach efforts to do the following:

*Shall implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.*

**Performance Standards:** Program shall include more than 1 mechanism and at least five different storm water themes or messages over the permit term, at least one theme shall be targeted to the development community, and reach at least 50% of the population.

The following tables outline the best management practices (BMPs) selected by the City of Wilmington to accomplish MCM 1. The City has the legal authority to implement all identified BMPs.

<table>
<thead>
<tr>
<th>BMP Type: Media Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description of BMP:</strong> The City will provide media communications, via the City’s website, to promote education and outreach of the storm water program and related issues. At least one storm water theme will be added to the website on an annual basis, including a theme targeted at the development community.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document the date and information added each time the storm water page on the City’s website is updated on an annual basis.</td>
<td>Annually</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Online communication is a growing way to provide current information to people of a wide variety of demographics.

**Target Audience:** General public.

**How BMP addresses TMDL:** A website link to Ohio EPA’s TMDL program will be added, as well as a link to the Lower Little Miami River TMDL. Several of themes used for media communications will be focused on water quality impairments identified in the Lower Little Miami River TMDL, including for bacteria.
BMP Type: Storm Water Management and Erosion Control Pamphlets

**Description of BMP:** The City will provide various storm water management and erosion control pamphlets at municipal offices and local events.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document the number of pamphlets distributed to the development community.</td>
<td>Annually</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMPs:** Repeatedly providing written information on this topic to residents and developers will remind them of the importance of proper watershed management practices and construction site erosion protection and sediment control (EPSC).

**Target Audience:** General public, Home-builders/development community.

**How BMP addresses TMDL:** Repeatedly providing written information on this topic to residents will provide avenues for education on various pollutants throughout the service area and create awareness for stakeholder involvement. Developers will reduce the occurrence of construction site EPSC violations, and reduce sediment loads from active construction sites. Water quality impairments due to bacteria and sediment were identified in the Lower Little Miami River TMDL.

### MCM 1 Decision Process – Rationale Statement

*The rationale statement shall include the following information, at a minimum:*

**i. How you will inform individuals and households about the steps they can take to reduce storm water pollution?**

See above tables for information on pamphlets and website updates. These methods will help inform individuals and households about steps they can take to reduce storm water pollution. The five themes that will be included as part of the MCM are as follows:

- Nutrient Pollution
- Erosion Control and Sediment Control (Targeted to the Development Community)
- Residential Storm Water Management
- Litter and Trash
- Hazardous Waste Disposal

**ii. How you plan to inform individuals and groups on how to become involved in the storm water program (with activities such as local stream restoration activities).**

Website updates and pamphlets will be utilized to notify individuals about upcoming and reoccurring opportunities to get involved.

**iii. Who are the target audiences for your education program who are likely to have significant storm water impacts (including commercial, industrial and institutional entities) and why those target audiences were selected.**

For the City of Wilmington, target audiences can generally be divided into three groups: (1) Development Community who is responsible for erosion control and detention to reduce...
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sediment loads, (2) Homeowners who can reduce their residential runoff pollution and (3) Businesses who have parking lot urban runoff.

iv. **What are the target pollutant sources your public education program is designed to address?**

Bacteria pollution (E.coli) is one of the main pollutants of concern as outlined in the TMDL, so this will be a key focus of the education programs, along with general urban runoff pollution (trash, oil, pet waste etc.) and nutrient pollution.

v. **What is your outreach strategy, including the mechanisms (e.g., printed brochures, newspapers, media, workshops, etc.) you will use to reach your target audiences, and how many people do you expect to reach by your outreach strategy over the permit term?**

See above tables for detailed strategies to reach people through printed media and digital media. All residents, businesses, and developers will have direct access to updated information via the City’s website. Several times a year residents are referred to the City’s stormwater program website from their utility bills. In this manner, the City anticipates that at least 50% of the target audience will be reached during the permit term.

vi. **Who (person or department) is responsible for overall management and implementation of your storm water public education and outreach program and, if different, who is responsible for each of the BMPs identified for this program?**

See above tables for responsible party for each listed BMP. Generally, this responsibility is held by the City of Wilmington Public Services Department.

vii. **How will you evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs?**

The measureable goals were selected to be specific, measurable, achievable and realistic. The City intends to evaluate the effectiveness of the public education and outreach BMPs by tracking and documenting information as described in the tables above.
Minimum Control Measure 2: Public Involvement/Participation
Minimum Control Measure 2: 
Public Involvement/Participation

The City of Wilmington MS4 permit requires the public involvement/participation efforts to do the following:

*Revised by City, November 2018*

**Shall comply with State and local public notice requirements and satisfy this minimum control measure’s minimum performance standards when implementing a public involvement/participation program.**

**Performance Standards:** Include, at a minimum, five public involvement activities over the permit term.

The following tables outline the best management practices (BMPs) selected by the City of Wilmington to accomplish MCM 2. The City has the legal authority to implement all identified BMPs.

### BMP Type: Various Watershed Improvement Activities

**Description of BMP:** The City will work with local volunteer groups and public organizations to provide targeted watershed improvement initiatives utilizing public involvement.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants of the activity</td>
<td>3 activities per permit cycle</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Engaging the public in watershed activities provides opportunity for hands-on education and outreach while also providing tangible benefit throughout the watershed.  
**Target Audience:** General public, citizen/student groups.  
**How BMP addresses TMDL:** Water quality benefits anticipated through various watershed improvement activities.

### BMP Type: Wastewater Treatment Plant Tours

**Description of BMP:** The City will continue to provide tours of its Wastewater Treatment Plant. A portion of the tour is focused on MS4 operations, storm water management, and associated impacts.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tours provided</td>
<td>2 tours per permit cycle</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Involving the general public in learning the various processes of a wastewater treatment plant and how it relates to their local streams and rivers.  
**Target Audience:** Students, general public.  
**How BMP addresses TMDL:** The general public can better understand and involved in how wastewater treatments plants reduce bacteria loads to local streams.
MCM 2 Decision Process – Rationale Statement

The rationale statement shall include the following information, at a minimum:

i. **Have you involved the public in the development and submittal of your NOI and SWMP description?**

   A draft of this storm water management plan was posted on the City’s website for public review and comment.

ii. **What is your plan to actively involve the public in the development and implementation of your program?**

   A draft of this storm water management plan was posted on the City’s website for public review and comment. The proposed SWMP includes various opportunities for the public to get involved in the implementation of the SWMP.

iii. **Who are the target audiences for your public involvement program, including a description of the types of ethnic and economic groups engaged. You are encouraged to actively involve all potentially affected stakeholder groups, including commercial and industrial businesses, trade associations, environmental groups, homeowner’s associations, and educational organizations, among others.**

   The target audiences are listed in the above tables and include volunteer groups, students, and the general public. By casting a broad net there is no bias towards specific ethnic and economic groups.

iv. **What are the types of public involvement activities included in your program. Where appropriate, consider the following types of public involvement activities: citizen representatives on a storm water management panel, public hearings, working with citizen volunteers willing to educate others about the program, volunteer monitoring or stream/beach clean-up activities.**

   As outlined in the above tables, we have included wastewater treatment plant tours and education, and various watershed activities through local volunteer groups such as educational stream walks, tree planting, stream clean-up, etc.

v. **Who (person or department) is responsible for the overall management and implementation of your storm water public involvement/participation program and, if different, who is responsible for each of the BMPs identified for this program.**

   See above tables.

vi. **How will you evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.**

   The measureable goals were selected to be specific, measurable, achievable and realistic. The City intends to evaluate the effectiveness of the public involvement/participation BMPs by tracking and documenting information as described in the tables above.
Minimum Control Measure 3:
Illicit Discharge Detection and Elimination
Minimum Control Measure 3: 
Illicit Discharge Detection and Elimination

The City of Wilmington MS4 permit requires the illicit discharge detection and elimination efforts to do the following:

Shall develop, implement and enforce a program to detect and eliminate illicit discharges.

Shall develop a comprehensive storm water system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls; MS4 system (catch basins, pipes, ditches, detention/retention ponds, post construction water quality BMPs), and private water quality BMPs.

Shall submit to EPA a list of HSTSs including addresses; a map of HSTS’s including type and size of conduits that receive discharges.

Shall effectively prohibit through ordinance, or other regulatory mechanism, illicit discharges including enforcement procedures.

Shall development and implement a plan to detect and eliminate non-storm water discharges, including illegal dumping and HSTS. At a minimum this includes:

i. Working with applicable agencies and/or departments to identify HSTS’s that could be connected to central sewers, and require connection for any HSTS not operating properly.

ii. Working with the health department to develop a proactive O&M program.

iii. Actively investigating contamination sources during dry weather screening.

iv. Evaluating the planned/possible installation of sewers in areas with high densities of HSTS’s.

Shall informs public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

Shall address the following categories of non-storm water discharges or flows if identified as significant contributors of pollutants: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash water, and discharges or flows from fire-fighting activities.

Performance Standards: Initial dry weather screening of all storm water outfalls over the permit term. Establish priorities and goals for long-term system wide surveillance of MS4. System map shall be updated as needed.
The following tables outline the best management practices (BMPs) selected by the City of Wilmington to accomplish MCM 3. The City the legal authority to implement all identified BMPs.

### BMP: Update System Mapping

**Description of BMP:** Update system GIS mapping to include all information required in the permit.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of features mapped.</td>
<td>Ongoing</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Number of HSTS’s and receiving ditches mapped.</td>
<td>Ongoing</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Updating the storm system mapping to include additional assets will create a more accurate representation of the entire storm system network.

**How BMP addresses TMDL:** No direct tie to the pollutants identified in the TMDL, but having accurate mapping will be useful to identify sources of illicit discharges to the MS4.

### BMP: Identifying Illicit Discharges

**Description of BMP:** Identifying and eliminating illicit discharges systematically.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify number of HSTS systems that could feasibly be connected to sewers.</td>
<td>Ongoing</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Number of HSTS’s identified.</td>
<td>Ongoing – all known HSTS’s are inspected on a case by case basis.</td>
<td>City of Wilmington Public Services Department and Clinton County Health District</td>
</tr>
<tr>
<td>Number of outfalls with dry weather screening completed.</td>
<td>Ongoing – all known outfalls will be screened once over the permit term.</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Identifying illicit discharges allows for these to be addressed systematically.

**How BMP addresses TMDL:** Identifying and eliminating illicit discharges will improve water quality, and could help achieve specific bacteria (*E. coli*) loads included in the Lower Little Miami River TMDL.
BMP: Eliminating Illicit Discharges

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review and revise existing ordinance prohibiting illicit discharges including enforcement procedures.</td>
<td>Prior to end of permit cycle</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Number of HSTS owners connected to sewer.</td>
<td>Ongoing</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Number of illicit discharge reports resolved.</td>
<td>Ongoing – all reports of illicit discharges will be investigated and resolved.</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

Rationale for BMP: Eliminating illicit discharges results in a successful program.

How BMP addresses TMDL: Identifying and eliminating illicit discharges will improve water quality, and could help achieve specific bacteria (E. coli) loads included in the Lower Little Miami River TMDL.

MCM 3 Decision Process – Rationale Statement

The rationale statement shall include the following information, at a minimum:

i. How you will develop a comprehensive storm sewer map showing the location of all outfalls and the names and location of all receiving waters. Describe the sources of information you used for the maps, and how you plan to verify the outfall locations with field surveys. If already completed, describe how you developed this map. Also, describe how your map will be regularly updated.

The City will conduct GIS mapping updates throughout the City based on best available field data and record data. The City will utilize additional City resources to keep GIS shapefiles updated as changes are needed.

ii. The mechanism (ordinance or other regulatory mechanism) you will use to effectively prohibit illicit discharges into the MS4 and why you chose that mechanism. If you need to develop this mechanism, describe your plan and a schedule to do so. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your program.

The City put in place ordinance 0-18-45 (Sewer Use Regulations, Chapter 922.02, and Chapter 922.19, which passed on 9-6-2018) to prohibit illicit discharges. The City’s ordinance also includes penalties for non-compliance, as part of ordinance Chapter 922.50. The Ordinances are included as an appendix to this document. Additionally, the City established ordinance 0-17-81 (Illicit Discharge Detection and Elimination, Chapter 938, passed on 1-18-2018) to further enhance illicit discharge prohibition.

iii. Your plan to ensure through appropriate enforcement procedures and actions that your illicit discharge ordinance (or other regulatory mechanism) is implemented.
The City’s ordinances Chapter 922.50, and Chapter 938.8 includes penalties for non-compliance – this is the enforcement mechanism. The relevant sections are included as an appendix to this document.

**iv. Your plan to detect and address illicit discharges to your system, including discharges from illegal dumping and spills.** Your plan shall include dry weather field screening for non-storm water flows and Ohio EPA recommends field tests of selected chemical parameters as indicators of discharge sources. You shall describe the mechanisms and strategies you will implement to ensure outfalls which have previously been dry-weather screened will not have future illicit connections. Your plan shall also address on-site sewage disposal systems (including failing on-lot HSTs and off-lot discharging HSTs) that flow into your storm drainage system. Your description shall address the following, at a minimum:

1. **Procedures for locating priority areas which include areas with higher likelihood of illicit connections (e.g., areas with older sanitary sewer lines, for example) or ambient sampling to locate impacted reaches;**

   Priority areas will be located by considering areas with concentrated HSTs’s, areas with concentrated resident complaints/reports, and areas of the system noted by City staff as a possible concern.

2. **Procedures for tracing the source of an illicit discharge, including the specific techniques you will use to detect the location of the source;**

   City crews have the ability to provide general field investigations, CCTV inspection, and dye testing, to help locate the source of illicit discharges. Water quality sampling may also be utilized where needed. Available GIS information will be utilized to augment field efforts in identification of the source of illicit discharges.

3. **Procedures for removing the source of the illicit discharge.**

   Illicit discharges will be resolved on a case by case basis given the unique nature of each situation.

4. **Procedures for program evaluation and assessment.**

   Mapping of all outfall screening and issues will be prepared to serve as a tool during evaluation and assessment of the program.

**v. How you plan to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.** Include in your description how this plan will coordinate with your public education minimum measure and your pollution prevention/good housekeeping minimum measure programs.

The hazards of illicit discharges will be a topic that is covered under the media communications BMPs described under MCM 1 earlier in this document.
vi. Who is responsible for overall management and implementation of your storm water illicit discharge detection and elimination program and, if different, who is responsible for each of the BMPs identified for this program.

Responsibilities are listed in the previous tables.

vii. How you will evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.

The measureable goals were selected to be specific, measureable, achievable and realistic. The City intends to evaluate the effectiveness of the illicit discharge detection and elimination BMPs by tracking and documenting information as described in the tables above.
Minimum Control Measure 4: Construction Site Storm Water Runoff Control
Minimum Control Measure 4:  
Construction Site Storm Water Runoff Control

The City of Wilmington MS4 permit requires the construction site storm water runoff control efforts to do the following:

*Shall develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre including projects less than one acre that are part of a larger common plan of development. At a minimum this includes:*

1. **Ordinance or other requirements for construction site operators to require erosion and sediment controls as well as sanctions to ensure compliance.**
2. **Requirements for construction site operators to implement appropriate erosion and sediment control BMPs.**
3. **Requirements for construction site operators to control waste at the construction site that may cause adverse impacts to water quality.**
4. **Procedures for storm water pollution prevention plan review which incorporates consideration of potential water quality impacts.**
5. **Procedures for the receipt and consideration of information submitted by the public.**
6. **Procedures for site inspection and enforcement of control measures.**

**Performance Standards:** Program shall include a pre-construction SWPPP for all land disturbances greater than 1 acre. Applicable sites shall be initially inspected. Frequency of follow up shall be monthly unless otherwise documented.

The following tables outline the best management practices (BMPs) selected by the City of Wilmington to accomplish MCM 4. The City has the legal authority to implement all identified BMPs.
BMP: Tools and Program Updates

**Description of BMP:** The City will review existing relevant ordinances and update them as needed to meet the requirements of this MCM. The City will focus on tools and program updates to meet this MCM.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review and revise procedures for construction site inspection program.</td>
<td>Prior to end of permit cycle.</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Review and revise as necessary existing ordinances and sanctions. (Chapter 922)</td>
<td>Prior to end of permit cycle.</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Review and revise existing storm water regulations.</td>
<td>Prior to end of permit cycle.</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Develop a checklist for SWPPP plan review by City staff.</td>
<td>Prior to end of permit cycle.</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Standardized tools and updated program regulations will aid the City in the successful implementation of this MCM.

**How BMP addresses TMDL:** Sediment is a pollutant of concern identified in the Lower Little Miami River TMDL. Updating the construction site tools and requirements will provide benefit through sediment load reduction.

BMP: Construction Site Runoff Control Implementation

**Description of BMP:** This BMP includes implementation of the program in accordance with the ordinances and regulations already in place.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of construction site inspections completed.</td>
<td>As needed</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Number of SWPPP’s reviewed as part of plan review process.</td>
<td>Ongoing</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Number of construction runoff issues reported.</td>
<td>Ongoing</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Implementation protocol and follow through are critical on active construction sites.

**How BMP addresses TMDL:** Given the emphasis on sediment loadings in the TMDL, this BMP is very important and will address the TMDL by providing oversight of construction sites.

MCM 4 Decision Process – Rationale Statement

*The rationale statement shall include the following information, at a minimum:*
i. The mechanism (ordinance or other regulatory mechanism) you will use to require erosion and sediment controls at construction sites and why you chose that mechanism. If you need to develop this mechanism, describe your plan and a schedule to do so. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your SWMP description.

The City passed ordinance 3587 (Section 1125.03) on 1-10-2000 to address sediment and erosion control. The City also maintains a storm water manual which details requirements for contractors to follow for site erosion control. These provisions will be reviewed and revised as necessary.

ii. Your plan to ensure compliance with your erosion and sediment control regulatory mechanism, including the sanctions and enforcement mechanisms you will use to ensure compliance. Describe your procedures for when you will use certain sanctions. Possible sanctions include non-monetary penalties (such as a stop work orders), fines, bonding requirements, and/or permit denials for non-compliance.

The City’s regulations include penalties for non-compliance. These provisions will be reviewed and revised as necessary.

iii. Your requirements for construction site operators to implement appropriate erosion and sediment control BMPs and control waste at construction sites that may cause adverse impacts to water quality. Such waste includes, but is not limited to, discarded building materials, concrete truck washouts, chemicals, litter, and sanitary waste.

All requirements are detailed in the City’s regulations as well as the storm water manual. These provisions will be reviewed and revised as necessary.

iv. Your procedures for pre-construction storm water pollution prevention plan review which incorporate consideration of potential water quality impacts. Describe the estimated number of sites that will have pre-construction site plans reviewed.

All proposed construction sites in the City are obligated to go through the plan review process which includes the development. As part of this permit cycle, these provisions will be reviewed and revised as necessary and a checklist will be developed to further standardize the plan review process.

v. Your procedures for receipt and consideration of information submitted by the public. Consider coordinating this requirement with your public education program.

Information submitted by the public related to construction erosion issues are inspected by the City of Wilmington staff, and the City coordinates with the contractor to resolve the issue.

vi. Your procedures for site inspection and enforcement of control measures, including how you will prioritize sites for inspection.
The City will develop and implement a construction site inspection program during this permit cycle.

vii. **Who is responsible for overall management and implementation of your construction site storm water control program and, if different, who is responsible for each of the BMPs identified for this program.**

The City of Wilmington Public Services Department is responsible for the review and approval of plan submittals including SWPPPs.

viii. **Describe how you will evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.**

The measurable goals were selected to be specific, measurable, achievable and realistic. The City intends to evaluate the effectiveness of the construction site runoff control BMPs by tracking and documenting information as described in the tables above.
Minimum Control Measure 5: Post-Construction Storm Water Management in New and Redevelopment
Minimum Control Measure 5:  
Post-Construction Storm Water Management in New and Redevelopment

The City of Wilmington MS4 permit requires the post-construction storm water management in new and redevelopment efforts to do the following:

*Shall develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development.*

*Shall develop and implement strategies which include a combination of structural and/or non-structural BMPs.*

*Shall use an ordinance, or other regulatory mechanism, to address post-construction runoff from new and redevelopment.*

*Shall ensure adequate long-term operation and maintenance of BMPs.*

**Performance Standards:** Post construction SWMP shall include a pre-construction SWPPP review of all projects which disturb greater than 1 acre. Site shall be inspected to ensure controls are installed per requirements. Program shall ensure long term O&M plans are developed and agreements are in place.

The following tables outline the best management practices (BMPs) selected by the City of Wilmington to accomplish MCM 5. The City has the legal authority to implement all identified BMPs.

<table>
<thead>
<tr>
<th>BMP: Tools and Program Update</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description of BMP:</strong> The City will review and revise its storm water manual and ordinances to include post-construction BMP considerations.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review existing ordinances and guidelines and update as needed.</td>
<td>Prior to end of permit cycle</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Develop and implement post construction BMP inspection program.</td>
<td>Prior to end of permit cycle</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Standardized tools and updated program objectives will aid the City in the successful implementation of this MCM.

**How BMP addresses TMDL:** Sediment is a pollutant of concern identified in the Lower Little Miami River TMDL. Updating the construction site tools and requirements will provide benefit through sediment load reduction.
BMP: Post-Construction Runoff Control Implementation

**Description of BMP:** The City will review and update its storm water manual and appropriate ordinances to continue implementation of its post-construction program.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of privately owned post-construction BMPs installed.</td>
<td>Annually following forthcoming revisions to existing ordinances by the end of the permit term.</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Number of maintenance agreements put in place.</td>
<td>Annually following forthcoming revisions to existing ordinances by the end of the permit term.</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Number of post-construction BMPs inspected.</td>
<td>Annually following forthcoming revisions to existing ordinances by the end of the permit term.</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Management and implementation of the post construction program is the key to the program being successful and impactful.

**How BMP addresses TMDL:** Program management and implementation will keep the designers and contractors accountable for the proper design and installation of BMPs which will provide water quality benefits to help meet the TMDLs.

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**MCM 5 Decision Process – Rationale Statement**

*The rationale statement shall include the following information, at a minimum:*

i. **Your program to address storm water runoff from new development and redevelopment projects. Include in this description any specific priority areas for this program.**

The City of Wilmington Storm Water Management Regulations will be revised to require all new and redevelopment projects that disturb greater than 1 acre to meet the City’s storm water management and EPSC specifications.

ii. **How your program will be specifically tailored for your local community, minimize water quality impacts, and attempt to maintain pre-development runoff conditions.**

The City will revise the current ordinances and Storm Water Management Manual to require the designer/contractor to submit a detailed storm water management plan including post-construction storm water control techniques with sizing calculations and drawings. The City will then review the submittal and coordinate with the designer/contractor to address any deficiencies. This site-specific review by City of Wilmington and extended staff is the component that allows the program to be specifically tailored for the local community.

iii. **Any non-structural BMPs in your program, including, as appropriate: green infrastructure storm water management techniques, policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open**
space (including a dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure; education programs for developers and the public about project designs that minimize water quality impacts; and other measures such as minimization of the percentage of impervious area after development, use of measures to minimize directly connected impervious areas, and source control measures often thought of as good housekeeping, preventive maintenance and spill prevention.

The City is currently reviewing their current policies and ordinances for non-structural BMPs within the City’s Storm Water Management Manual.

iv. Any structural BMPs in your program, including, as appropriate: green infrastructure storm water management techniques, storage practices such as wet ponds and extended-detention outlet structures; filtration practices such as grassed swales, bioretention cells, sand filters and filter strips; and infiltration practices such as infiltration basins and infiltration trenches.

The City is currently reviewing their current policies and ordinances for structural BMPs within the City’s Storm Water Management Manual.

v. The mechanisms (ordinance or other regulatory mechanisms) you will use to address post-construction runoff from new developments and redevelopments and why you chose the mechanism(s). If you need to develop a mechanism, describe your plan and a schedule to do so. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your program.

The City has in place ordinances that reference the City’s Storm Water Management Manual as the governing document regarding post construction runoff from new and redevelopment. This ordinance is enforceable in two ways one with fees in place for non-compliance and secondly with the City’s ability to deny approval of plans for developments that do not submit appropriate documentation of their plan to address runoff. These provisions will be reviewed and revised as part of this permit cycle.

vi. How you will ensure the long-term operation and maintenance (O&M) of your selected BMPs. Options to help ensure that future O&M responsibilities are clearly identified include an agreement between you and another party such as the post-development landowners or regional authorities.

The City’s will review and revise the existing ordinances and regulations to address long-term O&M of selected BMPs. These provisions will be revised as part of this permit cycle.

vii. Who is responsible for overall management and implementation of your post-construction SWMP and, if different, who is responsible for each of the BMPs identified for this program.

See above tables for responsible parties.
viii. How you will evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.

The measurable goals were selected to be specific, measureable, achievable and realistic. The City intends to evaluate the effectiveness of the post-construction storm water runoff control program by tracking and documenting information as described in the tables above.
Minimum Control Measure 6: Pollution Prevention/Good Housekeeping For Municipal Operations
Pollution Prevention/Good Housekeeping for Municipal Operations

The City of Wilmington MS4 permit requires the pollution prevention/good housekeeping for municipal operations efforts to do the following:

*Shall develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.*

*Using training materials available from OEPA or other organizations, program shall include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance,*

*Shall include a list of industrial facilities owned and operated by the City. SWP3 plans shall be developed and implemented as required.*

**Performance Standards:** Include at minimum an annual employee training. Operation and maintenance shall include appropriate documented procedures, controls, maintenance schedules, and record keeping.

The following tables outline the best management practices (BMPs) selected by the City of Wilmington to accomplish MCM 6. The City has the legal authority to implement all identified BMPs.

<table>
<thead>
<tr>
<th><strong>BMP: Employee Training</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description of BMP:</strong> Utilize available storm water training materials including online webinars, storm water conferences, educational seminars, etc. to train City staff on storm water related issues.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of person-hours completed each year.</td>
<td>Ongoing</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>In-house employee storm water good housekeeping training.</td>
<td>Annually</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Training City staff is a very important aspect of reducing pollution from municipal facilities. Using materials and training already available results in efficiencies and consistent messaging.

**How BMP addresses TMDL:** Reducing pollution from municipal facilities is consistent with addressing pollutant loads described in the Lower Little Miami River TMDL.
### BMP: Operation and Maintenance Program

**Description of BMP:** Continue implementation of City’s Operation and Maintenance Program for Municipal facilities.

<table>
<thead>
<tr>
<th>Measureable Goal</th>
<th>Implementation Schedule (Interim Milestones) and Frequency</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feet of storm sewers cleaned, number of catch basins cleaned.</td>
<td>Ongoing</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Amount of road salt, calcium and brine applied to roads.</td>
<td>Seasonal</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Hours logged in street sweepers.</td>
<td>Ongoing</td>
<td>City of Wilmington Public Services Department</td>
</tr>
<tr>
<td>Daily procedures being followed – vehicle washing, automotive fluid disposal, illegal dumping, etc.</td>
<td>Ongoing</td>
<td>City of Wilmington Public Services Department</td>
</tr>
</tbody>
</table>

**Rationale for BMP:** Implementing the O&M plans is critical for reducing pollution from municipal facilities.

**How BMP addresses TMDL:** Reducing pollution from municipal facilities is consistent with addressing pollutant loads described in the Lower Little Miami River TMDL.

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### MCM 6 Decision Process – Rationale Statement

*The rationale statement shall include the following information, at a minimum:*

**i.** Your operation and maintenance program to prevent or reduce pollutant runoff from your municipal operations. Your program shall specifically list the municipal operations that are impacted by this operation and maintenance program.

The City’s O&M program is divided among various departments including Parks, Public Services, Transportation, Police, and Fire – each department has a customized O&M program that is suited to their specific facilities.

**ii.** Any government employee training program you will use to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. Describe any existing, available materials you plan to use. Describe how this training program will be coordinated with the outreach programs developed for the public information minimum measure and the illicit discharge minimum measure.

See above table for information related to the employee training program. This program will be coordinated with Illicit Discharge and Public Outreach programs to the extent that the information provided in all programs will be consistent and will be cross-referenced as appropriate.

**iii.** Your program description shall specifically address the following areas:
1. Maintenance activities, maintenance schedules, and long-term inspection procedures for controls to reduce floatables and other pollutants to your MS4.

These items are handled in an ongoing manner by each department, so they can be easily customized and adapted as appropriate.

2. Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas you operate. A description of the materials used for roadway and municipal parking lot winterization (use of salt, sand, bottom ash, etc. or combination thereof), associated application rates, and the rationale for the selected application rates shall be included. Also identify controls or practices to be used for reducing or eliminating discharges of pollutants resulting from roadway and municipal parking lot winterization activities.

The City currently implements street sweeping, snow and ice removal, leaf collection, catch basin cleaning, pipe cleaning, as well as general good housekeeping at municipal facilities.

3. Procedures for the proper disposal of waste removed from your MS4 and your municipal operations, including dredge spoil, accumulated sediments, floatables, and other debris.

The City utilizes proper disposal methods to dispose of wastes from the MS4. Street debris is dewatered and hauled to the City owned land fill. Automotive waste is disposed of at off-site commercial facilities.

4. Procedures to ensure that new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices or practices.

These procedures are covered in the City’s storm water manual.

iv. Who is responsible for overall management and implementation of your pollution prevention/good housekeeping program and, if different, who is responsible for each of the BMPs identified for this program.

See above tables for responsible party for each BMP.

v. How you will evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.

The measurable goals were selected to be specific, measurable, achievable and realistic. The City intends to evaluate the effectiveness of the good housekeeping program by tracking and documenting information as described in the tables above.