

**NPDES PHASE II MS4 GENERAL PERMIT  
WATER QUALITY CHARACTERIZATION REPORT  
STORMWATER QUALITY MANAGEMENT PLAN**

JANUARY 2023

**Prepared for:**

City of Greensburg  
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Greensburg, IN 47240

Permit #: INR040091



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**WQCR and SWQMP Certification in accordance with 327 IAC 15-4-3(i) and MS4GP 3.3 and 4.9**

"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."

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Qualified Professional Signature Date

Emily Myers 12/19/22  
Qualified Professional Printed Name Date

Joshua L. Marstz 1/4/23  
MS4 Operator or Designee Signature (in accordance with 327 IAC 15-4-3(g)) Date

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## CHAPTER 3: STORMWATER QUALITY MANGEMENT PLAN

### REQUIREMENT MS4GP 4.2:

The SWQMP must be developed, implemented, and maintained to include provisions that will reduce the discharge of pollutants from the MS4 to protect water quality, human health, and the biotic community.

### 3.1 MS4 ADMINISTRATION

While the MS4 program oversight will be provided by the Utilities and Street Departments as noted in Section 1.1, other departments, staff members, and partners may be responsible for the implementation of individual minimum control measures (MCMs) and tasks. Responsible parties are included in the MCM tables in the following sections.

### 3.2 MCM PROGRAM DESCRIPTIONS

#### REQUIREMENT MS4GP 4.2(a):

The SWQMP must at a minimum include:

- (3) Program goals that are established and required by this permit and others identified by the MS4 entity to address local stormwater resource issues within their jurisdiction.
- (4) A detailed program description for each minimum control measure (MCM)...
  - (A) A timetable for SWQMP implementation for ach MCM and the WQCR
  - (B) A summary of measurable goals for ach MCM and a discussion of environmental impact
  - (C) Individuals that are responsible for implementing each MCM including their contact information

#### 3.2.1 Programmatic Indicators

Programmatic indicators are categories of data collected throughout the annual period by the MS4 entity which are used to measure implementation of each of the MCMs. These indicators pertain to specific environmental gauges that focus on the impacts of stormwater runoff. IDEM utilizes the indicators to determine the degree of success achieved by the stormwater management programs. IDEM requires an annual update for each indicator and if an indicator is not applicable to the MS4 operator, then the operator shall provide rationale for the non-applicability.

Each of the programmatic indicators has been addressed by BMPs within the MS4 entity. For reference, programmatic indicators are listed in **Appendix 1**.

All indicators have been addressed in the tables within following sections detailing BMPs for each MCM. Programmatic indicators are listed in Appendix 1 for reference.

#### 3.2.2 Public Education, Outreach, Participation and Involvement

An MS4 must develop strategies to inform constituents and target groups of the impacts that polluted stormwater runoff can have on water quality and ways they can minimize their impact on stormwater quality.

The city is continuing to develop and implement partnerships with the Decatur County Soil and Water Conservation District (SWCD) and the Decatur County Solid Waste Management District (SWMD) to provide public information and outreach services while also playing a major role in the public involvement and participation activities related to the household hazardous waste and recycling efforts.

**Table 8** provides a summary of the Public Education, Outreach, Participation and Involvement BMPs to be implemented and identifies the associated measurable goals, timeline, priority areas, and responsible parties.

**Table 8: Public Education, Outreach, Participation and Involvement BMPs**

| Best Management Practice (BMP)                                                              | BMP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Measurable Goals, Tracking and Programmatic Indicators                                                                                                                                                                                                                                                                                                                                                                                                         | Timeline                                                                                                                                     | Responsible Party                                                      |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <p><b>Public Education and Involvement Plan</b></p> <p>(4.3(a))</p>                         | <ul style="list-style-type: none"> <li>Identify target constituents</li> <li>Develop a stormwater public education and involvement plan</li> <li>Develop list of three community wide stormwater issues to assist with education and involvement events for construction, residential and commercial/industrial groups</li> <li>Develop or collaborate with existing efforts to conduct two public events annually</li> <li>Develop or collaborate with existing efforts to highlight identified community wide stormwater issues at three events for target groups</li> <li>Develop educational materials</li> <li>Provide annual training to construction site run-off and post-construction target groups</li> </ul> | <ul style="list-style-type: none"> <li>Plan developed with partner agency and department input</li> <li>Reviewed annually and revised as needed</li> <li>Events and activities will be decided in conjunction with development and annual review of the education and involvement plan</li> <li>Maintain a list of topics covered and constituents reached for each event</li> </ul>                                                                           | <ul style="list-style-type: none"> <li>January 2023 (developed)</li> <li>January 2024</li> <li>January 2025</li> <li>January 2026</li> </ul> | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |
| <p><b>Stormwater Educational Materials</b></p> <p>(4.3(a)(4))<br/>(4.3(b))<br/>(4.3(d))</p> | <ul style="list-style-type: none"> <li>Collaborate to develop, produce, or distribute printed materials related to stormwater issues</li> <li>Continue providing available stormwater handouts/information at MS4 Coordinator's office</li> <li>Include information related to proper disposal of wastes</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>Materials and opportunities will be discussed during the development and annual review of the education and involvement plan</li> <li>Work in cooperation with partners to broaden exposure and present a unified message</li> <li>Work with local entities to publish stormwater information in existing newsletters, newspapers</li> <li>Maintain a list of materials developed, distributed, and utilized</li> </ul> | <ul style="list-style-type: none"> <li>January 2023 (plan)</li> <li>January 2024</li> <li>January 2025</li> <li>January 2026</li> </ul>      | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |

| Best Management Practice (BMP)                                                              | BMP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Measurable Goals, Tracking and Programmatic Indicators                                                                                                                                                                                                                                                                                                                                                                                    | Timeline                                                                                                                                    | Responsible Party                                                                                       |
|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <p><b>Web Page</b><br/><br/>(4.3(c))</p>                                                    | <ul style="list-style-type: none"> <li>• Maintain the City of Greensburg web page regarding stormwater quality issues, and links to other sites</li> <li>• Include articles developed, brochures, and calendar updates</li> <li>• Include ordinances, applicable fees, and MS4 program information</li> </ul>                                                                                                                                                      | <ul style="list-style-type: none"> <li>• Utilize education and involvement plan to identify messages, issues, and partners</li> <li>• Review web page and update with new information annually</li> <li>• Track total number of hits site receives each year</li> <li>• Document all questions and comments received via the web page as well as the responses to them</li> <li>• Document posts relevant to stormwater issues</li> </ul> | <ul style="list-style-type: none"> <li>• January 2023</li> <li>• December 2023</li> <li>• December 2024</li> <li>• December 2025</li> </ul> | <ul style="list-style-type: none"> <li>• Greensburg MS4 staff</li> </ul>                                |
| <p><b>Elected Official Update</b><br/><br/>(4.3(e))</p>                                     | <ul style="list-style-type: none"> <li>• Report stormwater program updates to elected officials or an advisory board</li> </ul>                                                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Updates will be provided at an April meeting of Board of Works</li> <li>• Maintain a list of attendees and materials distributed</li> </ul>                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• April 2023</li> <li>• April 2024</li> <li>• April 2025</li> <li>• April 2026</li> </ul>            | <ul style="list-style-type: none"> <li>• Greensburg MS4 staff</li> </ul>                                |
| <p><b>Household Hazardous Waste (HHW) and Recycling Activities</b><br/><br/>(4.4(b)(4))</p> | <ul style="list-style-type: none"> <li>• Encourage residents and staff to use existing HHW drop off for proper disposal</li> <li>• Educate Greensburg residents about illicit discharges and proper disposal of waste</li> <li>• Encourage Greensburg residents to participate in curb-side recycling program</li> <li>• Utilize existing SWMD activities to educate community members on the importance of pollution prevention and recycling programs</li> </ul> | <ul style="list-style-type: none"> <li>• Promote the HHW facilities operated by the SWMD</li> <li>• Document the amount of material collected at the HHW Facility</li> <li>• Document dates, times, and attendance at all presentations to citizen and school groups that incorporate stormwater quality discussions</li> <li>• Document the number of stormwater materials distributed on an annual basis</li> </ul>                     | <ul style="list-style-type: none"> <li>• On-going</li> </ul>                                                                                | <ul style="list-style-type: none"> <li>• Greensburg MS4 staff</li> <li>• Decatur County SWMD</li> </ul> |
| <p><b>Public Reporting Program</b><br/><br/>(4.4(b)(6))</p>                                 | <ul style="list-style-type: none"> <li>• Utilize program to field complaints from the public on illegal dumping, illicit discharges, poor erosion control practices, and other activities that negatively impact stormwater quality</li> </ul>                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>• Implement a pollution response program</li> <li>• Promote, advertise, and follow-up on complaints and calls received through the complaint system</li> <li>• Include educational material developed</li> <li>• Respond to complaints</li> <li>• Document the number of complaints received and all follow up actions taken on reports</li> </ul>                                                 | <ul style="list-style-type: none"> <li>• On-going</li> </ul>                                                                                | <ul style="list-style-type: none"> <li>• Greensburg MS4 staff</li> </ul>                                |



| Best Management Practice (BMP)                           | BMP Description                                                                                                                    | Measurable Goals, Tracking and Programmatic Indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Timeline                                                                                                                             | Responsible Party                                                      |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <p><b>Annual Report</b></p> <p>(4.3(g))<br/>(4.3(h))</p> | <ul style="list-style-type: none"> <li>Assess the program annually</li> <li>Report progress in an annual report to IDEM</li> </ul> | <ul style="list-style-type: none"> <li>Assess program in conjunction with gathering data and compilation of the annual report</li> <li>Include: <ul style="list-style-type: none"> <li>List of each public participation and outreach event and activity conduction, a description of the activity, an estimate of the number of attendees, and an assessment if the goals and objectives were met</li> <li>The number and types of construction and/or post-construction stormwater training opportunities what were provided to contractors, developers and builders, property owners (commercial, industrial, residential, homeowner associations, and other targeted entities during the reporting period</li> <li>Documentation that presentations were made to elected officials or boards</li> <li>Describe each targeted audience selected and how they were reached during the reporting period and describe behavioral changes observed</li> <li>A list of all public education materials used during the reporting period</li> </ul> </li> <li>Submit annual report</li> </ul> | <ul style="list-style-type: none"> <li>February 2023</li> <li>February 2024</li> <li>February 2025</li> <li>February 2026</li> </ul> | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |

### 3.2.3 Illicit Discharge Detection and Elimination

An MS4 must develop a program which uses education and both structural and non-structural BMPs to detect, address, and eliminate illicit discharges into the MS4 conveyance system. Problem areas must be located via dry weather screening or other means, the source must be determined illicit connections must be removed or otherwise corrected, and the actions taken must be documented. Through an ordinance or other regulatory mechanism, illicit discharges must be prohibited from entering the MS4 conveyances and appropriate enforcement procedures and actions are required.

The Illicit Discharge Detection and Elimination (IDDE) BMPs outlined in **Table 9** will be implemented by the MS4 staff in order to comply with the minimum requirements of the MCM. The programs are designed to gain a thorough awareness of their separate storm conveyance system and thereby allowing the identification and elimination of illicit discharges entering the system. The program also establishes the legal, technical, and educational means needed to eliminate illicit discharges.

**Table 9: IDDE BMPs**

| Best Management Practice (BMP)                                       | BMP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Measurable Goals, Tracking, and Programmatic Indicators                                                                                                                                                                                                                                                                  | Timeline                                                                                                                        | Responsible Party                                                      |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <b>IDDE Ordinance</b><br>(4.4(a))                                    | <ul style="list-style-type: none"> <li>Review IDDE language contained in the ordinance documents for needed updates and to ensure compliance with the MS4GP</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Enforce ordinance</li> <li>Review policies at least once per permit term</li> </ul>                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>January 2023 (review/update)</li> <li>Implementation throughout permit term</li> </ul>   | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |
| <b>IDDE Plan</b><br>(4.4(b))<br>(4.4(h))                             | <ul style="list-style-type: none"> <li>Review the IDDE plan and update as necessary to reflect the proposed actions for illicit discharge detection and elimination in the current permit term</li> <li>Implement the IDDE plan to detect, address, and eliminate illicit discharges into the MS4 conveyance system</li> <li>Include SOPs to locate problem areas and to ensure consistent investigations for all illicit discharges</li> <li>Investigate transient illicit discharges that have been reported to the MS4 Coordinator for additional follow-up</li> <li>Utilize the Desktop Assessment of Illicit Discharge Potential (Table 9 in WQCR) to better prioritize areas for IDDE screening activities</li> </ul> | <ul style="list-style-type: none"> <li>Review and revise IDDE plan in first year of permit term</li> <li>Conduct dry weather screening until 100% screened by end of permit term</li> <li>Conduct screening of all non-stormwater discharges until discharge is eliminated or determined to be uncontaminated</li> </ul> | <ul style="list-style-type: none"> <li>Review and update by June 2023</li> <li>Implementation throughout permit term</li> </ul> | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |
| <b>Stormwater System Mapping</b><br>(4.4(d))<br>(4.4(e))<br>(4.4(f)) | <ul style="list-style-type: none"> <li>Identify priority areas based on land use, prior history, and frequency of discharges</li> <li>Enhance existing maps with information collected during dry-weather screening events, maintenance activities, etc.</li> <li>Add new outfalls and conveyance systems to the map for the appropriate jurisdiction per ordinance as-built requirements or new developments</li> </ul>                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>Review and update map annually</li> <li>Identify priority areas within first year of permit term</li> </ul>                                                                                                                                                                       | <ul style="list-style-type: none"> <li>January 2023 (identify priority areas)</li> <li>Review/update annually</li> </ul>        | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |
| <b>IDDE Staff Training</b><br>(4.4(g))                               | <ul style="list-style-type: none"> <li>Train appropriate staff members on investigation of illicit discharges or illicit connections to the stormwater conveyance system</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>Conduct annual refresher training to appropriate departments and staff</li> <li>Document number of staff, number of events held, and the topics covered in each session</li> </ul>                                                                                                | <ul style="list-style-type: none"> <li>July 2023</li> <li>Annually</li> </ul>                                                   | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |

| Best Management Practice (BMP)                           | BMP Description                                                                                                                        | Measurable Goals, Tracking, and Programmatic Indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Timeline                                                                                                                                     | Responsible Party                                                        |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <p><b>Annual Report</b></p> <p>(4.4(i))<br/>(4.4(k))</p> | <ul style="list-style-type: none"> <li>• Assess the program annually</li> <li>• Report progress in an annual report to IDEM</li> </ul> | <ul style="list-style-type: none"> <li>• Assess program in conjunction with gathering data and compilation of the annual report</li> <li>• Include: <ul style="list-style-type: none"> <li>• IDDE program updates</li> <li>• A summary of any storm sewer system mapping changes to the stormwater outfall and conveyance maps</li> <li>• Number of new MS4 outfalls mapped</li> <li>• Number and location of dry weather outfalls screened for illicit discharges</li> <li>• Number and location of illicit discharges detected</li> <li>• Number and location of illicit discharges eliminated</li> <li>• Number of illicit discharges and/or spills reported to the MS4 entity</li> <li>• Number of enforcement actions taken by the MS4 entity</li> </ul> </li> <li>• Submit annual report</li> </ul> | <ul style="list-style-type: none"> <li>• February 2023</li> <li>• February 2024</li> <li>• February 2025</li> <li>• February 2026</li> </ul> | <ul style="list-style-type: none"> <li>• Greensburg MS4 staff</li> </ul> |

### 3.2.4 Construction Site Stormwater Run-Off

The MS4GP requires the MS4 Operator to develop and administer an erosion and sediment control program which includes strategies to manage the overall program components, monitor compliance of program requirements, and if necessary, enforce any violations. Requirements also include the development of an ordinance or other regulatory mechanism and establishment of a construction program that controls polluted runoff from construction activities that disturb one or more acres of land in the MS4 area. This construction program must include a permitting process, erosion control plan review process, site inspections, and enforcement. The permitting process must include a requirement for the construction project site owner to submit a copy of the permit application directly to IDEM. MS4 entities must provide an opportunity for local SWCD to provide comments and recommendations to the MS4 operator on individual projects.

The construction program must include requirements for the implementation of appropriate BMPs on construction sites to control sediment, erosion, and other waste. MS4 entities must review and approve construction plans submitted by the construction site operator before construction activity commences. Procedures must be developed for site inspection and enforcement to ensure BMPs are properly installed. The procedures must include a means to identify priority sites for inspection and enforcement, as well as a means to receive and consider public inquiries, concerns, and information submitted regarding local construction activities. A tracking process must be implemented in which submitted public information is documented and then given to the appropriate staff for follow-up. Further MS4 personnel responsible for plan review, inspection, and enforcement of construction activities shall receive annual training.

**Table 10** in the next section provides a detailed description of the Construction and Post-Construction Site Stormwater Runoff Control BMPs to be implemented and identifies the measurable goals, progress indicators, timelines, priority areas, and responsible parties. Information such as which structural BMPs are allowed within new or redevelopment, BMP selection criteria, and the associated performance standards may be found in the Stormwater Ordinance and Technical Standards for the City of Greensburg. These BMPs have been combined with the Post-Construction Site Stormwater Runoff Control BMPs (MCM #5) for ease of presentation and discussion.

### 3.2.5 Post-Construction Site Stormwater Run-Off

The MS4GP requires the development of an ordinance or other regulatory mechanism and establishment of a post-construction program that addresses runoff from new development and redevelopment areas that disturb one or more acres of land in the MS4 area. This program must include a permitting process, plan review process, site inspections, and enforcement. MS4 area personnel responsible for plan review, inspection, and enforcement of post-construction BMPs shall receive annual training.

Where appropriate, MS4 entities must use a combination of storage, infiltration, filtering, or vegetative practices to reduce the impact of pollutants in stormwater runoff on receiving waters in areas that are the responsibility of the MS4 entity. A written Operational and Maintenance (O&M) Plan must be developed and implemented for all existing stormwater structural BMPs, which are under the control of the MS4 entity. As new post-construction BMPs are added to areas under the control of the MS4 entity, the O&M Plan must be updated accordingly.

Compliance with this MCM requires MS4s to develop a program for managing Post-Construction Stormwater Runoff Control BMPs that will ensure adequate, long-term stormwater quality benefits in new development and redevelopment activities. Once construction is complete, post-construction

practices specified by the MS4 must be implemented to ensure adequate stormwater quality is maintained from the developed site. Table 10 provides a summary of the Construction and Post-Construction Site Stormwater Runoff Control BMPs to be implemented and identifies the associated measurable goals, programmatic indicators, timeline, priority areas and responsible parties. These BMPs have been combined with the Construction Site Stormwater Runoff Control BMPs (MCM #4) for ease of presentation and discussion.

**Table 10: Construction and Post-Construction BMPs**

| Best Management Practice (BMP)                                                             | BMP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Measurable Goals, Tracking, and Programmatic Indicators                                                                                                                                                                                                                                                                                                                                                  | Timeline                                                                                                                      | Responsible Party                                                      |
|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <b>Stormwater Management Ordinance</b><br><br>(4.5(b))<br>(4.5(f))<br>(4.6(b))<br>(4.6(c)) | <ul style="list-style-type: none"> <li>Review and revise the active construction and post-construction site ordinance language and stormwater technical standards to ensure compliance with the MS4GP and the CSGP</li> </ul>                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>Continue to update and enforce the Stormwater Management Ordinance</li> <li>Review and approve proposed new and redevelopment projects for compliance with the Stormwater Technical Standards</li> <li>Incorporate post-construction performance standards into the ordinance and/or technical standards</li> <li>Review at least once per permit term</li> </ul> | <ul style="list-style-type: none"> <li>January 2023 (review/update)</li> <li>Implementation throughout permit term</li> </ul> | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |
| <b>Plan Review and Permitting Procedures</b><br><br>(4.5(c))                               | <ul style="list-style-type: none"> <li>Establish or review plan review and permitting procedures, internal processes, and timetables</li> </ul>                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>Establish or review written procedures for plan review</li> <li>Develop or review forms, checklists</li> <li>Review and approve proposed new and redevelopment projects</li> <li>Review 100% of construction plans and inspect prioritized sites for compliance</li> </ul>                                                                                        | <ul style="list-style-type: none"> <li>January 2023 (review/update)</li> <li>Implementation throughout permit term</li> </ul> | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |
| <b>Inspection Procedures</b><br><br>(4.5(d))<br>(4.6(e))<br>(4.6(f))                       | <ul style="list-style-type: none"> <li>Establish or review procedures and processes to inspect sites to ensure measures are installed and maintained</li> <li>Inspect 100% of all permitted construction sites with greater than one acre of disturbance</li> <li>Re-inspect and follow-up on prioritized sites having identified problem areas and/or concerns</li> <li>Complete active construction site and post-construction BMP inspection forms</li> </ul> | <ul style="list-style-type: none"> <li>Establish or review written procedures for inspections</li> <li>Develop or review forms, checklists</li> <li>Identify priority sites for inspections</li> <li>Conduct inspections in accordance with procedures</li> <li>Complete forms for active construction sites and post-construction BMPs inspected</li> </ul>                                             | <ul style="list-style-type: none"> <li>January 2023 (review/update)</li> <li>Implementation throughout permit term</li> </ul> | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |
| <b>Enforcement Procedures</b><br><br>(4.5(e))                                              | <ul style="list-style-type: none"> <li>Establish or review procedures and policies to enforce local ordinance</li> </ul>                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>Establish or review written procedures to address violations, including compliance and escalating enforcement</li> </ul>                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>January 2023 (review/update)</li> <li>Implementation throughout permit term</li> </ul> | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul> |

| Best Management Practice (BMP)                                       | BMP Description                                                                                                                                                                                                                                                                                                                                                                                          | Measurable Goals, Tracking, and Programmatic Indicators                                                                                                                                                                                                                                                                                                                           | Timeline                                                                                         | Responsible Party                                                                                       |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Public Reporting Program</b><br><br>(4.5(g))                      | <ul style="list-style-type: none"> <li>Utilize program to field complaints from the public on illegal dumping, illicit discharges, poor erosion control practices, and other activities that negatively impact stormwater quality</li> </ul>                                                                                                                                                             | <ul style="list-style-type: none"> <li>Implement the pollution hotline program</li> <li>Respond to complaints and inquiries</li> <li>Document the number of complaints received and all follow up actions taken on reports</li> <li>Respond to complaints and inquiries</li> <li>Document the number of complaints received and all follow up actions taken on reports</li> </ul> | <ul style="list-style-type: none"> <li>On-going</li> </ul>                                       | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul>                                  |
| <b>Staff Training</b><br><br>(4.5(j))<br>(4.6(i))                    | <ul style="list-style-type: none"> <li>Train appropriate staff members on plan review, inspection, compliance, and enforcement</li> </ul>                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>Conduct annual refresher training to appropriate departments and staff</li> <li>Document number of staff, number of events held, and the topics covered in each session</li> </ul>                                                                                                                                                         | <ul style="list-style-type: none"> <li>Annually</li> </ul>                                       | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> <li>Relevant city employees</li> </ul> |
| <b>Active Site Inventory</b><br><br>(4.5(l))                         | <ul style="list-style-type: none"> <li>Maintain an inventory of all projects subject to the CSGP, the MS4GP, and owned or operated by the MS4</li> <li>Track the status of construction projects, erosion and sediment control activities, and post-construction BMPs</li> <li>Track violations, complaints, and public information requests</li> <li>Digitize publicly owned structural BMPs</li> </ul> | <ul style="list-style-type: none"> <li>Establish or revise tracking procedures</li> <li>Establish or update digitized structural BMP maps</li> </ul>                                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>January 2023 (review/update)</li> <li>On-going</li> </ul> | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul>                                  |
| <b>Operation &amp; Maintenance (O&amp;M) Manuals</b><br><br>(4.6(d)) | <ul style="list-style-type: none"> <li>Require O&amp;M manuals to be submitted for all post-construction BMPs identified as part of a project submittal package</li> </ul>                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>Enforce ordinance requirements for O&amp;M plan submittal and plan contents for new BMPs</li> </ul>                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>As plans are submitted</li> </ul>                         | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul>                                  |
| <b>CSGP Compliance</b><br><br>(4.5(k))                               | <ul style="list-style-type: none"> <li>Ensure MS4 owned/operated projects are compliant with the CSGP</li> </ul>                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>Submit plans to SWCD</li> <li>Comply with MS4 stormwater ordinance</li> <li>Develop SOP which includes self-monitoring of projects</li> </ul>                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>On-going</li> </ul>                                       | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul>                                  |



| Best Management Practice (BMP)                                                        | BMP Description                                                                                                                        | Measurable Goals, Tracking, and Programmatic Indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Timeline                                                                                                                                     | Responsible Party                                                        |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <p><b>Annual Report</b></p> <p>(4.5(i))<br/> (4.5(m))<br/> (4.6(h))<br/> (4.6(j))</p> | <ul style="list-style-type: none"> <li>• Assess the program annually</li> <li>• Report progress in an annual report to IDEM</li> </ul> | <ul style="list-style-type: none"> <li>• Assess program in conjunction with gathering data and compilation of the annual report</li> <li>• Include: <ul style="list-style-type: none"> <li>• The number of construction projects owned and/or operated by the MS4 entity that are active at the time of submittal</li> <li>• The number of construction sites obtaining a MS4 entity-issued stormwater run-off permit or authorization to discharge</li> <li>• The number of construction sites inspection</li> <li>• The number and type of enforcement actions taken</li> <li>• The number of public information requests and/or complaints received</li> </ul> </li> <li>• Updates to the post-construction ordinance or regulatory mechanism</li> <li>• Number of sites requiring post-construction controls</li> <li>• Number, type, and location of structural measures installed</li> <li>• Number, type, and location of structural measures modified to function properly to improve water quality benefits</li> <li>• Number, type, and location of structural measures inspection to ensure each meets design requirements and/or are being maintained</li> <li>• Submit annual report</li> </ul> | <ul style="list-style-type: none"> <li>• February 2023</li> <li>• February 2024</li> <li>• February 2025</li> <li>• February 2026</li> </ul> | <ul style="list-style-type: none"> <li>• Greensburg MS4 staff</li> </ul> |

### 3.2.6 Municipal Operations Pollution Prevention and Good Housekeeping

The MS4GP requires the development and implementation of a program to prevent or reduce polluted runoff from municipal operations within the MS4 area. The program must include written documentation of maintenance activities, maintenance schedules, and long-term inspection procedures for BMPs to reduce floatables and other pollutants discharged from the separate storm sewers.

Controls must be implemented for reducing or eliminating the discharge of pollutants from operational areas, including roads, parking lots, maintenance and storage yards, and waste transfer stations. Written procedures must be developed and implemented for the proper disposal of waste or materials removed from separate storm sewer systems and operational areas. New flood management projects must be assessed via written documentation for their impacts on water quality and existing flood management projects must be examined for incorporation of additional water quality protection devices or practices. MS4 entity employees must be properly trained on various topics such as herbicide and insecticide application and the function of BMPs. Such training must be documented in writing.

**Table 11** provides a summary of the Pollution Prevention and Good Housekeeping BMPs to be implemented and identifies the associated measurable goals, programmatic indicators, environmental benefits, timeline, priority areas and responsible parties associated with each BMP. A detailed description of each BMP is provided below.

**Table 11: Pollution Prevention and Good Housekeeping BMPs**

| Best Management Practice (BMP)                                                   | BMP Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Measurable Goals, Tracking, and Programmatic Indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Timeline                                                                                                                       | Responsible Party                                                                                                   |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <p><b>Stormwater Pollution Prevention Plans (SWPPPs)</b><br/><br/>(4.7(b-f))</p> | <ul style="list-style-type: none"> <li>• Evaluate listing of properties owned or operated by the MS4</li> <li>• Develop additional SWPPPs or SOPs if necessary</li> <li>• Include facility inspection sheets, employee training form, spill documentation</li> <li>• This general BMP covers specific BMPs such as:                             <ul style="list-style-type: none"> <li>○ Secondary Containment</li> <li>○ Salt/Sand Management</li> <li>○ Snow Disposal Areas</li> <li>○ Spill Prevention and Clean Up</li> <li>○ Fertilizer and Pesticide Management</li> <li>○ Waste Disposal</li> <li>○ Wash water management</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Utilize SWPPP and sheets to track inspections, training, etc. for each facility</li> <li>• Conduct and document quarterly facility inspections and assessments</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>• Annually (review and revise)</li> <li>• Quarterly (inspections)</li> </ul>            | <ul style="list-style-type: none"> <li>• Greensburg MS4 staff</li> <li>• Other relevant city departments</li> </ul> |
| <p><b>Facility Inspections</b><br/><br/>4.7(c)<br/>4.7(f)</p>                    | <ul style="list-style-type: none"> <li>• Assess existing operations at each MS4 owned and/or operated facility</li> <li>• Conduct quarterly inspections at each facility and update records in SWPPP</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>• Conduct and document quarterly facility inspections and assessments, at least one of which is conducted by the MS4 coordinator or a designated individual</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• Quarterly</li> </ul>                                                                  | <ul style="list-style-type: none"> <li>• Greensburg MS4 staff</li> <li>• Other relevant city departments</li> </ul> |
| <p><b>Stormwater Infrastructure Maintenance</b><br/><br/>(4.7(g))</p>            | <ul style="list-style-type: none"> <li>• Develop a written O&amp;M plan for MS4 owned and/or operated stormwater infrastructure</li> <li>• Perform a surface visual inspection of all catch basins, outfalls, and conveyance systems</li> <li>• Maintain the MS4 conveyance and associated structures included outfalls, open channels, and ditches</li> </ul>                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>• Implement a storm sewer system maintenance schedule and track activities to document the amount of pollution that has been kept out of local receiving waters as a result of the stormwater program</li> <li>• Complete surface visual inspections of the entire system within the permit cycle with a minimum of 15% completed annually</li> <li>• Document the amount of litter picked up as a result of periodic litter pickup events</li> <li>• Document the amount of materials removed from the storm sewer system and disposal methods</li> <li>• Document all improvements made to roadside shoulders and ditches</li> <li>• Document all improvements made to stormwater outfalls</li> </ul> | <ul style="list-style-type: none"> <li>• July 2023 (review/update)</li> <li>• Implementation throughout permit term</li> </ul> | <ul style="list-style-type: none"> <li>• Greensburg MS4 staff</li> <li>• Other relevant city departments</li> </ul> |

| Best Management Practice (BMP)                           | BMP Description                                                                                                                                                                                                                                                             | Measurable Goals, Tracking, and Programmatic Indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Timeline                                                                                                                             | Responsible Party                                                                                               |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
|                                                          |                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>Document all issues noted during visual inspection</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                      |                                                                                                                 |
| <b>Third Party Compliance</b><br>(4.7(j))                | <ul style="list-style-type: none"> <li>Establish or review procedures to ensure contractors or third-party entities hired by the MS4 entity are required to comply with stormwater good housekeeping</li> </ul>                                                             | <ul style="list-style-type: none"> <li>Establish or review written procedures for compliance and enforcement</li> <li>Document actions taken</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>As needed</li> </ul>                                                                          | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul>                                          |
| <b>Flood Management Projects</b><br>(4.7(k))<br>(4.7(l)) | <ul style="list-style-type: none"> <li>Assess flood management projects for incorporation of water quality devices or practices</li> </ul>                                                                                                                                  | <ul style="list-style-type: none"> <li>Document that flood control projects are assessed for incorporation of additional water quality devices or practices</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>As projects proposed</li> </ul>                                                               | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> <li>Engineering Department</li> </ul>          |
| <b>Staff Training</b><br>(4.7(m))                        | <ul style="list-style-type: none"> <li>Train appropriate staff members on new technology, operations, fueling spill prevention and clean-up, other responsibilities that arise during the year, site specific stormwater run-off issues, and permit requirements</li> </ul> | <ul style="list-style-type: none"> <li>Conduct annual refresher training to appropriate departments and staff</li> <li>Train all new full-time employees within 60 days of date of employment</li> <li>Train all new seasonal employees within 30 days of date of employment</li> <li>Document number of staff, number of events held, and the topics covered in each session</li> </ul>                                                                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>Annually</li> </ul>                                                                           | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> <li>Other relevant city departments</li> </ul> |
| <b>Annual Report</b><br>(4.7(i))<br>(4.7(n))             | <ul style="list-style-type: none"> <li>Assess the program annually</li> <li>Report progress in an annual report to IDEM</li> </ul>                                                                                                                                          | <ul style="list-style-type: none"> <li>Assess program in conjunction with gathering data and compilation of the annual report</li> <li>Include:               <ul style="list-style-type: none"> <li>Number and location of stormwater outfalls and conveyance systems that have been repaired</li> <li>Estimated amount of material collected from stormwater drainage system cleaning including the disposal methods utilized</li> <li>Estimated amount of materials collected from street sweeping, if applicable, including the disposal method utilized</li> <li>Number and location of de-icing salt and sand storage areas and methods used to minimize stormwater exposure</li> </ul> </li> <li>Submit annual report</li> </ul> | <ul style="list-style-type: none"> <li>February 2023</li> <li>February 2024</li> <li>February 2025</li> <li>February 2026</li> </ul> | <ul style="list-style-type: none"> <li>Greensburg MS4 staff</li> </ul>                                          |

## REFERENCES

- American Legal Publishing Corporation. (2020). Greensburg, Indiana Code of Ordinances. Retrieved from [https://codelibrary.amlegal.com/codes/greensburg/latest/greensburg\\_in/0-0-0-23033](https://codelibrary.amlegal.com/codes/greensburg/latest/greensburg_in/0-0-0-23033)
- Bartholomew Co. & Decatur Co. SWCDs. (2008). Clifty Creek Watershed Comprehensive Management Plan. Retrieved from [https://ecm.idem.in.gov/cs/idcplg?IdcService=GET\\_FILE&dID=83085070&dDocName=83085003&Rendition=web&allowInterrupt=1&noSaveAs=1](https://ecm.idem.in.gov/cs/idcplg?IdcService=GET_FILE&dID=83085070&dDocName=83085003&Rendition=web&allowInterrupt=1&noSaveAs=1)
- City of Greensburg, Indiana. (2022). Street Department. Retrieved from <https://www.cityofgreensburg.com/city-services/street-department/>
- City of Greensburg, Indiana. (2022). Utilities. Retrieved from <https://www.cityofgreensburg.com/city-services/utilities/>
- Indiana Department of Environmental Management. (2002). Sand Creek WMP 00-222. *Sand Creek Watershed Project*. Retrieved from <https://www.in.gov/idem/nps/resources/watershed-management-plans/sand-creek-wmp-00-222/>
- Indiana Department of Environmental Management. (2003, July 7). Rule 13. Storm Water Run-Off Associated with Municipal Separate Storm Sewer System Conveyances. *Indiana Administrative Code*.
- Indiana Department of Environmental Management. (2021). Investigation of Water Quality in the School Branch Watershed (Contract #29917). *Summary of Current 319(h) Grant Projects*. Retrieved from <https://www.in.gov/idem/nps/funding/current-section-319205j-projects/summary-of-current-319h-grant-projects/>
- Indiana Department of Environmental Management. (2021, December). Municipal Separate Storm Sewer System General Permit.
- Indiana Department of Environmental Management. (2022). Integrated Water Monitoring and Assessment Report. Retrieved from <https://www.in.gov/idem/nps/watershed-assessment/water-quality-assessments-and-reporting/integrated-water-monitoring-and-assessment-report/>
- Indiana Department of Environmental Management. (2022). LARE Project Applications & Funding Approvals. Retrieved from <https://www.in.gov/dnr/fish-and-wildlife/wildlife-resources/lake-and-river-enhancement/lare-project-applications-and-funding-approvals/>
- Indiana Department of Environmental Management. (2022). Section 303(d) List of Impaired Waters. *Indiana's Finalized 303(d) List of Impaired Waters (Category 5) for 2022*. Retrieved from <https://www.in.gov/idem/nps/watershed-assessment/water-quality-assessments-and-reporting/section-303d-list-of-impaired-waters/>
- Indiana Department of Environmental Management. (n.d.). Rule 6. Storm Water Discharges Exposed to Industrial Activity. *Indiana Administrative Code*.

Indiana Water Monitoring Inventory. (2022). Indiana Water Monitoring Inventory Map. Retrieved from <https://inwater.agriculture.purdue.edu/monitoring/>

Stats Indiana. (2022). Indiana City/Town Census Counts, 1900 to 2020. Retrieved from <http://www.stats.indiana.edu/topic/population.asp>

Strand Associates. (2015). Combined Sewer Overflow Long Term Control Plan Compliance Plan.

US Fish & Wildlife Service. (2021). Wetlands Mapper. *National Wetlands Inventory*. Retrieved from <https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>

USGS. (2021). NLCD 2019 Land Cover (CONUS). *National Land Cover Database*. Retrieved from <https://www.mrlc.gov/data/nlcd-2019-land-cover-conus>

USGS. (2022). National Hydrography Dataset. Retrieved from <https://www.usgs.gov/national-hydrography>

## **APPENDIX 1: Programmatic Indicators**

| MCM                                                     | Programmatic Indicator Permit Citation | Description                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Public Education, Outreach, Participation & Involvement | 4.3(h)(2)                              | A list of each public participation and outreach events and activities conducted, a description of the activity, an estimate of the number of attendees, and an assessment if the goals and objectives were met.                                                                                   |
|                                                         | 4.3(h)(3)                              | The number and types of construction and/or post-construction stormwater training opportunities that were provided to contractors, developers and builders, property owners (commercial, industrial, residential, homeowner associations, and other targeted entities during the reporting period. |
|                                                         | 4.3(h)(4)                              | Documentation that presentations were made to elected officials or boards.                                                                                                                                                                                                                         |
|                                                         | 4.3(h)(5)                              | Describe each targeted audience selected and how they were reached during the reporting period and describe behavioral changes observed.                                                                                                                                                           |
|                                                         | 4.3(h)(6)                              | A list of all public education materials used during the reporting period.                                                                                                                                                                                                                         |
| Illicit Discharge Detection & Elimination               | 4.4(k)(2)                              | IDDE program updates.                                                                                                                                                                                                                                                                              |
|                                                         | 4.4(k)(3)                              | A summary of any storm sewer system mapping changes to the stormwater outfall and conveyance maps.                                                                                                                                                                                                 |
|                                                         | 4.4(k)(4)                              | Number of new MS4 outfalls mapped.                                                                                                                                                                                                                                                                 |
|                                                         | 4.4(k)(5)                              | Number and location of dry weather outfalls screened for illicit discharges.                                                                                                                                                                                                                       |
|                                                         | 4.4(k)(6)                              | Number and location of illicit discharges detected.                                                                                                                                                                                                                                                |
|                                                         | 4.4(k)(7)                              | Number and location of illicit discharges eliminated.                                                                                                                                                                                                                                              |
|                                                         | 4.4(k)(8)                              | Number of illicit discharges and/or spills reported to the MS4 entity.                                                                                                                                                                                                                             |
| Construction Site Stormwater Run-off                    | 4.5(m)(2)                              | The number of construction projects owned and/or operated by the MS4 entity that are active at the time of submittal.                                                                                                                                                                              |
|                                                         | 4.5(m)(3)                              | The number of construction sites obtaining a MS4 entity-issued stormwater run-off permit or authorization to discharge.                                                                                                                                                                            |
|                                                         | 4.5(m)(4)                              | The number of construction sites inspected.                                                                                                                                                                                                                                                        |
|                                                         | 4.5(m)(5)                              | The number and type of enforcement actions taken.                                                                                                                                                                                                                                                  |
|                                                         | 4.5(m)(6)                              | The number of public information requests and/or complaints received.                                                                                                                                                                                                                              |
| Post-Construction Stormwater Run-off                    | 4.6(j)(2)                              | Updates to the post-construction ordinance or regulatory mechanism.                                                                                                                                                                                                                                |
|                                                         | 4.6(j)(3)                              | Number of sites requiring post-construction controls.                                                                                                                                                                                                                                              |
|                                                         | 4.6(j)(4)                              | Number, type, and location of structural measures installed.                                                                                                                                                                                                                                       |
|                                                         | 4.6(j)(5)                              | Number, type, and location of structural measures modified to function properly or improve water quality benefits.                                                                                                                                                                                 |
|                                                         | 4.6(j)(6)                              | Number, type, and location of structural measures inspected to ensure each meets design requirements and/or are being maintained.                                                                                                                                                                  |



|                                                                              |           |                                                                                                                          |
|------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------|
| Municipal<br>Operations<br>Pollution<br>Prevention &<br>Good<br>Housekeeping | 4.7(n)(2) | Number and location of stormwater outfalls and conveyance systems that have been repaired.                               |
|                                                                              | 4.7(n)(3) | Estimated amount of material collected from stormwater drainage system cleaning including the disposal methods utilized. |
|                                                                              | 4.7(n)(4) | Estimated amount of material collected from street sweeping, if applicable, including the disposal methods utilized.     |
|                                                                              | 4.7(n)(5) | Number and location of de-icing salt and sand storage areas and methods used to minimize stormwater exposure.            |

## **APPENDIX 2: Acronyms**

|        |                                                      |
|--------|------------------------------------------------------|
| BMP    | Best Management Practice                             |
| CBBEL  | Christopher B. Burke Engineering, LLC                |
| CSGP   | Construction Stormwater General Permit               |
| CSO    | Combined Sewer Overflow                              |
| CWA    | Clean Water Act                                      |
| EI     | Erodibility Index                                    |
| EPA    | Environmental Protection Agency                      |
| GIS    | Geographical Information System                      |
| HEL    | Highly Erodible Land                                 |
| HHW    | Household Hazardous Waste                            |
| HUA    | Hydrologic Unit Area                                 |
| HUC    | Hydrologic Unit Code                                 |
| IAC    | Indiana Administrative Code                          |
| IBC    | Impaired Biotic Communities                          |
| IDDE   | Illicit Discharge Detection and Elimination          |
| IDEM   | Indiana Department of Environmental Management       |
| IDNR   | Indiana Department of Natural Resources              |
| IDP    | Illicit Discharge Potential                          |
| IR     | Integrated Water Monitoring and Assessment Report    |
| LARE   | Lake and River Enhancement Program                   |
| LTCP   | Long Term Control Plan                               |
| MCM    | Minimum Control Measure                              |
| MS4    | Municipal Separate Storm Sewer System                |
| MS4GP  | Municipal Separate Storm Sewer System General Permit |
| NLCD   | National Land Cover Dataset                          |
| NOI    | Notice of Intent                                     |
| NPDES  | National Pollution Discharge Elimination System      |
| NRCS   | Natural Resource Conservation Service                |
| NWI    | National Wetlands Inventory                          |
| O&M    | Operation & Maintenance Manual/Plan                  |
| OSRW   | Outstanding State Resource Waters                    |
| PCB    | Polychlorinated biphenyls                            |
| PHEL   | Potentially Highly Erodible Land                     |
| PI     | Programmatic Indicators                              |
| PWS    | Public Water Supplies                                |
| SDWA   | Safe Drinking Water Act                              |
| SIC    | Standard Identification Classification               |
| SOP    | Standard Operating Procedure                         |
| SR CER | Stream Reach Characterization and Evaluation Report  |
| SWCD   | Soil and Water Conservation District                 |
| SWMD   | Solid Waste Management District                      |
| SWPPP  | Stormwater Pollution Prevention Plan                 |
| SWQMP  | Stormwater Quality Management Plan                   |
| TMDL   | Total Maximum Daily Load                             |
| USGS   | United States Geological Survey                      |
| WHPA   | Wellhead Protection Area                             |
| WMP    | Watershed Management Plan                            |
| WQCR   | Water Quality Characterization Report                |
| WQS    | Water Quality Standards                              |
| WWTP   | Wastewater Treatment Plant                           |