

City of Temple

Existing Phase II MS4

Storm Water Management Program

Submitted April 2019

**STATE OF GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION**

Storm Water Management Program (SWMP)

General NPDES Permit No. GAG610000 for
Small Municipal Separate Storm Sewer Systems (MS4)

1. General Information

- A. Name of small MS4: City of Temple, GA
- B. Name of responsible official: Michael Johnson
Title: Mayor
Mailing Address: 240 Carrollton Street
City: Temple State: GA Zip Code: 30179
Telephone Number: 770-562-3369
- C. Designated stormwater management program contact:
Name: William (Bill) Osborne
Title: City Administrator
Mailing Address: 240 Carrollton Street
City: Temple State: GA Zip Code: 30179
Telephone Number: 770-562-3369
Email Address: wosborne@templega.us

2. Sharing Responsibility

- A. Has another entity agreed to implement a control measure on your behalf?
No _____ (If no, skip to Part 3)

Control Measure or BMP:

1. Name of entity _____
2. Control measure or component of control measure to be implemented by entity on your behalf:

- B. Attach an additional page if necessary to list additional shared responsibilities. **It is mandatory that you submit a copy of a written agreement between your MS4 and the other entity demonstrating written acceptance of responsibility.**

3. Minimum Control Measures and Appendices

- A. Public Education and Outreach
- B. Public Involvement/Participation
- C. Illicit Discharge Detection and Elimination
- D. Construction Site Stormwater Runoff Control
- E. Post-Construction Stormwater Management in New Development and Redevelopment
- F. Pollution Prevention/Good Housekeeping
- G. Appendix – Enforcement Response Plan
- H. Appendix – Impaired Waters

4. Certification Statement

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 gathered and evaluated the information submitted. Based upon 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.

Printed Name: Michael Johnson Date: _____

Signature: _____ Title: Mayor

Storm Water Management Program

Public Education and Outreach on Storm Water Impacts

Best Management Practice (BMP) #1 – Brochures & Fact Sheets

1. Target audience: General Public
2. Description of BMP: The City will provide storm water and related brochures and fact sheets on a kiosk at City Hall and at a civic event during each reporting period. Brochures/fact sheets will cover a variety of topics and provide information that can increase the sense of community and serve as an effective way to promote environmental awareness.
3. Measurable goal(s): A minimum of one additional or updated fact sheet will be provided each reporting period. Brochures and/or fact sheets will be available at one civic event during each reporting period.
4. Documentation to be submitted with each annual report: Documentation of the additional/uploaded fact sheet and civic event will be provided with the annual report.
5. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): August 2019
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
6. Person (position) responsible for overall management and implementation of the BMP: City Administrator
7. Rationale for choosing BMP and setting measurable goal(s): City Hall serves as a central point of life in the City of Temple. This informational Kiosk should contain all types of information pertinent to the community.
8. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: The benefits are difficult to directly measure, but this BMP is an effective way to promote environmental awareness and promote change in habits.

BMP #2 – Education Utilizing the City Web Site

1. Target audience: General Public
2. Description of BMP: The City will use its website, www.templega.us to disseminate storm water related information. Visitors to the website will be able to learn more about storm water, ways that may cause water pollution, how it affects our environment, and opportunities to reduce the negative impacts of storm water pollution.
3. Measurable goal(s): The City will update the storm water page at least once during each reporting period.
4. Documentation to be submitted with each annual report: Documentation of updates to the website and the number of visits will be provided in each annual report. A counter will report the number of visits to the site.
5. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): August 2019
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
6. Person (position) responsible for overall management and implementation of the BMP: City Administrator
7. Rationale for choosing BMP and setting measurable goal(s): The City website is available to a large portion of the population and is a good way to distribute storm water information.
8. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: The benefits are difficult to directly measure, but this BMP provides access to information 24 hours a day, 7 days a week

Public Involvement/Participation

Best Management Practice (BMP) #1 – Presentations to Mayor & City Council

1. Target audience/stakeholder group: General Public
2. Description of BMP: The City will use presentations at open public City Council committee meetings to involve the public in the storm water program
3. Measurable goal(s): A minimum of 2 presentations involving storm water management activities during each reporting year
4. Documentation to be submitted with each annual report: Meeting agendas and copies of the presentations will be included in the annual report.
5. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): August 2019
 - c. Frequency of actions (if applicable): Twice per Calendar Year
 - d. Month/Year of each action (if applicable):N/A
6. Person (position) responsible for overall management and implementation of the BMP: City Administrator
7. Rationale for choosing BMP and setting measurable goal(s): Temple City Council meetings provide an opportunity to communicate about the program with both elected officials and the general public
8. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: The benefits are difficult to directly measure, but this BMP is an effective way to engage with the community on environmental issues.

B. BMP #2 – SWMP Access

1. Target audience/stakeholder group: General Public
2. Description of BMP: The City will provide access to the SWMP and annual reports through the City web site.
3. Measurable goal(s): The SWMP and any updates will be posted on the storm water page. The SWMP annual reports will be posted on the page
4. Documentation to be submitted with each annual report: The names of each documented posted, and the date of the posting will be documented in the annual report.
5. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): August 2019
 - c. Frequency of actions (if applicable): As needed (min. annually)
 - d. Month/Year of each action (if applicable): N/A
6. Person (position) responsible for overall management and implementation of the BMP: City Administrator
7. Rationale for choosing BMP and setting measurable goal(s): Using the City web site has the potential to provide access to program information to a significant portion of the Temple residents.
8. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: The benefits are difficult to directly measure, but this BMP provides access to information 24 hours a day, 7 days a week

Illicit Discharge Detection and Elimination

Best Management Practice (BMP) #1 – Legal Authority

1. Description of BMP: The City prohibits non-storm water discharges into the MS4 through ordinance to protect the public health, safety, environment and general welfare by controlling the introductions of pollutants into the MS4. The City adopted the Illicit Discharge and Illegal Connection Ordinance on April 2, 2007. See Appendix A – Illicit Discharge and Illegal Connection Ordinance.
2. Measurable goal(s): The City will evaluate the effectiveness of the existing ordinance on an on-going basis and modify the ordinance if necessary.
3. Documentation to be submitted with each annual report: Any modifications to the ordinance during the reporting period will be reported in the annual report for that period.
4. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): April 2007
 - c. Frequency of actions (if applicable): As Needed
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): An Illicit Discharge ordinance prohibits non-storm water discharges into the MS4 through ordinance to protect the public health, safety, environment and general welfare.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: Illicit Discharges will be identified and addressed through routine inspections

BMP #2 – Outfall Map & Inventory

1. Description of BMP: The City has developed a partial MS4 inventory and map showing locations of system components. The maps will be enhanced to include the names and locations of all outfalls and waters of the State that receive discharges from those outfalls. Additionally, all public ditches will be mapped as part of the map enhancement project.
2. Measurable goal(s): The City will update the map and inventory for the outfalls from the MS4 area. Following completion of the mapping and inventory, the maps will be updated annually with any additions or modifications to the MS4.
3. Documentation to be submitted with each annual report: The City will provide an update on mapping and inventory development in each annual report, including partial maps and inventories. Updated map and inventory will be provided on subsequent annual reports
4. Schedule:
 - a. Interim milestone dates (if applicable):
 - Update Outfalls and Receiving waters Defined March 2020
 - Add 35% of public ditches to map March 2021
 - Add 35% of public ditches to map (70% total) March 2022
 - Add 30% of public ditches to map (complete) March 2023
 - b. Implementation date (if applicable): See above dates
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): These maps are important to identify problems and ensure proper functioning of the MS4 & to assist staff with outfall inspections
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: Accurate maps will allow the City to respond quickly to locate and eliminate illicit discharges, contributing to program success

BMP #3 – IDDE Plan

1. Description of BMP: An illicit Discharge Detection and Elimination Plan (IDDE Plan) will be developed and implemented for dry weather screening and outfall inspections.
2. Measurable goal(s): Initial dry-weather screening to be conducted in conjunction with Inventory Mapping.
3. Documentation to be submitted with each annual report: The number of dry-weather inspections conducted, the number of illicit discharges identified and the number of discharges eliminated each year. Illicit discharges eliminated will be described. Enforcement actions taken will be discussed.
4. Schedule:
 - a. Interim milestone dates (if applicable):

○ Develop IDDE Plan	March 2020
○ Submit IDDE Plan with annual report	March 2020
○ Initial Screening 35%	March 2021
○ Initial Screening 70%	March 2022
○ Initial Screening 30%	March 2023
 - b. Implementation date (if applicable): March 2020
 - c. Frequency of actions (if applicable): Annually/On-going
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): Detection and elimination of illicit discharges is important to protect and restore waterways.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: Routinely inspecting outfalls helps ensure the MS4 is operating properly, while also identifying illicit discharges requiring elimination.

BMP #4 – Education

1. Description of BMP: The City will develop and publicize a program to facilitate public and municipal reporting of illicit discharges.
2. Measurable goal(s): Educational outreach will be done once per reporting period upon development of plan.
3. Documentation to be submitted with each annual report: Documentation of educational outreach will be provided in each annual report:
4. Schedule:
 - a. Interim milestone dates (if applicable):
 - o Develop Education Plan March 2020
 - o Submit IDDE Plan with annual report March 2020
 - b. Implementation date (if applicable): March 2020
 - c. Frequency of actions (if applicable): Annually/On-going
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): Educating the public about impacts of illicit discharges can help the City identify illicit discharges that may be occurring. Elimination of these discharges would have a positive impact on water quality.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: The benefits are difficult to directly measure, but this BMP is an effective way to promote environmental awareness and promote citizen reporting of illicit discharges.

BMP #5 – Compliant Response

1. Description of BMP: The City Ordinances provide legal enforcement authority to require all illicit connections to the drainage system to be discontinued. When an illicit discharge is detected, either through concerned citizen reports or departmental monitoring, source tracking methods will be used such as observation and back tracking the discharge so that it can be eliminated.
2. Measurable goal(s): Develop procedures for receiving, investigating and tracking the status of illicit discharge complaints. Reports of illicit discharges will be investigated within 72 hours of receipt. A tracking system will be utilized to record the report, the result of the investigation, and resolution as necessary.
3. Documentation to be submitted with each annual report: The log of complaints including date of complaint, and status of resolution will be included in the annual report.
4. Schedule:
 - a. Interim milestone dates (if applicable):
 - o Develop Complaint Response Plan March 2020
 - o Submit Plan with annual report March 2020
 - b. Implementation date (if applicable): March 2020
 - c. Frequency of actions (if applicable): Annually/On-going
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): Tracking citizen complaints will support identification and monitoring of problems.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: This process is an opportunity for citizens and Temple to work together and will be effective if information is collected, investigated and resolved in a timely manner.

Construction Site Storm Water Runoff Control

The City of Temple is not delegated as a Local Issuing Authority. Therefore the Georgia Environmental Protection Division, through the Mountain District, conducts and implements the elements of Construction Site Storm Water Runoff Control.

Best Management Practice (BMP) #1 – Legal Authority

1. Description of BMP: The City has adopted an E&S ordinance which limits construction activity pollutants impact on waters of the State. The City adopted the Soil Erosion and Sedimentation Control Ordinance April 2, 2007. See Appendix B – Soil Erosion and Sedimentation Control Ordinance.
2. Measurable goal(s): The City will evaluate the Soil Erosion and Sedimentation Control Ordinance and if necessary modify the ordinance during the reporting period.
3. Documentation to be submitted with each annual report: Any modifications to the ordinance during the reporting period will be reported in the annual report for that period.
4. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): April 2007
 - c. Frequency of actions (if applicable): Review annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): This ordinance regulates construction activity to reduce pollutants entering waters of the State.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: Enforcement of this ordinance will reduce pollutants from construction sites.

Post-Construction Storm Water Management in New Development and Redevelopment

Best Management Practice (BMP) #1 – Legal Authority

1. Description of BMP: A post-construction ordinance provides the structural framework to address storm water runoff into the MS4 from new development and re-development projects. The Ordinance also adopts the State Storm Water Design manual. The City adopted the Ordinance for Post-Development Storm water Management for New Development and Re-Development on April 2, 2007. See Appendix C- Ordinance for Post-Development Storm water Management for New Development and Re-Development.
2. Measurable goal(s): The City will evaluate the existing post-construction ordinance, and if necessary, modify the ordinance during the reporting period.
3. Documentation to be submitted with each annual report: Any modifications to the ordinance during the reporting period will be reported in the Annual Report.
4. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): April 2007
 - c. Frequency of actions (if applicable): Annual Review
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): The storm water ordinance ensures that controls are required that will prevent or minimize water quality impacts.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: Implementation and enforcement of this ordinance will ensure that post-construction storm water is being controlled.

BMP #2 – Inventory

1. Description of BMP: The City has developed a partial MS4 inventory and map showing locations of system components (e.g. detention ponds, water quality devices, infiltration structures, etc.) and only those privately owned structures designed after the December, 2008 deadline for adoption of the GSMM. The inventory shall include information on the number and type of structures and ownership (e.g. public owned versus privately owned)
2. Measurable goal(s): The City will inventory post construction management structures in the limits of the City. Following completion of the inventory, the inventory will be updated annually with any additions.
3. Documentation to be submitted with each annual report: The City will provide an update on mapping and inventory development in each annual report, including partial maps and inventories. Updated map and inventory will be provided on subsequent annual reports
4. Schedule:
 - a. Interim milestone dates (if applicable):

• Update Outfalls and Receiving waters Defined	March 2020
• Add 35% of public ditches/private structures	March 2021
• Add 35% of public ditches/private structures	March 2022
• Add 30% of public ditches/private structures	March 2023
 - b. Implementation date (if applicable): See above dates
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): Maintaining post-construction control information will ensure other BMP's can be implemented to identify problems and ensure proper functioning of control measures
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: Having information about each control will allow the City to respond and implement programs to ensure proper functioning.

BMP #3 – Inspection Program

1. Description of BMP: The City will inspect each post-construction structure on a routine basis to ensure that they are being properly maintained and functioning.
2. Measurable goal(s): A post-construction structure inspection program will be developed. Upon approval, post-construction structure inspections will be conducted such that 20% of the structures are inspected each year, and 100% of the post-construction controls are inspected over a 5-year period.
3. Documentation to be submitted with each annual report: The number of inspections conducted during the reporting period, and a summary of the inspection results will be included in the annual report.
4. Schedule:
 - a. Interim milestone dates (if applicable):

• Develop Inspection Program Plan	March 2021
• Submit Plan for approval	March 2021
• Inspect 20% of Post Construction Structures	March 2022
• Inspect 20% of Post Construction Structures	March 2023
• Inspect 20% of Post Construction Structures	March 2024
• Inspect 20% of Post Construction Structures	March 2025
• Inspect 20% of Post Construction Structures	March 2026
 - b. Implementation date (if applicable): See above dates
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): Routine inspection will help prevent potential nuisance, reduce the need for repair maintenance, and reduce the risk of polluting storm water runoff by identifying maintenance requirements.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: By routine inspection of each structure the City will ensure that they are being properly maintained, functioning, and if any deficiencies are found that they are addressed.

BMP #3 – Maintenance Program

1. Description of BMP: The City will implement a long-term operation and maintenance program for post-construction storm water management structures. At a minimum, the maintenance program will address all publically-owned structures and those privately-owned structures with construction completed after March 2014.
2. Measurable goal(s): The City will document maintenance it performs on both publically-owned structures and documentation received from private owners for the maintenance that is performed on their structures, during the reporting period
3. Documentation to be submitted with each annual report: The City will provide the structure inventory, ownership, and maintenance activities and/or maintenance agreement during the reporting period in each annual report.
4. Schedule:
 - a. Interim milestone dates (if applicable):
 - Develop Maintenance Program Plan March 2022
 - Submit Plan for approval March 2022
 - b. Implementation date (if applicable): See above dates
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): Routine maintenance helps prevent potential nuisance, reduce the need for repair maintenance, and reduce the risk of polluting storm water runoff by finding and fixing issues.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: By performing regular maintenance the City will ensure the structure is functioning properly and minimize health and safety issues, property damage, etc.

Pollution Prevention/Good Housekeeping for Municipal Operations

Best Management Practice (BMP) #1 – MS4 Control Structure Inventory & Map

1. Description of BMP: The City will continue to update their storm sewer inventory map showing the location of all catch basins, ditches, ponds and storm drain lines with the City. These maps are for inspection, maintenance and familiarity of the system.
2. Measurable goal(s): The City will map the MS4 system in accordance with the implementation schedule. Following completion of the mapping, the maps will be updated with any additions or modifications to the MS4.
3. Documentation to be submitted with each annual report: The City will provide an updated map in each annual report.
4. Schedule:
 - a. Interim milestone dates (if applicable):
 - Update Outfalls and Receiving waters Defined March 2020
 - Add 35% of public ditches/private structures March 2021
 - Add 35% of public ditches/private structures March 2022
 - Add 30% of public ditches/private structures March 2023
 - b. Implementation date (if applicable): 2015
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): It is important to have the MS4 mapped to maintain the systems functionality, which is dependent on inspection, maintenance and familiarity with the system.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: MS4 maps will allow for improved maintenance and management of the system as it continues to develop.

BMP #2 – MS4 Inspection Program

1. Description of BMP: The City will develop a storm sewer inspection program to ensure the system is operating properly and to identify elements requiring maintenance.
2. Measurable goal(s): Following approval of the program, initial inspections will be conducted in conjunction with BMP#1 MS4 Control Structure Inventory and Map. After initial inspections, the City will inspect the MS4 structures (e.g. catch basins, ditches, ponds and storm drain lines) so that 100% are inspected within a 5-year period in accordance with the inspection program.
3. Documentation to be submitted with each annual report: The City will report the number and percentage of control structures inspected in each annual report.
4. Schedule:
 - a. Interim milestone dates (if applicable):

• Develop Inspection Program Plan	March 2021
• Submit Plan for approval	March 2021
• Inspect 20% of Structures	March 2022
• Inspect 20% of Structures	March 2023
• Inspect 20% of Structures	March 2024
• Inspect 20% of Structures	March 2025
• Inspect 20% of Structures	March 2026
 - b. Implementation date (if applicable): See above dates
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): Routine inspection will help prevent potential nuisance, reduce the need for repair maintenance, and reduce the risk of polluting storm water runoff by identifying maintenance requirements.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: By routine inspection of each structure the City will ensure that they are being properly maintained, functioning, and if any deficiencies are found that they are addressed.

BMP #3 – MS4 Maintenance Program

1. Description of BMP: The City will implement a maintenance program for the MS4.. The City conducts maintenance on the MS4 structures as needed.
2. Measurable goal(s): The City will document maintenance it performs on MS4 system components. The City will maintain documentation and track activities.
3. Documentation to be submitted with each annual report: The City will provide the number of each type of structure maintained in each annual report.
4. Schedule:
 - a. Interim milestone dates (if applicable):
 - Develop Maintenance Program Plan March 2022
 - Submit Plan for approval March 2022
 - b. Implementation date (if applicable): See above dates
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): Routine maintenance helps prevent potential nuisance, reduce the need for repair maintenance, and reduce the risk of polluting storm water runoff by finding and fixing issues.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: By performing regular maintenance the City will ensure the structure is functioning properly and minimize health and safety issues, property damage, etc.

BMP #4 – MS4 Street and ROW Cleaning

1. Description of BMP: Removing trash and debris from the road right of way will help improve safety along the roads and reduce debris from entering MS4 system.
2. Measurable goal(s): The City will develop procedures for the removal of trash and debris. The City will remove trash and debris from the right of ways with MS4 area.
3. Documentation to be submitted with each annual report: The City will report the quantity of trash and debris removed in each reporting period.
4. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): 2012
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): Removing debris from the right of ways will improve safety and reduce debris from entering the MS4 system and waterways.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: Removing debris reduces pollutants that would enter the waters of the State.

BMP #5 – MS4 Employee Training

1. Description of BMP: The City will provide educational opportunities to employees on the importance of storm water management and pollution prevention.
2. Measurable goal(s): One educational opportunity will be provided during each reporting period.
3. Documentation to be submitted with each annual report: The City will provide documentation of the number of employees and the educations information shared in each of the annual reports.
4. Schedule:
 - a. Interim milestone dates (if applicable): N/A
 - b. Implementation date (if applicable): June 2020
 - c. Frequency of actions (if applicable): Annually
 - d. Month/Year of each action (if applicable): N/A
5. Person (position) responsible for overall management and implementation of the BMP: City Administrator
6. Rationale for choosing BMP and setting measurable goal(s): By educating employees on storm water pollution, the City will increase their awareness on illicit discharges, dumping and spills so that they can recognize, change and report problems.
7. How you will determine whether this BMP is effective in accordance with Part 5.1.4 of the Permit: Educating City employees is a critical element of a successful pollution prevention plan.

Appendix

Impaired Waters

City of Temple – Impaired Waters Plan shall be completed by April 2021

1. Population based on the 2010 U.S. Census: _____

If the population is less than 10,000, then see items #2 and #3 below.

If the population exceeds 10,000, then see items #4 and #5 below.

2. If the population is less than 10,000, then the MS4 must develop an Impaired Waters Plan (see Part 4.4.1 of the NPDES Permit) including:
- A list of impaired waters and the pollutant(s) of concern;
 - A map showing the location of the impaired waters and all identified MS4 outfalls located on the impaired waters or occurring within one linear mile upstream of the waters;
 - BMPs that will be implemented to address each pollutant of concern; and
 - A schedule for implementing the BMPs.
3. The Impaired Waters Plan must be submitted with the annual report due February 15, 2015.

Final completion date/date of submittal to EPD: _____

NOTE: Upon completion, the Impaired Waters Plan will be included as an Appendix to the SWMP.

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PLAN

**PREPARED FOR:
THE
CITY OF TEMPLE,
GEORGIA**

**December 2019
Revised: July 2020**

Prepared to Meet the Requirements of:
Storm Water Management Plan (SWMP)
General NPDES Permit #GAG610000

Table of Contents

SECTION 1 – INTRODUCTION.....	3
1.1 Background	3
1.2 Defining Illicit Discharges	3
1.3 Regulatory Authority.....	4
SECTION 2 – MAPPING.....	5
2.1 Mapping the System.....	5
SECTION 3 – SELECTING AREAS FOR MONITORING.....	6
3.1 Prioritizing Areas for Screening	6
SECTION 4 – DRY WEATHER SCREENING.....	7
4.1 Background	7
4.2 Dry Weather Screening Procedures for Storm Sewer Outfalls.....	8
4.3 Physical Observations	10
SECTION 5 –TRACING THE SOURCE OFAN ILLICIT DISCHARGE.....	11
5.1 Background.....	11
5.2 Manhole Inspections.....	11
5.3 Video Inspections.....	11
5.4 Smoke Testing.....	12
5.5 Dye Testing.....	12
SECTION 6 – ELIMINATING THE SOURCE OF AN ILLICIT DISCHARGE.....	14
6.1 Background.....	14
6.2 Compliance and Enforcement Actions.....	14
6.3 Proper Construction and Maintenance of MS4s	15
6.4 Integrating Illicit Discharge Requirements and Construction Site Management Goals...	15
6.5 Preventing and Responding to Illegal Dumping.....	15
SECTION 7 – EVALUATING THE IDDE PROGRAM.....	17

SECTION 1 – INTRODUCTION

1.1 Background

On December 8, 1999, the United States Environmental Protection Agency (US EPA) issued regulations that expanded the existing NPDES Storm Water Program to include discharges from small municipal separate storm sewer systems (MS4s) in “urbanized areas” and stormwater discharges from construction activities that disturb more than one acre of land. These regulations are commonly referred to as the “Phase II Storm Water Program”.

In 2007, the State of Georgia, via the Georgia Environmental Protection Division (EPD), adopted the federal phase II rules as NPDES Phase II MS4 general permit (GAG61000), which requires designated MS4 entities to develop Storm Water Management Plans (SWMPs) that address the detrimental water quality impacts of non-stormwater discharges to their stormwater drainage systems.

The permit requires MS4s to implement an ordinance prohibiting the non-stormwater discharges, map their stormwater drainage systems, and develop and implement an illicit discharge detection and elimination (IDDE) program, among other requirements.

This document has been prepared to serve as the City of Temple’s IDDE plan and guidance for implementing the IDDE program in a manner consistent with the City of Temple’s illicit discharge ordinance and the requirements of GAG610000. This plan outlines the policies and procedures that will be used to ensure compliance with the illicit discharge detection and elimination components of the City of Temple’s Stormwater Phase II NPDES permit.

1.2 Defining Illicit Discharges

The US EPA defines an illicit discharge as *any discharge to a regulated small MS4 or to the waters of the State that does not consist entirely of stormwater or allowable nonstormwater discharges*.

Illicit discharges are most typically categorized as spills, illegal connections, illegal dumping, or prohibited discharges entering the MS4’s stormwater drainage system, and often consist of sewage, septic tank effluent, oil disposal, radiator flushing, laundry wastewater, construction site wastes, roadway spills, illegal dumping and improperly disposed of household hazardous wastes.

Illicit discharges can also be categorized by the manner in which they enter the storm sewer system. Direct discharges enter the system via a direct connection or discharge to the storm sewer system. A sanitary sewer cross connection is common example of a direct illicit discharge. An indirect illicit discharge often enters the storm sewer system via running off into a stormwater inlet or by infiltrating through the joints in a pipe. Examples of indirect discharges to the storm sewer system include groundwater seepage, spills, illegal dumping and car wash runoff that reaches a stormwater inlet.

Illicit discharges are often identified by substantial dry weather discharges from storm sewers that contain a variety of water quality pollutants. However, not all dry weather flows contain pollutants. Some dry weather flows may originate from springs, groundwater flows, or leaking drinking water pipes.

The frequency of dry weather discharges in storm drains is important and can be classified as *continuous*, *intermittent*, or *transitory*. *Continuous* discharges occur most or all of the time, are usually easier to detect, and typically produce the greatest pollutant load.

Intermittent discharges occur over a shorter period of time (e.g., a few hours per day or a few days per year). Because they are infrequent, intermittent discharges are hard to detect, but can still represent a serious water quality problem, depending on their flow type.

Transitory discharges occur rarely, usually in response to a singular event such as an industrial spill, ruptured tank, sewer break, transport accident or illegal dumping episode. These discharges are extremely hard to detect with routine monitoring, but under the right conditions, can exert severe water quality problems on downstream receiving waters.

1.3 Regulatory Authority

The City of Temple has prepared and adopted an ordinance that makes illicit discharges illegal and prescribes the penalties and corrective actions necessary for mitigating any illicit discharges that may be identified within the MS4 area.

SECTION 2 – MAPPING

2.1 Mapping the System

The City of Temple is developing a map of the storm drain system, as required by the Phase II Stormwater Program, using geographic information systems (GIS) computing software.

The City of Temple may expand upon this effort by developing an updated storm sewer system map, utilizing geographic information system (GIS), with mapping capabilities that include the following datasets:

- land usage
- topography (2 foot contours or best available)
- stormwater outfalls
- storm sewer infrastructure
- open ditches/channels
- location of waters of the State of Georgia

Data will be collected by compiling information from a variety of sources, including federal and state datasets, which are typically free of charge, to datasets that are purchased from private or semi-public entities. Digital submittals of new/redevelopment as-builts may be required by the City of Temple in the future.

Once appropriate MS4 data has been compiled, the City of Temple will perform desktop assessments to prioritize IDDE efforts and program development. The desktop assessment will allow MS4 staff to screen and rank the MS4 area or portions of the MS4 area as having a high, medium, or low potential for illicit discharges.

Desktop assessments will ultimately guide the development of the IDDE program by providing a mechanism by which the City of Temple can set IDDE program priorities. For example, if it is determined that low density residential land usage with a low risk for illicit discharges dominates the MS4 area, then the City of Temple may decide that the most cost effective approach to its IDDE program could be focusing IDDE efforts on public education. Conversely, if assessments indicate that land uses with high risks of illicit discharges dominates the MS4 area, then the City of Temple could focus its efforts on finding and eliminating illicit discharges.

In addition to evaluating land usage, older developments within the MS4 area will be evaluated as these locations are more likely to have illicit discharges due to being constructed prior to current standards for inspections.

Desktop assessments and screening will provide a systematic approach for assessing the community's risk for illicit discharges as the community grows and changes over time. Additionally, the assessments are anticipated to generate field maps necessary for completing dry weather screening and source identification/elimination efforts.

SECTION 3 – SELECTING AREAS FOR MONITORING

3.1 Prioritizing Areas for Screening

The City of Temple will select screening locations based on the potential for illicit discharges. The following guidelines should be used to prioritize stormwater outfalls within the MS4 area for dry weather screening of potential illicit connections:

- Utilize an up-to-date inventory of the separate storm sewer system outfalls;
- Review records of previously screened outfalls to identify any subset of outfalls that have previously, and consistently, had illicit dry weather flows;
- Identify any new outfalls, or outfalls not previously screened, or outfalls identified by citizen complaints (see the Complaint Response Plan Regarding Illicit Discharges and Storm Water Runoff and the Illicit Discharge and Storm Water Complaint Report Form);
- Identify outfalls that drain into 303(d) listed waters, or have significant industrial land use, or discharge to streams with water quality concerns without obvious point sources;
- Rank previously screened outfalls by quarter since last screening; and
- Prioritize the set of outfalls for quarterly screening by adding the number of problem outfalls to the number of previously unscreened outfalls.

In order to provide a comprehensive screening of outfalls within the community, sites should be rotated on an annual basis.

SECTION 4 – DRY WEATHER SCREENING

4.1 Background

The EPD requires the use of dry weather screening protocols to identify illicit discharges within the MS4. As implied by its name, dry weather screening is a process used to locate illicit discharges after extended periods of dry weather, often 48 to 72 hours after a rainfall of 0.10 inches or more. Dry weather screening is typically performed at storm sewer outfalls, but in some cases, may be performed by examining storm sewer manholes.

Dry weather screening is a systematic process for locating stormwater outfalls and evaluating these outfalls for discharges (flow), odor, color, turbidity, and floatables. Although the impact of a dry weather discharge on receiving streams is often very obvious, it may not be easy to determine if a discharge is having a negative impact on the receiving stream based upon visual observations alone. As a consequence, the visual observations can be conducted multiple times, as needed to allow for verification of the discharge and a better assessment of the discharge's impact over time.

If the impact of a suspected illicit discharge is in question, dry weather screening is often supplemented with chemical, biological or physical analysis to identify any pollutants that may be associated with the discharge. To minimize the costs associated with water quality sampling, water quality parameters considered to be indicators of different categories of illicit discharges will be monitored. Ammonia, for example, is typically used as a primary indicator of sewage pollution, while fluoride is a common indicator for drinking water that may be leaking into the storm sewer system.

Since dry weather screening and water quality monitoring can be time consuming and expensive, the City of Temple will have their screening programs integrated with infrastructure inventories to obtain maximum benefits from staff time spent in the field.

Dry weather screening is easiest to perform during the fall during "leaf off" conditions, but may be performed during any season. Leaf off conditions makes it easier to locate storm sewer outfalls and to navigate rough terrain associated with stream banks and channels.

4.2 Dry Weather Screening Procedures for Storm Sewer Outfalls

The following dry weather screening procedure should be followed for all outfalls of all shapes and sizes, including large and small pipes, submerged or partially submerged outfalls, blocked outfalls and outfalls from stormwater treatment facilities. Field screening staff should only skip downspout drains, open ended culverts (where you can see through the culvert), weep holes and drop inlets from roads or bridges.

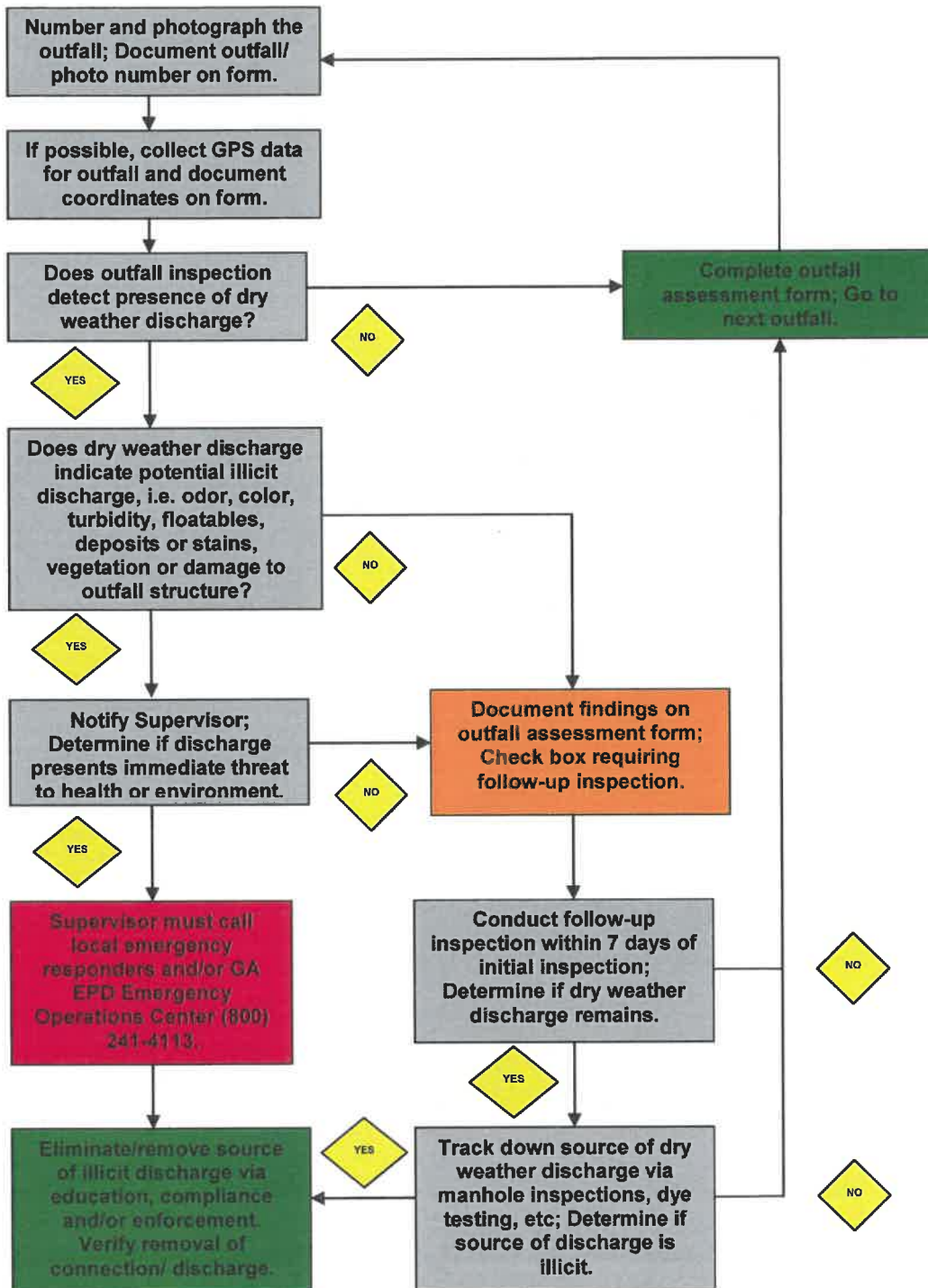
The City of Temple, GA Stormwater Outfall Inspection Checklist should be completed for each inspected outfall. The procedure for dry-weather screening is as follows (also see flowchart on the following page):

1. Utilizing desktop assessment, City of Temple Storm Drainage System maps, or copies of USGS topographic maps, locate the storm sewer outfall.
2. Number and photograph the outfall, and document the outfall/photo number on the outfall inspection checklist.
3. If available, collect GPS data for the outfall and record coordinates.
4. Measure the outfall structure to characterize its shape, size, and material(s) and record the outfall characterization data.
5. If a dry weather flow is occurring at the outfall, record additional physical observations including flow, odor, color, turbidity, solids and floatables (toilet paper, oil sheen, etc).
6. If a dry weather discharge is obviously illicit, field crews must report the illicit discharge to their supervisor immediately for source identification efforts and appropriate compliance/enforcement actions. Source identification is discussed in detail in a later section.
7. The supervisor or his designated staff must conduct follow up inspections to confirm or rule out the presence of a suspected illicit discharge. This process may include any of the options discussed later in this document.

While in the field, checklists from each dry weather screening survey should be kept together. A checklist for each subsequent visit should be used for follow-up visits. Checklists should be maintained for several years as supporting documentation for an electronic database. All checklists should be checked by a supervisor for quality assurance/quality control (QA/QC). Any errors or omissions must be corrected on the checklist and the checklist must be approved by the supervisor prior to data entry.

When field sheets have been approved, all data from the outfall assessment forms should be entered into the appropriate electronic database. This database is critical to annual reporting to EPD and must be complete and accurate.

**ILLICIT DISCHARGE DETECTION AND ELIMINATION PLAN
DRY WEATHER SCREENING
STANDARD OPERATING PROCEDURE (SOP)**



4.3 Physical Observations

The key to understanding dry weather screening results and data is the ability to diagnose illicit discharges based upon the characteristics of the discharge. For the purposes of this program, observations of odor, color, turbidity, solids and floatables will be used as the primary indicators of illicit discharges. The following discussion provides an explanation of how results for each of these parameters may be used to diagnose illicit discharges.

If any visible discharge is observed, then it should be stated and described in accordance to the Stormwater Outfall Inspection Checklist. Each of these observations associated with flowing outfalls may predict the presence of an illicit discharge or illegal connection:

- **Odor** – Most strong odors are associated with illicit discharges and can be traced to specific types of operations. Typical observations of odors during illicit discharge inspections include gasoline, oil, sewage, chemicals or decomposition. Sewage or sulfide (rotten egg) smell is often associated with stale sanitary wastewater which could indicate a sanitary cross connection or a failing septic system. An oil or gas smell can indicate nearby gas stations or vehicle maintenance operations. In residential neighborhoods, an oil or gas smell can indicate improper disposal of hazardous household waste.
- **Color** – Notable discoloration from stormwater discharges is typically an important indicator for illicit connections or illegal dumping. A variety of colors may be found. Yellow colorations may result from discharges from chemical, textile, or tanning plants. Brown colors typically come from meat packing facilities, printing facilities, or metal, stone or concrete operations. Green chemicals can come from chemical plants or textile operations, but may also be associated with antifreeze from residential or commercial vehicle maintenance operations. Red colorations may originate from meat packing or processing facilities, while gray colorations likely result from dairies or food processing facilities.
- **Turbidity** – The visual estimate of the turbidity of the discharge is a measure of the cloudiness or opaqueness of the water. Cloudy discharges are most often the result of sewage, concrete or stone operations, fertilizer use or manufacturing, or car dealers and detailing operations. Opaque discharges are most often associated with food processing, timber/ lumber operations, metal works, painting, or paint/ pigment manufacturing.
- **Floatables** – The presence of any floatable materials in the discharge or the plunge pool below may suggest an illicit discharge. Sewage, oil sheen or film, and suds are all examples of floatable indicators. Floatables can include solids from industrial or sanitary wastewater, such as toilet paper. Floatables may also include industrial pollutants, such as animal fats, food, solvents, fuels, sawdust, foam, or packing materials. Oil sheen is a common indication of nearby gas stations or vehicle maintenance operations. [Note that for dry weather screening, trash and debris are not considered indicators of an illicit discharge or illegal connection.]

- **Deposits or Stains** – Sediment is the most common deposit left in stormwater drainage systems. However, deposits and stains may also include crystalline powders from chemical or fertilizer manufacturing. Dark or oily deposits are likely derived from industrial or vehicle service operations.

SECTION 5 – TRACING THE SOURCE OF AN ILLICIT DISCHARGE

5.1 Background

Once a dry weather discharge has been discovered, the source of the discharge must be identified. Several methods are available for use in locating the source of a discharge, including manhole investigations, video inspections, smoke testing, dye testing, or other related methods. Since removal of illicit discharges is a mandatory component of the Phase II Stormwater Program, source identification is a fundamental component of the illicit discharge program.

5.2 Manhole Inspections

The most common method of tracking a dry weather flow is to follow the discharge upstream within the storm water conveyance system via manhole inspections. This can be accomplished by consulting the storm drainage system map, following the discharge to the next “upstream” manhole and working progressively up the storm sewer system until the source of the discharge is isolated or by splitting the contributing storm sewer system into equal segments and inspecting manholes at strategic locations within the contributing storm sewer network.

The decision to move upstream or to split manhole inspections among the contributing drainage area depends most typically upon the size of the outfall and the complexity of the stormwater drainage system. As a general rule, dry weather discharges from outfalls greater than 36” inches in diameter with complex drainage are likely candidates for splitting up manhole inspections.

Repeat these steps until a junction is found with no evidence of discharge; the discharge source is likely to be located between the junction with no evidence of discharge and the next downstream junction. Be aware of the surrounding areas and look for water in gutters and streets which may indicate an illicit discharge.

5.3 Video Inspections

Video inspections work by remotely guiding a mobile video camera through storm sewer lines to observe actual connections to the system and to identify the source of dry weather discharges and potentially illicit connections. This method of inspection is often time consuming and can be expensive; however, video inspections can provide access to small diameter pipes where physical inspections are not possible and video inspections provide a less intrusive method of conducting inspections when access is limited, especially in residential areas.

5.4 Smoke Testing

Smoke testing methodologies work by introducing a non-toxic smoke into the stormwater drainage system and then observing where the smoke emerges. Smoke testing can identify illicit connections to the storm sewer system, as well as damaged storm lines where infiltration or inflow is occurring. As a result, it is necessary to inform area residents of the date and time of smoke testing operations, as well as local police and fire departments. Smoke may cause minor irritation of respiratory passages, so residents with respiratory conditions should receive special attention to determine if they should be present during testing.

Smoke testing is best utilized in the upper reaches of the stormwater drainage system with small pipes or laterals. In utilizing this method, smoke bombs or candles are most typically used to generate the smoke while blowers are used to force air through the storm sewer. First, storm drain inlets and excluded drainage pipes are sealed off with sand bags or expandable plugs (beach balls may be used). Next, smoke is released and forced into the storm sewer system by the blower. Lastly, field crews visually inspect the area to identify any smoke escaping the drainage system above ground.

5.5 Dye Testing

This method of source identification involves the dumping or flushing of non-toxic dye into the sinks, floor drains, or toilets and then conducting manhole inspections of both sanitary and storm sewer manholes or outfalls to detect the presence of the dye. As with smoke testing, an informed public is necessary for avoiding unwarranted concerns regarding potential dye "sightings" in local streams, creeks or ditches. Local police and fire departments, as well as wastewater treatment plant or sanitary district operators, should also be informed prior to dye testing.

A field crew of two or more people is typically required to conduct dye testing with one person inside the building and one person stationed at the appropriate manhole or outfall. The person inside the structure injects the dye, adds a sufficient quantity of water to flush the dye through the system, and notifies the person outside to watch for the dye.

This test is relatively quick, typically lasting 30 minutes or less, effective (very definitive), and cheap. Dye testing is best applied when a suspect source of an illicit discharge is narrowed down to a few homes or buildings.

The following table shows locations which typically produce discharges and should be monitored for illicit discharges.

Table 1: Land Uses, Generating Sites and Activities That Produce Indirect Discharges		
Land Use	Generating Site	Activity that Produces Discharge
Residential	<ul style="list-style-type: none"> • Apartments • Multi-family • Single Family Detached 	<ul style="list-style-type: none"> • Car Washing • Driveway Cleaning • Dumping/Spills (e.g., leaf litter and RV/boat holding tank effluent) • Equipment Washdowns • Lawn/Landscape Watering • Septic System Maintenance • Swimming Pool Discharges
Commercial	<ul style="list-style-type: none"> • Campgrounds/RV parks • Car Dealers/Rental Car Companies • Car Washes • Commercial Laundry/Dry Cleaning • Gas Stations/Auto Repair Shops • Marinas • Nurseries and Garden Centers • Oil Change Shops • Restaurants • Swimming Pools 	<ul style="list-style-type: none"> • Building Maintenance (power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (power washing) • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing • Washdown of greasy equipment and grease traps
Industrial	<ul style="list-style-type: none"> • Auto recyclers • Beverages and brewing • Construction vehicle washouts • Distribution centers • Food processing • Garbage truck washouts • Marinas, boat building and repair • Metal plating operations • Paper and wood products • Petroleum storage and refining • Printing 	<ul style="list-style-type: none"> • All commercial activities • Industrial process water or rinse water • Loading and un-loading area washdowns • Outdoor material storage (fluids)
Institutional	<ul style="list-style-type: none"> • Cemeteries • Churches • Corporate Campuses • Hospitals • Schools and Universities 	<ul style="list-style-type: none"> • Building Maintenance (e.g., power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Parking Lot Maintenance (power washing) • Vehicle Washing
Municipal	<ul style="list-style-type: none"> • Airports • Landfills • Maintenance Depots • Municipal Fleet Storage Areas • Ports • Public Works Yards • Streets and Highways 	<ul style="list-style-type: none"> • Building Maintenance (power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (power washing) • Road Maintenance • Spill Prevention/Response • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing

SECTION 6 – ELIMINATING THE SOURCE OF AN ILLICIT DISCHARGE

6.1 Background

Once the source of an illicit discharge has been identified, the City of Temple has a variety of means at their disposal for removing or eliminating illicit discharges from their stormwater drainage systems. Methods for removing illicit discharges include compliance assistance, enforcement actions, incentives, or spill response. No matter which method is chosen to fix an illicit discharge, the action must clearly identify the following:

- Who is responsible,
- What method will be used,
- How long the repair will take, and
- How the solution will be confirmed.

6.2 Compliance and Enforcement Actions

In most situations, the City of Temple will respond to the discovery of an illicit discharge in a graduated manner with initial attempts to gain voluntary compliance followed by escalating and increasingly severe enforcement actions. However, deliberate actions by individuals knowledgeable about the consequences and requirements of local illicit discharge ordinances will likely require swift implementation of the most severe penalties available to the City of Temple.

In many cases the party responsible for the illicit discharge may not be aware of the existence or the environmental consequence of an illegal connection/discharge. In such cases, voluntary compliance is commonly achieved by providing the responsible party with information about illicit connections, the environmental consequences of illicit connections, applicable regulations, and by requesting that the problem be fixed.

Where voluntary compliance has not been achieved, the City of Temple's Illicit Discharge Ordinance and Enforcement Response Plan provides the city the authority to issue Notice of Violation (NOV) letters requiring violators to remove an illicit connection or eliminate an improper discharge. The city also has the authority to issue stop work orders, withhold plan approval, or suspend and/or revoke permits if an immediate threat to public health or the environment exists.

See the Enforcement Response Plan for the most accurate information.

6.3 Proper Construction and Maintenance of MS4s

Some illicit discharge problems may be the responsibility of the City of Temple. These problems include cross-connections between the sanitary sewer and storm sewer systems and infiltration into damaged or deteriorating storm sewer pipes.

Cross-connections between the city's sanitary sewer and storm sewer systems may exist by mistake, because of deterioration over time, or as part of the design in an antiquated system. Complete and accurate maps of the sanitary sewer and storm sewer systems can help identify these cross-connections and prevent them during any new construction that takes place. Contamination can infiltrate into a cracked or leaking MS4 from leaking sanitary sewer pipes, failing septic systems, or contaminated groundwater. To help prevent this, both the MS4s and sanitary sewer systems should be inspected periodically and maintained properly to keep them in good repair.

6.4 Integrating Illicit Discharge Requirements and Construction Site Management Goals

The City of Temple realizes the interconnectedness between illicit discharges and the stormwater pollution prevention requirements required by erosion protection and sediment control ordinances. When inadequate erosion and sediment controls are not implemented on construction sites, sediment and a variety of other pollutants wash off construction sites by stormwater runoff.

Strict implementation of EPD's erosion protection and sediment control regulations are fundamental to successful implementation of this illicit discharge program.

6.5 Preventing and Responding to Illegal Dumping

Preventative Actions

It is often difficult to identify and locate the individuals responsible for illegal dumping; therefore, the program to address illegal dumping should focus on prevention, backed up by enforcement to the extent possible.

US EPA Region 5 has prepared an *Illegal Dumping Prevention Guidebook* that suggests the following key strategies that can be used to prevent illegal dumping.

- **Site maintenance and controls** Measures should be taken to clean up areas where illegal dumping has taken place, and controls such as signs or access restrictions should be used, as appropriate, to prevent further dumping.
- **Community outreach and involvement** Outreach is the key to an illegal-dumping prevention program and can include the following components:
 - Educating businesses, municipal employees, and the general public about the environmental and legal consequences of illegally disposing of waste into the storm sewer system
 - Providing and publicizing ways for citizens to properly dispose of waste
 - Providing opportunities for citizens to get involved in preventing and reporting illegal dumping

- **Targeted enforcement** This strategy should include a prohibition against illegal dumping via ordinance or another similar measure, backed up by trained law enforcement personnel and possibly field operations.
- **Program measurement** Tracking and evaluation methods should be used to measure the impact of illegal-dumping prevention efforts and determine whether goals are being met.
- **Site maintenance and controls**
 - Storm-drain stenciling program
 - Spill-response plans for hazardous-waste spills
- **Community outreach and involvement**
 - An illegal-dumping reporting hotline
 - Outreach to business sectors that handle hazardous materials and/or have a history of illegal-dumping problems; outreach should include information on Best Management Practices for spill prevention and proper waste disposal
- **Targeted enforcement**
 - An illicit discharge ordinance
 - Training of municipal employees, police officers, and other local entities to be on the lookout for illicit discharges
- **Program measurement**
 - Tracking of incident locations
 - Compilation of statistics (e.g., annual cleanup costs, facility compliance, arrests, convictions, fines, complaints)

Responding to Illegal Dumping

The city has access to local emergency management activities, such as EMA response teams. These organizations are the primary first responders to spills and they should be informed and educated about the City of Temple's Storm Water Management Program (SWMP), especially the storm water drainage system mapping. Most commonly, the city's fire and police department also respond to the scene of spills and accidents, so staff training or cross-training regarding illicit discharge elimination can be critical to effective implementation of the illicit discharge detection and elimination plan.

In addition, the State of Georgia has established spill reporting, containment, and response requirements in GAG610000. This rule establishes statewide criteria for reporting spills from facilities or emergencies and has established an environmental hotline for reporting such spills. To report spills, contact the Georgia EPD Emergency Operations Center at 1(800) 241-4113.

SECTION 7 – EVALUATING THE IDDE PROGRAM

Periodic evaluation of the IDDE program is recommended to examine what has been done, what worked, and what didn't work. Based on these evaluations adjustments to future actions can be made to ensure an effective MS4 program.

A key part of evaluating the program involves documenting actions taken. These include maintaining documentation of the following:

- Number of outfalls screened
- Number of complaints received and investigated
- Number of discharges eliminated

These will be reported in the Annual Report.

Methods which could be used to evaluate the IDDE Program include:

- Evaluating the number of illicit discharges that were detected using different detection methods to determine which methods were the most effective.
- If monitoring data for receiving waters is available, evaluate changes in the water quality of the receiving waters.
- To evaluate the efficiency and feasibility of the program, determine staff time and the expense involved in achieving a given result, or examine the difficulties encountered. The Annual Report will determine if the goals of the SWMP are being achieved and help determine areas for improvement or areas which require changes to the program.

Dry Weather Outfall Screening Form	
Name of City or County:	Data Sheet Number:
Date of screening (MM/DD/YY):	Time of screening:
Weather conditions:	
Sampling performed by:	

Outfall Description	
Outfall Location:	Outfall I.D. Number:
Outfall Type/Material: <input type="checkbox"/> Closed Pipe (circle): RCP CMP PVC HDPE Other: _____ <input type="checkbox"/> Open Channel (circle): Concrete Earthen Grassy Other: _____	Outfall Diameter/Dimensions:
Receiving stream and watershed name:	
Land use/industries in drainage area:	
GPS Coordinates:	Photo numbers:

Field Observations and Measurements	
Flow from outfall? <input type="checkbox"/> Yes <input type="checkbox"/> No Flow Description: <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial	
Odor: <input type="checkbox"/> None <input type="checkbox"/> Sewage <input type="checkbox"/> Sulfide (rotten eggs) <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Other _____ Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Faint <input type="checkbox"/> 2-Easily Detected <input type="checkbox"/> 3-Noticable from a distance	
Color: <input type="checkbox"/> Clear <input type="checkbox"/> White <input type="checkbox"/> Gray <input type="checkbox"/> Orange/Rust <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Brown/Black <input type="checkbox"/> Other _____ Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Faint <input type="checkbox"/> 2-Clearly visible in bottle <input type="checkbox"/> 3-Clearly visible in flow	
Turbidity: <input type="checkbox"/> None <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque <input type="checkbox"/> Silty <input type="checkbox"/> Muddy <input type="checkbox"/> Other _____ Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Slight cloudiness <input type="checkbox"/> 2-Cloudy <input type="checkbox"/> 3-Opaque	
Floatables: <input type="checkbox"/> None <input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other _____ Relative severity: <input type="checkbox"/> 0-None <input type="checkbox"/> 1-Few/slight <input type="checkbox"/> 2-Some <input type="checkbox"/> 3-Heavy	
Flow Temperature (°C):	
Flow pH:	pH meter calibrated? <input type="checkbox"/> Yes <input type="checkbox"/> No
Flow Conductivity (µmho/cm):	Conductivity meter calibrated? <input type="checkbox"/> Yes <input type="checkbox"/> No

Water Quality Sampling			
Field Test Kit Manufacturer:		Model:	
Fluoride (mg/L):		Fecal Coliform (MPN/100ml):	
Surfactants (mg/L):		Analysis Comments:	
Grab sample for lab? (fluoride/surfactants) <input type="checkbox"/> Yes <input type="checkbox"/> No		Bacteria Grab sample for lab? (fecal coliform) <input type="checkbox"/> Yes <input type="checkbox"/> No	
Grab Sample ID:		Bacteria Grab Sample ID:	

Outfall Potential for Illicit Discharge: <input type="checkbox"/> Unlikely - or- No Flow <input type="checkbox"/> Possible (presence of two or more indicators) <input type="checkbox"/> Suspect (one or more indicators with severity of 2 or 3) <input type="checkbox"/> Obvious - or- Confirmed

NOTE: Water quality sampling (using a field test kit and/or grab samples) is required for a dry weather flow that meets any of the following criteria: Visible sewage or sewage odor; physical indicator of potential illicit discharge (color, odor, turbidity or floatables); pH lower than 6.5 or higher than 7.5; or specific conductivity greater than 300 µmho/cm.

Green Infrastructure / Low Impact Development (GI/LID) Program

**Prepared For:
The
City of Temple,
Georgia**

July 2020

Prepared to Meet the Requirements of:
General NPDES Permit #GAG610000

Table of Contents

Background and Purpose.....	3
Temple Code of Ordinances and Development Code Review	4
GI/LID Program.....	4
Definition of GI/LID	4
GI/LID BMPs in the City of Temple.....	4
GI/LID Structure Inspection and Maintenance.....	5
Permit Requirements.....	5
GI/LID Inspection and Maintenance Responsibilities.....	5
GI/LID Inspection Program.....	6
GI/LID Maintenance Program	7
GI/LID Program Implementation Schedule.....	8
Appendix A – Example GI/LID Structure Inspection Forms	

Background and Purpose

The City of Temple, Georgia, encompasses 6.9 square miles and had a population of 4,228 people in 2010 based on the U.S. Census. Temple is not a Local Issuing Authority (LIA), therefore Temple along with the Georgia Department of Natural Resources – Environmental Protection Division (EPD) share responsibilities for regulating land disturbance permits, performing erosion control inspections, enforcing erosion control measures, and enforcing litter control. In compliance with the 2017 General NPDES Stormwater Permit No. GAG610000 for Phase II MS4s effective December 6, 2017, permittees with a population of less than 10,000 people are required to develop a Green Infrastructure / Low Impact Development (GI/LID) Program for the inspection and maintenance of GI/LID structures.

Bethel, Chance, Webster, Williams Mill, Holly, and Trestle Creek run through the City of Temple. The City of Temple consists of soils with Hydrologic Soil Group (HSG) B, C, and D. HSG B soils have moderately high rates of infiltration, while HSG C soils have lower rates of infiltration. HSG D soils have very low rates of infiltration and possess the highest chance to produce runoff. The greatest potential for the use of infiltration based GI/LID structures exists within the City in areas with HSG B soils.

As outlined in the General Permit for Phase II MS4s, the GI/LID Program for MS4s with a population of less than 10,000 people includes a GI/LID Inspection and Maintenance Program.

This document serves to further encourage the use of and provide information regarding the inspection and maintenance of GI/LID best management practices (BMPs) in the City of Temple. The objective of this document is to identify the most effective approach for integrating GI/LID into the City of Temple's current stormwater and development programs, including developing an inspection and maintenance program

The City of Temple encourages the use of GI/LID BMPs. The ultimate intent of establishing a City of Temple GI/LID Program is to ensure GI/LID practices and structures are implemented and maintained by their respective owners for improved watershed protection.

Temple Code of Ordinances and Development Code Review

The City of Temple will conduct a general review of local ordinances and development regulations to ensure the use of GI/LID techniques are not prohibited or impeded. If the City's local ordinances and/or development regulations prohibit or impede the use of GI/LID techniques, they will be revised or replaced to support the use of GI/LID techniques.

GI/LID Program

Definition of GI/LID

GI/LID refers to a broad range of stormwater practices and structures for a variety of purposes including water quality improvements and watershed protection. It includes a diverse set of site planning techniques, site design techniques, and GI/LID structures. See the most recent Georgia-based guidance on GI/LID within the 2016 Georgia Stormwater Management Manual (GSMM) for information.

The following are some examples of GI/LID (per the GSMM):

- Better Site Planning Techniques (e.g. protection of conservation areas, utilization of natural features for stormwater management, avoiding developing in floodplains, avoiding developing on steep slopes, etc.)
- Better Site Design Techniques (e.g. reducing roadway lengths and widths, reducing parking lot footprints, reducing building footprints, utilizing open space development, using vegetated swales instead of curb and gutter, etc.)
- Low Impact Development Structures (e.g. green roofs, permeable pavement, vegetated filter strips, rain gardens, etc.)

The GSMM serves as a reference to support the selection of practices and structures that would be appropriate for implementation in the City of Temple.

GI/LID BMPs in the City of Temple

In an effort to promote the use of GI/LID where it is feasible, the City of Temple will allow the use of all GI/LID structures, better site planning techniques, and better site design techniques that are included in the 2016 GSMM.

Information related to the design criteria, advantages/disadvantages, maintenance needs, pollutant removal calculations, stormwater management suitability, implementation considerations, runoff reduction credits, and other useful information pertaining to each GI/LID structure are found in Volume 2 of the GSMM.

The City of Temple understands that the feasibility and successful implementation of individual structures and techniques is site-dependent and therefore the GSMM will be used to determine specific procedures that may be included on a development or re-development site.

GI/LID Structure Inspection and Maintenance

Permit Requirements

Although the City of Temple's population is less than 10,000 people, the GI/LID Inspection and Maintenance Program requirements for populations larger than 10,000 people from the General Permit for Phase II MS4s are included below for reference:

- Beginning in 2020, conduct inspections and/or ensure inspections are conducted on 100% of the GI/LID structures within a 5-year period. The inspections must be completed in accordance with the schedule submitted in the GI/LID Program. Provide documentation of the inspections conducted during the reporting period in each annual report.
- Conduct maintenance on the permittee owned GI/LID structures, as needed. Provide the number of structures and percentage of the total structures maintained during the reporting period in each annual report.
- Implement the maintenance procedures in accordance with the GI/LID program for ensuring publicly-owned structures owned by other entities and privately owned non-residential GI/LID structures are maintained as needed. Provide documentation of these activities in each annual report.

GI/LID Inspection and Maintenance Responsibilities

Table 1 summarizes the GI/LID inspection and maintenance responsibilities that are incorporated into the City of Temple SWMP, by nature of approval of this document. Details are provided following the table.

Table 1

GI/LID Inspection and Maintenance Responsibilities – City of Temple

Green Infrastructure / Low Impact Development Program

Location	Inspection Responsibility	Maintenance Responsibility
Within the MS4 and public right-of-way	City of Temple	City of Temple
Publicly Owned, Georgia Department of Transportation Structures within the MS4	Georgia Department of Transportation	Georgia Department of Transportation
Private non-residential	City of Temple	Property Owner
Private residential	Property Owner	Property Owner
City of Temple government facilities	City of Temple	City of Temple

GI/LID Inspection Program

As directed by EPD, 100% of the GI/LID structures will be inspected within a 5-year period upon the construction and identification of GI/LID structures within the City of Temple.

Privately Owned Non-Residential Structures

Privately owned non-residential structures are required to be maintained by individual property owners. Private non-residential property owners will be required to complete, sign, and notarize a maintenance agreement with the City of Temple. The maintenance agreement will require the property owner to submit an inspection form once every five years to the City to verify inspection and maintenance needs. If the City identifies non-compliance with the maintenance agreement, the first step to bring the site into compliance will be for a City staff member to conduct a site visit or phone call to the property owner. Property owners who fail to maintain their stormwater systems will be notified of the violation. If within thirty (30) days (or twenty-four (24) hours if there is an immediate danger to public safety), no actions are taken, the City of Temple may enter the property and correct the failure. The cost for the repair work may be a charge on the customer's water, sewer, and stormwater bill, or a lien on the property that may be placed on the tax bill.

Additionally, failure to maintain stormwater controls in accordance with maintenance agreements may be subject to enforcement actions. If the City of Temple determines that a responsible person has failed to comply with such provisions, the City will issue a written notice of violation, and if the responsible parties do not address the violations, they may be subject to penalties such as stop work orders, revocation of permit, civil penalties or criminal penalties for intentional and flagrant violations. Non-residential structures are subject to future inspections by city personnel to verify maintenance activities were performed. The City will document all maintenance agreements, inspection forms, property owner communication, and if applicable, documentation of any enforcement actions, and will provide this information to EPD with each annual report. Appendix A contains GI/LID structure inspection forms from the GSMM.

Publicly Owned Structures

For publicly owned GI/LID structures, the City of Temple will prioritize inspections based on proximity to any documented complaints received. Inspections will be completed by City staff, and during each inspection, conditions will be documented on an inspection form. Forms provided in the GSMM for each GI/LID structure will be used to complete inspections (see Appendix A). Inspections will be prioritized based on structure location, subdivision age, accessibility, or concern. Once inspections are completed for any documented complaints received, City staff will conduct inspections on the remaining GI/LID structures to ensure that all publicly owned GI/LID structures are inspected at least once within a 5-year period. This approach will allow staff to respond efficiently to known problems, while documenting the condition of other structures in adjacent areas.

Inspections of applicable GI/LID BMPs will be documented on an inspection form and, at a minimum, attempt to identify the following information:

- Adequate access to GI/LID BMPs via drainage easements and berms;
- Stormwater facilities that require sediment removal, grassing, outlet control structure repair, and erosion control;
- Accumulation of sediment or debris at the discharge of outfall structures;
- Stormwater collection and transfer structures that are not properly maintained or damaged.

Emergency situations will be addressed immediately while routine inspections are prioritized based upon the assessed conditions. Once the City of Temple is able to reduce any inspection/maintenance backlog, areas will be identified to prioritize inspections based on structure condition, frequency of failure, and age.

GI/LID Maintenance Program

As directed by EPD, the City of Temple will conduct maintenance on publicly-owned GI/LID structures on an as-needed basis. The City will ensure the maintenance of privately-owned non-residential GI/LID structures. With regard to responsibility:

- **Publicly-owned structures:** The City of Temple is responsible for maintenance associated with GI/LID structures at municipal facilities in their jurisdictions (e.g., the Wastewater Treatment Plant (WWTP), administration buildings, maintenance facilities, etc.).
- **Privately-owned non-residential structures:** The property owner is responsible for maintenance of the GI/LID structures. The City ensures that proper maintenance is performed by the owner through a notarized maintenance agreement signed by both the private property owners and the City of Temple.

Maintenance needs will vary for each GI/LID structure and may include such actions as proper drainage, replacing mulch and plants, removing sediment, sweeping/vacuuming, dewatering, invasive species removal, planting, and removing trash/debris. The City of Temple will utilize the GSMM to identify maintenance needs for GI/LID structures.

Maintenance activities will follow the same pattern as the inspections, since most structures needing to be repaired or maintained will be included as a work order as the result of an inspection. Once maintenance has been conducted, information will be documented regarding the efforts, final condition, and follow-up needs of the structure. The City of Temple will provide the number and/or percentage of public GI/LID structures maintained during the reporting period in each annual report.

GI/LID Program Implementation Schedule

The GI/LID program outlined above will be implemented according to the following schedule:

- The City of Temple will conduct the following:
 - Conduct inspections on public and private non-residential GI/LID structures so that each structure is inspected once every 5 years
 - Conduct maintenance, as needed, on City-owned GI/LID structures
 - Coordinate with private non-residential property owners to ensure that needed maintenance is conducted on GI/LID structures

Appendix A: Example GI/LID Structure Inspection Forms*

***See the GSMM Appendix E Best Management Practice Operations & Maintenance Guidance Document for all GI/LID Structure Inspection Forms**

Bioretention Area					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, etc. removed).					
Inlet Structure					
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc.					
Area around the inlet structure is mowed and grass clippings are removed.					
No evidence of gullies, rills, or excessive erosion around the inlet structure.					
Water is going through structure (i.e. no evidence of water going around the structure).					
Diversion structure (high flow bypass structure or other) is free of trash, debris, or sediment. Comment on overall condition of diversion structure and list type.					
Pretreatment (choose one)					
Forebay – area is free of trash, debris, and sediment.					
Weir – area is free of trash, debris, and sediment is less than 25% of the total depth of the weir.					
Filter Strip or Grass Channels – area is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion.					
Rock Lined Plunge Pools – area is free of trash debris and sediment. Rock thickness in pool is adequate.					
Main Treatment					
Main treatment area is free of trash, debris, and sediment.					
Erosion protection is present on site (i.e. turf reinforcement mats). Comment on types of erosion protection and evaluate condition.					

Bioretention Area					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
No evidence of long-term ponding or standing water in the ponding area of the practice (examples include: stains, odors, mosquito larvae, etc).					
Structure seems to be working properly. No settling around the structure. Comment on overall condition of structure.					
Vegetation within and around practice is maintained per landscaping plan. Grass clippings are removed.					
Mulching depth of 3-4 inches is maintained. Comment on mulch depth.					
Native plants were used in the practice according to the planting plan.					
No evidence of use of fertilizer on plants (fertilizer crusting on the surface of the soil, tips of leaves turning brown or yellow, blackened roots, etc.).					
Plants seem to be healthy and in good condition. Comment on condition of plants.					
Emergency Overflow					
Emergency overflow is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
Outlet Structure					
Outlet structure is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
Results					
Overall condition of Bioretention Area:					
Additional Comments					
Notes: *If a specific maintenance item was not checked, please check N/A and explain why in the appropriate comment box.					

Dry Enhanced Swale/Wet Enhanced Swale					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, etc. removed).					
Inlet Structure					
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc.					
Area around the inlet structure is mowed and grass clippings are removed (for dry enhanced swale).					
No evidence of gullies, rills, or excessive erosion around the inlet structure.					
Water is going through structure (i.e. no evidence of water going around the structure).					
Pretreatment (choose one)					
Forebay – area is free of trash, debris, and sediment.					
Weir – area is free of trash, debris, and sediment is less than 25% of the total depth of the weir.					
Filter Strip or Grass Channels – area is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion.					
Rock Lined Plunge Pools – area is free of trash debris and sediment. Rock thickness in pool is adequate.					
Main Treatment					
Main treatment area is free of trash, debris, and sediment.					
Erosion protection is present on site (i.e. turf reinforcement mats). Comment on types of erosion protection and evaluate condition.					
For dry enhanced swale, no evidence of long-term ponding or standing water in the ponding area of the practice (examples include: stains, odors, mosquito larvae, etc).					
Plants were used in the practice according to the planting plan.					

Dry Enhanced Swale/Wet Enhanced Swale					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
Vegetation within and around practice is maintained per landscaping plan. Grass clippings are removed.					
Structure seems to be working properly. No settling around the structure. Comment on overall condition of structure.					
No evidence of undesirable vegetation.					
No evidence of use of fertilizer on plants (fertilizer crusting on the surface of the soil, tips of leaves turning brown or yellow, blackened roots, etc.).					
Plants seem to be healthy and in good condition. Comment on condition of plants.					
No evidence of erosion around the sides of the check dam.					
Cleanout caps are in place and in good condition (for dry enhanced swale).					
The underdrain appears to be unclogged evidenced by water exiting the practice freely (for dry enhanced swale).					
Pea gravel diaphragm or other flow spreader is clean and working properly.					
Emergency Overflow					
Emergency overflow is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
Outlet Structure					
Outlet structure is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
Results					
Overall condition of Enhanced Swale:					
Additional Comments					
<p>Notes: *If a specific maintenance item was not checked, please explain why in the appropriate comment box.</p>					

Grass Channel					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A ⁺	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, etc. removed).					
Inlet					
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc.					
Area around the inlet is mowed and grass clippings are removed.					
No evidence of gullies, rills, or excessive erosion around the inlet.					
No signs of clogging or damage around the inlet.					
Pretreatment (choose one)					
Forebay – area is free of trash, debris, and sediment.					
Filter Strip or Grass Channels – area is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion.					
Main Treatment					
Main treatment area is free of trash, debris, and sediment.					
No evidence of erosion in the practice.					
No evidence of long-term ponding or standing water in the ponding area of the practice (examples include: stains, odors, mosquito larvae, etc).					
No undesirable vegetation located within the practice.					
No evidence of use of fertilizer on plants (fertilizer crusting on the surface of the soil, blackened roots, etc.).					
Grass within and around practice is maintained at the proper height (3-4 inches). Grass clippings are removed.					
Grass cover seems healthy with no bare spots or dying grass.					

Grass Channel					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
No accumulating sediment within the grass channel.					
Outlet					
Outlet is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding.					
Results					
Overall condition of Grass Channel:					
Additional Comments					
Notes: * If a specific maintenance item was not checked, please check N/A and explain why in the appropriate comment box.					

Infiltration Practice					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, etc. removed).					
Inlet					
Drainage ways (overland flow or pipes) to the practice are free of trash, debris, large branches, etc. Drainage ways are in good condition.					
Area around the inlet structure is mowed and grass clippings are removed.					
No evidence of gullies, rills, or excessive erosion around the inlet structure.					
Water is going through structure (i.e. no evidence of water going around the structure).					
Diversion structure (high flow bypass structure or underdrain) is free of trash, debris, or sediment. Comment on overall condition of diversion structure and list type.					
Pretreatment (choose one)					
Forebay – area is free of trash, debris, and sediment.					
Forebay – No undesirable vegetation.					
Forebay – No signs of erosion, rills, or gullies. Erosion protection is present on site.					
Forebay – No signs of standing water.					
Filter Strip– area is free of trash debris and sediment. Area has been mowed and grass clippings are removed. No evidence of erosion or sediment accumulation.					
Filter Strip – No signs of unhealthy grass, bare or dying grass. Grass height is maintained to a height of 6 – 15 inches.					
Filter Strip– No signs of erosion, rills, or gullies. Erosion protection is present on site.					
Filter Strip – No undesirable vegetation.					
Filter Strip – No signs of standing water (examples include: stains, odors, mosquito larvae, etc).					

Infiltration Practice					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
Main Treatment					
Main treatment area is free of trash, debris, and sediment.					
Erosion protection is present on site (i.e. turf reinforcement mats). Comment on types of erosion protection and evaluate condition.					
Structure seems to be working properly. No settling around the structure. Comment on overall condition of structure.					
No signs of ponding water more than 48 hours after a rain storm event (examples include: stains, odors, mosquito larvae, etc).					
No undesirable vegetation growing within the practice.					
Native plants were used in the practice according to the landscaping plan.					
Observation well is capped and locked when not in use					
Flow testing has been performed on infiltration practice to determine if underdrain is clogged.					
Emergency Overflow and Outlet Structure					
Area is free of trash, debris, and sediment.					
No evidence of erosion, scour, or flooding around the structure.					
No signs of sediment accumulation.					
Grass height of 6 – 15 inches is maintained.					
Results					
Overall condition of Infiltration Practice:					
Additional Comments					
Notes: *If a specific maintenance item was not checked, please check N/A and explain why in the appropriate comment box.					

Permeable Bricks/Blocks					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
General Inspection					
Access to the site is adequately maintained for inspection and maintenance.					
Area is clean (trash, debris, grass clippings, leaves, etc. removed).					
Area around the practice is mowed and grass clippings are removed. No signs of bare or dead grass.					
No evidence of gullies, rills, or erosion around the practice.					
Water is permeating the bricks/blocks (i.e. no evidence of water going around the practice).					
Bricks/blocks are structurally sound. No signs of cracks or splitting.					
Aggregate between the bricks/blocks is reasonable.					
No evidence of long-term ponding or standing water in the practice.					
Grass in the concrete grid is healthy, no dead grass or bare spots.					
Grass in the concrete grid is mowed and grass clippings are removed.					
Structure seems to be working properly. No signs of the bricks/blocks settling. Comment on overall condition of bricks/blocks.					
Vegetation within and around practice is maintained. Grass clippings are removed.					
No exposed soil near the bricks/blocks that could cause sediment accumulation within the practice.					
Cleanout caps are present and not missing (if applicable).					
The underdrain system has been flushed properly and there is no sign of clogging (if applicable).					
Results					
Overall condition of Permeable Bricks/Blocks:					

Permeable Bricks/Blocks					
Maintenance Item	Condition				Comment
	Good	Marginal	Poor	N/A*	
Additional Comments					
Notes: * If a specific maintenance item was not checked, please check N/A and explain why in the appropriate comment box.					