PHASE II MS4- CITY OF DOVER STORMWATER MANAGEMENT PLAN:2024-2028

National Pollutant Discharge Elimination System
Permit No. DE 0051195

Purpose

A living document intended to provide guidance for running an effective MS4 Program in the City of Dover. Following this document will keep the City in compliance with the Phase II MS4 Tier I General Permit issued on 09/28/2023.

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Introduction

The City of Dover has a population of over 39,000 people and provides drinking water, wastewater, and stormwater services to its citizens. All of Dover's stormwater drains into one of three watersheds: St. Jones River, Leipsic River, or Little Creek. These watersheds will eventually drain into Delaware Bay and then the Atlantic Ocean. The City has 683 outfalls (as of December 2023).

Watershed and Waterbody Information

Little Creek Watershed

152 of 683 outfalls discharge to the Little Creek watershed.

A TMDL has been completed for this Watershed.

Pollutant/Parameter Addressed	Reduction Required Throughout Watershed (%)	Reduction Allocated to Nonpoint Source
Enterococcus	75	75
Nitrogen	40	40
Phosphorous	40	40

Upper Little River

Designated uses:

Industrial Water Supply, Fish Consumption, Primary Contact Recreation, Secondary Contact Recreation, Agricultural Water Supply, Fish, Aquatic Life, and Wildlife

This Waterbody is impaired (on the CWA 303(d) list).

Pollutant or Stressor	Source of Pollutant or Stressor
Enterococcus	NPS
DO	NPS
Nutrients	NPS

Pipe Elm Branch

Designated uses:

Industrial Water Supply, Fish Consumption, Primary Contact Recreation, Secondary Contact Recreation, Agricultural Water Supply, Fish, Aquatic Life, and Wildlife

This Waterbody is impaired (on the CWA 303(d) list).

Pollutant or Stressor	Source of Pollutant or Stressor
Enterococcus	NPS
DO	NPS
Nutrients	NPS

St. Jones Watershed

481 of 683 outfalls discharge to the St. Jones watershed.

A TMDL has been completed for this Watershed.

Pollutant/Parameter Addressed	Reduction Required Throughout Watershed (%)	Reduction Allocated to Nonpoint Source
Enterococcus	90	90
Nitrogen	40	40
Phosphorous	40	40

Upper St. Jones

Designated uses:

Industrial Water Supply, Fish Consumption, Primary Contact Recreation, Secondary Contact Recreation, Agricultural Water Supply, Fish, Aquatic Life, and Wildlife

This Waterbody is impaired (on the CWA 303(d) list).

Pollutant or Stressor	Source of Pollutant or Stressor
Enterococcus	NPS
DO	NPS
Nutrients	NPS

Fork Branch

Designated uses:

Industrial Water Supply, Fish Consumption, Primary Contact Recreation, Secondary Contact Recreation, Agricultural Water Supply, Fish, Aquatic Life, and Wildlife

This Waterbody is impaired (on the CWA 303(d) list).

Pollutant or Stressor	Source of Pollutant or Stressor

Enterococcus	NPS
DO	NPS
Nutrients	NPS

Leipsic River Watershed

50 of 683 outfalls discharge to the Leipsic River watershed.

A TMDL has been completed for this Watershed.

Pollutant/Parameter Addressed	Reduction Required Throughout Watershed (%)	Reduction Allocated to Nonpoint Source
Enterococcus	75	75
Nitrogen	40	40
Phosphorous	40	40

Muddy Branch

Designated uses:

Industrial Water Supply, Fish Consumption, Primary Contact Recreation, Secondary Contact Recreation, Agricultural Water Supply, Fish, Aquatic Life, and Wildlife

This Waterbody is impaired (on the CWA 303(d) list).

Pollutant or Stressor	Source of Pollutant or Stressor
Enterococcus	NPS
DO	NPS
Nutrients	NPS

St Jones Watershed Pollution Control Strategy (PCS)

The St Jones River Watershed PCS was prepared in December 2012 by the Watershed Assessment and Management Section of the Division of Watershed Stewardship (DNREC). The plan recaps progress to date in reducing pollutants in the Watershed, sets forth 16 BMPs to continue reducing pollutants, and provides sources of funding and implementation programs available.

Progress prior to the issuance of the PCS included steps to improve water quality through the implementation of laws, regulations, and voluntary BMPs. Analysis at the time showed that to date, nonpoint sources of Total Nitrogen and Total Phosphorus have been reduced by 34% and 151% respectively from the TMDL baseline levels. The City can learn from this progress because BMPs implemented in the City, especially the formation of the Silver Lakes Commission, proved to be effective.

Below are the 16 BMPs presented in the PCS.

1. Riparian Buffers
2. Open Space
3. Open Space Education
4. Sewer Repair
5. Septic Pump (Regular Maintenance)
6. Cesspools & Seepage Pits (Eliminate)
7. Septic Removal
8. Performance Standards
9. Stormwater Utility
10. Stormwater BMPs
11. Impervious Cover (Reduce)
12. Stormwater Retrofits
13. Stormwater Education (Particularly for HOAs)
14. Stream Monitoring
15. Agricultural BMPs
16. Nutrient Management Act

Some of the 16 BMPs set forth have clear categories (Sewer Repair- Wastewater upgrade/maintenance), but many of the BMPs are interconnected and serve multiple purposes for the Watershed. For example, a Stormwater Utility funds stormwater management in the Watershed, but it also works with Reduce Impervious Surface BMP through Credit programs.

The final section of the PCS provides funding sources and implementation programs pertinent to reducing pollutants in the Watershed and funding stormwater management projects. The City will reference this section when planning future stormwater projects in the MS4.

Potential Sources of Relevant Pollutants

Potential sources of pollutants in the City of Dover include aging infrastructure, urbanization, and brownfields.

Aging Infrastructure

93 communities in Dover have approved plans from before 1991. This means that these communities were built and designed before the Sediment and Stormwater Law was implemented in July 1991. These aging communities have undersized, aging stormwater infrastructure that can cause pollutant and sediment runoff.

Areas with aging infrastructure are all over the City and can be located using the Dover Areas layer in ArcGIS. Priority should be given to these areas when determining where to install structural BMPs, like swales, or where to institute nonstructural BMPs, like illicit discharge education.

Urbanization

There are currently (2/2025) 90 active construction projects in the City. Construction sites are major sources of sediment runoff. Sediment binds with nutrients, making construction sites a large contributor

to point source pollution. Urbanization also creates more nonpoint sources of pollution since the number of vehicles in the City will grow.

All construction projects, active and pending, can be located using the Construction Projects layer in ArcGIS. These projects are all over the City. The City will work with Kent Conservation District (KCD) to report any noncompliance with the Erosion & Sedimentation (E & S) Approved Plan. The City has worked with KCD in the past to report noncompliance at the Eden Hill construction sites.

To address the concerns of urbanization, the City must use nonstructural BMPs, like education, to educate Dover's growing population about illicit discharges.

Brownfields

There are 13 Certified Brownfield Sites in the City of Dover. Brownfields can become a source of pollution if they are not properly contained or remediated.

Brownfields in the City can be located using the Certified Brownfield layer in ArcGIS. The attribute table for this layer also contains a Program ID, so the City could check on the status of these brownfields and if they are in compliance with DNREC.

Public Notice

The City of Dover does not possess and enforce a local requirement for public notice.

Certification

I certify under penalty of law this document and all attachments were prepared under my direction, or supervision, in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or person(s) directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete.

Printed name: Mark Nowak

Signature: Mark Nowak

Title: Public Works Director

MCM 1: Public Education and Outreach

BMP 1.0: Written Public Education and Outreach Program

The City will update, implement, and maintain a written public education and outreach program. The program will be revised as necessary throughout the permit term to make progress towards measurable goals. Implemented activities to achieve measurable goals will be recorded and documented in each annual report.

The education and outreach program will be designed to achieve measurable improvements in the public's understanding of the causes and impacts of stormwater pollution and the actions they can take to prevent pollution. The program will be integrated with other SWMP program elements and adjusted to address issues brought to the City from the public and from lessons learned in implementing other program elements.

BMP 1.1: Distribute Educational Materials

The City will distribute educational materials to the community and appropriate employees about the consequences of polluted stormwater runoff. The materials will provide actions the public can take to reduce pollutants from entering the stormwater system.

Examples of educational materials:

- Web pages
- Brochures
- Booklets
- Training programs

Responsible Party:

Environmental Scientist

BMP 1.2: 24-Hr Hotline Number

By March 1, 2024, the City will establish and update a process by which the public can report water quality complaints that will include a 24-hr hotline phone number.

Responsible Parties:

Environmental Scientist, System Ops

BMP 1.3: Target Audiences

Update the target audiences within the Dover MS4 and develop engaging materials to educate the audiences on the impact of stormwater pollution.

These topics may include:

- Water conservation
- Chemical application on lawns and landscaping
- Proper car wash procedures
- Proper disposal of paint and other hazardous waste
- Recycling and trash pick-up
- Proper pet waste disposal

Responsible Party:

Environmental Scientist

BMP 1.4: Conduct 2 Educational Events/Campaigns Per Year

Events/campaigns may include distributing educational materials that describe the impacts of stormwater pollution on waterbodies and methods of reducing it.

Materials may be distributed through:

- Newsletters
- Websites
- Radio or television public service announcements
- Other events that will reach target audiences

Responsible Party:

Environmental Scientist

BMP 1.5: Provide Annual MS4 Training for Appropriate Employees

The City will implement and revise as needed an annual MS4 training program for appropriate employees. It will address topics to prevent or reduce the discharge of stormwater pollution into the MS4. Topics selected and the attendee list will be provided in the annual report.

Responsible Party:

Environmental Scientist

BMP 1.6: Description of Program Strength

A description of how the education programs complement and strengthen other requirements in the MS4 permit will be included in the annual report.

Responsible Party:

Environmental Scientist

Key Documents and Deliverables:

- Written Education and Outreach Program
- 24-hr Hotline Number
- Target Audience Breakdown
- Educational Materials
- MS4 Training and Attendee List

MCM 2: Public Involvement and Participation

BMP 2.0: Written Public Involvement and Participation Program

The City will update, implement, and maintain a written public involvement and participation program. The program will be revised as necessary throughout the permit term to make progress towards measurable goals. Implemented activities to achieve measurable goals will be recorded and documented in each annual report.

The program will promote and provide participation activities to the community and describe methods of encouraging the public's involvement and input.

Examples of activities:

- Adopt-a-Stream programs
- Stream clean-ups
- Litter pickup days
- Public surveys
- Storm drain marking
- Volunteer water quality monitoring
- Tree plantings
- Other pollution prevention events

Responsible Party:

Environmental Scientist

BMP 2.1: Determine Target Audiences

Determine target audiences within the Dover MS4 to promote public involvement and participation activities. Identify key individuals and groups (public and private) who are interested in or affected by the SWMP.

Responsible Party:

Environmental Scientist

BMP 2.2: Specify Activities for Target Audiences

The City will specify appropriate activities for each of the target audience groups. Activities will be promoted through the City website, print media, and other methods.

Responsible Party:

Environmental Scientist

BMP 2.3: Perform 3 Public Participation Activities Per Year

The City will perform at least 3 public participation activities per year and submit a summary of the activity and number of participants in the annual report.

Responsible Party:

Environmental Scientist

BMP 2.4: Public Access to MS4 Annual Reports and Public Comments on SWMP

The City will provide access to MS4 Annual Reports on the Public Works website. The City will consider incorporating substantive public comments when updating, implementing, and/or making improvements to the SWMP.

Responsible Party:

Environmental Scientist

Key Documents and Deliverables:

- Written Public Involvement and Participation Program
- Activities Specific to Target Audiences
- Report of 3 Public Participation Activities Per Year
- Public Access to Annual Reports on Website
    - Plan for incorporating public comments

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP 3.1: Written IDDE Program

The City will update, implement, manage, and enforce a program to detect and reduce to the **maximum extent practicable** illicit discharges into the MS4. The program will include a plan to detect and reduce, to the **maximum extent practicable**, non-stormwater discharges, including illegal dumping and spills into the MS4. Program updates will be provided in the annual report.

Non-stormwater discharges permitted to enter the MS4:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising groundwater
- Uncontaminated groundwater infiltration
- Uncontaminated pumped groundwater
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensate
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual resident vehicle washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water

The program will include procedures for identifying priority areas that have a higher likelihood of illicit discharges, illicit connections, or illegal dumping. Areas to examine include those with older infrastructure, historical high-risk activities, and areas with a higher incidence of spill or illicit discharge history.

Responsible Parties:

Environmental Scientist

BMP 3.2: Update and Maintain Map(s) of the Dover MS4

Update and maintain map(s) of the regulated MS4 that identifies all stormwater conveyances, outfalls, stormwater management structures, and waters of the State that receive stormwater discharges from the MS4.

Responsible Parties:

Environmental Scientist, GIS Manager

BMP 3.3: Verify Outfall Locations and Map New Conveyances

Verify outfall locations and map new conveyances, outfalls, and stormwater management structures as they are constructed or newly discovered within the MS4.

Responsible Parties:

Environmental Scientist

BMP 3.4: IDDE Ordinance

The City will maintain an ordinance to implement and enforce the IDDE program which includes the prohibition of unauthorized non-stormwater discharges to the MS4.

Responsible Parties:

Environmental Scientist, Stormwater Coordinator, Code Enforcement

BMP 3.5: Update and Implement a Screening Program

The City will update and implement a screening program to assist in detecting and eliminating illicit discharges. The program will include a schedule and methodology to evaluate at least 20% of the City's stormwater system per year using mapping and water quality data to determine areas with high potential for illicit discharges and improper disposal. Dry weather screening and field evaluation activities will also be conducted in these areas.

The City will also update written procedures for determining which outfalls will receive dry weather screening based off of results of field observations, complaints from the public, or investigations from trained field staff. When visual observations indicate a potential problem such as discolored flows, foam, surface sheen, and other similar contamination, the City must

sample and analyze for selected indicator pollutants that are defined in the written procedures. Any field evaluations will be included in the annual report.

Responsible Parties:

Environmental Scientist

BMP 3.6: Locating Sources

Implement a system for identifying the sources of an illicit discharge when contaminated flow is detected at an outfall and establish procedures for eliminating an illicit discharge when possible. The annual report must contain the written procedures, a sample report template, and a summary of all reported illicit discharges. The summary of illicit discharges must include an incident description, date reported, response actions, follow-up actions, and enforcement actions.

Responsible Parties:

Environmental Scientist

BMP 3.7: Legal Mechanism for Access to Private Properties

Obtain a legal mechanism to access private properties to inspect outfalls and investigate illicit connections or discharges. Examples include city ordinances, land easements, and search warrants.

Responsible Parties:

Environmental Scientist, Engineering

BMP 3.8: Recordkeeping

Record all outfall inspections including flows observed, results of screening and testing, follow up investigations, and corrective actions taken to reduce illicit discharges to the maximum extent possible.

Responsible Parties:

Environmental Scientist

BMP 3.9: Addressing Public Reporting of Illicit Discharges

Maintain a system for addressing public reporting of illicit discharges and procedures to inform employees, businesses, and the general public of the hazards associated with illegal discharges and improper waste disposal.

Responsible Parties:

Environmental Scientist

BMP 3.99: Sanitary Sewer Overflow (SSO) Procedures

Within ninety (90) days of the Permit effective date (January 1, 2024), the City will develop procedures to recognize and report any sanitary sewer overflows or leaking onsite sewage disposal systems that discharge into the small MS4 and submit those procedures to the Department for review.

The City must document any SSO that enters the MS4 or has the potential to impact the MS4. These updates will be provided in the annual report and will include the following:

a) A description of the discharge, including an estimate of the amounts discharged, and the cause of the discharge
b) The period of the discharge, including the dates and times of correction and elimination
c) Actions taken or to be taken to reduce and mitigate the discharge as well as prevent its recurrence

Responsible Parties:

Environmental Scientist

Key Documents and Deliverables:

- Written IDDE Program
    - Written Screening Program
- Records of all outfall flows observed
- Implement a system to locate sources of illicit discharges
- Maintain illicit discharge ordinance
- Update map(s) of Dover MS4
- Develop SSO Procedure

MCM 4: Construction Site Stormwater Runoff Control

The City of Dover has an MOA/MOU with Kent Conservation District (KCD) to perform Construction Site Stormwater Runoff Control according to the MS4 permit.

BMP 4.1: Requirements for the Review and Approval of Sediment and Stormwater Plans

Sediment and Stormwater Plans must be reviewed and approved. A copy of the approved Sediment and Stormwater Plan along with the Construction General Permit must be kept on every construction site.

Responsible Parties:

Kent Conservation District (KCD)

BMP 4.2: Requirements for the Use and Maintenance of Erosion and Sediment (E&S) Controls

Structural and nonstructural (E&S controls must be inspected during construction and maintenance at critical stages to verify compliance with the approved plans.

Responsible Parties:

KCD

BMP 4.3: Procedures for the Inspection and Enforcement of Erosion and Sediment Controls

Requirements and procedures must be in place for the inspection and enforcement of E&S controls to ensure that polluted runoff is not occurring during active construction. As per the Delaware Sediment and Stormwater Regulations, a Certified Construction Reviewer (CCR) must be utilized as outlined in the Delaware Sediment and Stormwater Regulations. All inspection reports must be kept onsite, and the permittee/Delegated Agency must review them for compliance with the Delaware Sediment and Stormwater Regulations.

Responsible Parties:

KCD

BMP 4.4: Certification through DNREC

Stormwater Site contractors responsible for inspection shall be certified through a DNREC or DNREC-approved training pursuant to the regulation and CGP.

Responsible Parties:

DNREC, KCD

BMP 4.5: Completion of BMP Checklist

CCRs must complete the stormwater BMP checklist and submit it to the permittee/Delegated Agency, as required in the Delaware Sediment and Stormwater Regulations. CCRs must be on site during critical stages of BMP construction.

Responsible Parties:

KCD

BMP 4.6: Documentation in Annual Report

The City will include a summary within the annual report that the Delegated Agency (KCD) is performing these actions appropriately throughout the MS4 in accordance with the MOA/MOU.

Responsible Parties:

Environmental Scientist

BMP 4.7: Development of an Ordinance

The City will develop an ordinance or other regulatory and enforceable mechanisms for ensuring compliance with this section.

Responsible Parties:

Environmental Scientist

BMP 4.8: Procedures for Public Receipt of Information

The City will put in place procedures for receipt and consideration of information submitted by the public.

Responsible Parties:

Environmental Scientist, Director of Public Works

Key Documents and Deliverables:

- Summary within the annual report that includes:
  - number of Sediment and Stormwater Plans reviewed
  - number and type of actions that resulted in compliance
  - percent of active construction sites inspected once
  - percent of active construction sites inspected more than once
  - number of construction sites authorized for disturbances of one acre or more
  - summarize CCR training records including topic of training, date, and hours of training
  - effectiveness of the program and assessment of E&S BMP procedures

MCM 5: Post Construction Stormwater Management

The City of Dover has an MOA/MOU with Kent Conservation District (KCD) to perform Post Construction Stormwater Management according to the MS4 permit.

BMP 5.1: Procedures to Conduct Annual Visual Inspections

Procedures will be established to conduct annual visual inspections of all publicly and privately owned and operated stormwater management systems within the Dover MS4. The City will develop a program to prioritize repairs in accordance with 7 DE Admin. Code 5101 7.0. A summary of inspections and corrective actions must be included in the annual report.

Responsible Parties:

KCD, Environmental Scientist

BMP 5.2: Conduct Representative Visual Inspections

The City will identify and map all stormwater systems which may discharge to the MS4 and conduct annual visual inspections of a representative sample of these systems to ascertain proper function. A summary of these inspections and findings will be included in the annual report. ALL stormwater systems must be inspected a minimum of once every permit term.

Responsible Parties:

KCD, Environmental Scientist, GIS Manager

BMP 5.3: Address Post-Construction Runoff From New Development

The City will update, implement, and enforce a program to address post-construction runoff from new development and redevelopment projects to ensure adequate long-term operation and maintenance (O&M) of stormwater management systems in accordance with 7 Admin. Code 5101.

Responsible Parties:

Environmental Scientist

BMP 5.4: BMP Design Training Program

The City will update a program to ensure appropriate staff are trained in proper BMP design, performance, inspection, and routine maintenance.

Responsible Parties:

Environmental Scientist

Key Documents and Deliverables:

- Procedures for visual inspection
- Map of all stormwater systems within Dover MS4
    - Conduct a yearly visual inspection of a representative sample
- Update, implement, and enforce a program to address post-construction runoff
- Update a staff training program in BMP design, performance, inspection, and routine maintenance

MCM 6: Pollution Prevention (P2) and Good Housekeeping

BMP 6.1: Annual Staff Training

The City will ensure that the proper staff receives annual training to reduce or eliminate the discharge of pollutants during municipal operations. Training may include in-person, online, on-the-job, and other formats. Topics for training must include spill prevention and response, proper disposal of waste, and how to conduct periodic visual inspections to detect and correct potential discharges at City-owned properties.

Responsible Parties:

Environmental Scientist

BMP 6.2: Good Housekeeping Plans for City-owned or Operated Properties

The City will maintain and update as needed a good housekeeping plan for City-owned or operated properties that could contribute to the discharge of pollutants to the MS4. Properties include buildings, roadways, parks, and other locations where the following activities are performed:

- Vehicle or heavy equipment maintenance
- Storage and use of deicers, fertilizers, pesticides, road maintenance materials, litter or debris, petroleum products, or hazardous materials

A standard plan may be created to address multiple properties where similar activities occur. The plan must include:

1. Description of site activities
2. List of potential pollutants including their sources and locations on the site. The plan must consider conveyance of stormwater entering, flowing through, and leaving the site.
3. Written good housekeeping procedures designed to prevent the discharge of pollutants to Dover's MS4. This includes regular visual inspections to detect potential discharges and maintenance requirements. (All outfalls and stormwater facilities must be inspected at least once each permit term.)
4. Written procedures for corrective actions to address any release, spill, or leak on site
5. Documentation of any discharge, release, leak, or spill, including the date, findings of investigation, and response actions

Responsible Parties:

Environmental Scientist

BMP 6.3: Quantify and Report Pollution Related to Street Sweeping and Catch Basins

Street Sweeping:

The City will continue its Street Sweeping program which sweeps all City streets between the months of January and November. During these months, the City will ensure that all curbed streets with storm drains owned or operated by the City will be swept a minimum of four times annually. Street Sweeping debris will be stored at Schutte Park on a concrete pad until the beginning of the next sweeping season. It will then be tested by KCI before disposal at the DSWA Sandtown Landfill.

The City must demonstrate by research, modeling, or other appropriate scientific literature that the Street Sweeping Program is adequate for pollutant removal and improved water quality. All street sweeping activity, including information about size, location, and frequency of area swept must be summarized in the annual report.

Catch Basins:

The City must maintain a risk-based program to prioritize catch basin maintenance and inspection. Permittees may use analysis of past data, weather patterns, public complaints, and observations incidental to their field operations to prioritize catch basin inspections so long as this analysis is included in the SWMP. All catch basins must be inspected and maintained as necessary and at a minimum of once every permit term.

A map of the locations of catch basins, a summary of the amount of solids removed, and the maintenance performed to comply must be included in the annual report.

Responsible Parties:

Environmental Scientist, GIS Manager, KCI

BMP 6.4: Update and Maintain a Standard Operating Procedure (SOP) for Pesticide/Herbicide Application, Storage, and Disposal

The City will update and maintain an SOP for pesticide/herbicide application, storage, and disposal. Examples can include integrated pest management plans or alternative techniques.

Responsible Parties:

Environmental Scientist, Grounds

BMP 6.5: Update and Maintain an SOP for Fertilizer Application

The City will update and maintain an SOP for fertilizer application. Examples can include chemical storage, landscaping with low maintenance/native species, and application procedures.

Responsible Parties:

Environmental Scientist, Grounds

BMP 6.6: Update and Maintain SOP for Snow and Ice Control

The City will update and maintain and SOP for snow and ice control that includes use of pretreatment, truck calibration and storage, and salt dome storage and containment.

Responsible Parties:

Environmental Scientist, Streets/Stormwater

BMP 6.7: Update and Maintain a Litter Control Program

The City will update and maintain a Litter Control Program for floatables that can enter the MS4. Program activities may include:

- Marking and maintaining storm drain inlets
- Litter collection and inspection of streams and water bodies
- Household hazardous waste collection
- Municipal composting programs
- Street curb maintenance
- Sidewalk sweeping

Provide and analysis of the progress towards implementing litter reduction strategies in the annual report. The analysis must describe the status of trash elimination efforts including resources (personnel and financial) expended and the effectiveness of all program components.

As part of the public education and outreach strategies, the City will incorporate litter control education, outreach, and participation for encouraging an increase in residential and commercial recycling rates, improving trash management, and reducing littering.

Responsible Parties:

Environmental Scientist, Parks & Recreation

BMP 6.8: Incorporate Green Infrastructure into the Routine Upgrade of Stormwater Conveyance Systems

The City will consider incorporating runoff reduction techniques and green infrastructure in the routine upgrade of existing stormwater conveyance systems and municipal properties. Examples may include:

- Replacement of closed drainage with grass swales
- Replacement of existing island in parking lots with rain gardens or curb cuts to route the flow through below-grade infiltration areas
- Other low-cost improvements that provide runoff treatment or reduction

The decision to incorporate runoff reduction techniques is at the discretion of the City, and the decision not to do this will not be a permit violation.

Responsible Parties:

Environmental Scientist, Streets/Stormwater, KCI

BMP 6.9: Contracts to Minimize the Discharge of Pollutants to the MS4

Require through the use of contract language, training, SOPs, or other measures within the City's legal authority that City contractors engaged in activities with potential to discharge pollutants use control measures to minimize discharge to the MS4.

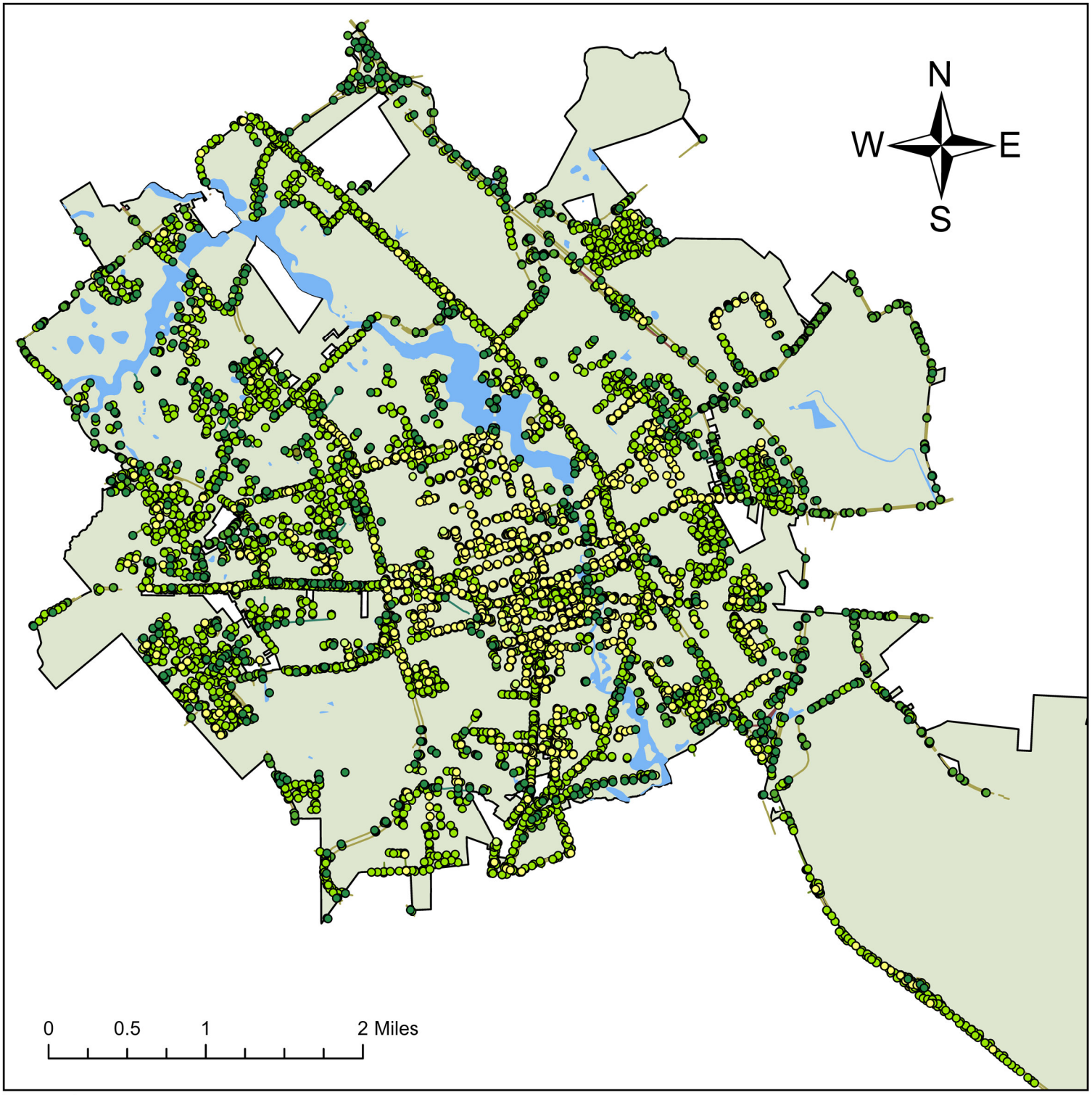
Responsible Parties:

Environmental Scientist, City Solicitor

Key Documents and Deliverables:

- Developed plan for training City employees
- Plans and Standard Plans to prevent illicit discharges on ALL City properties
- Street Sweeping Program
- Written plan for prioritization of catch basin inspection and maintenance
    - A map of locations and a summary of work done for annual report
- SOPs
    - Pesticide/herbicide
    - Fertilizer application
    - Snow and ice control
- Update and maintain a Litter Control Program
- Contract language for City contractors engaging in activities with the potential to discharge pollutants

City of Dover, Delaware MS4



Legend

- Outfall
- Control Structures
- Manholes
- Inlets
- Junction Box
- Culvert Point
- City Maintained Ditches
- Driveway Culvert
- Hydraulic Connector
- Pipe
- Swale
- Water Bodies
- City Boundary

Public Education and Outreach Program

MCM 1: Public Education and Outreach

The permittee shall update, implement, and maintain a written public education and outreach program and distribute educational materials to the community and appropriate employees about the consequences of polluted stormwater runoff. The materials must provide actions the public can take to reduce pollutants from entering the stormwater system. Examples of educational materials include web pages, brochures, booklets, and training programs. The education and outreach program may be coordinated with other portions of the permittee's MS4 program or developed independent of other pollution control efforts. The program shall be designed to achieve measurable improvements in the public's understanding of the causes and impacts of stormwater pollution and the actions they can take to prevent pollution.

To comply with the General Permit, the Stormwater Division of the City of Dover (City) will be presenting at the following events, Envirothon (Aquatics Training) hosted by DNREC, Make-A-Splash hosted by DNREC, Tree for Every Delawarean Initiative (TEDI) Event hosted by Kent Conservation District, and Super Senator Day hosted by the Capital School District. In addition to attending these events, the City has a variety of items to achieve the measurable goals for Public Education and Outreach. These include establishing activities during Earth Week, creating new City Vehicle Cards, Educate the City Campaign, updating the City of Dover's website, and participating in the City's Touch-A-Truck Day.

Events

1.1 Make-A-Splash

1.1.1 Scheduled Completion

April 15, 2025

1.1.2 Quantifiable Target

A count on how many participants visit the table will be taken and used to measure effectiveness.

1.1.3 Target audience

- ◊ K-12 Children

1.1.4 Materials for distribution

- ◊ Reflective “Only Rain Down the Drain” stickers
- ◊ City of Dover Public Works water bottles
- ◊ City of Dover Public Works Hand sanitizers
- ◊ Report Illicit Discharges stickers
- ◊ Report Illicit Discharges pencils
    - o Mechanical and wooden
- ◊ Report Illicit Discharges magnets

1.2 Super Senator Day

1.2.1 Scheduled Completion

October 12, 2024

1.2.2 Quantifiable Target

The number of distribution materials taken will be recorded to determine effectiveness.

1.2.3 Target audience

- ◊ K-12 Children
- ◊ Families
- ◊ Members of the community

1.2.4 Materials for distribution

- ◊ Informational pamphlets
  - o Delaware Livable Lawns
  - o Delaware Livable Lawns Fertilizing
  - o The City's Grass Clipping Ordinance
  - o Only Rain Down the Drain City flyers
- ◊ City of Dover Public Works portable multi-charger case with multi-chargers
- ◊ Report Illicit Discharges Chapsticks
- ◊ Reflective "Only Rain Down the Drain" stickers
- ◊ City of Dover Public Works water bottles
- ◊ City of Dover Public Works hand sanitizers
- ◊ City of Dover Public Works medium canvas tote bags
- ◊ Report Illicit Discharges mechanical pencils
- ◊ City of Dover Public Works magnetic chip clips
- ◊ City of Dover Public Works pocket notebooks
- ◊ Report Illicit Discharges phone wallets

1.3 Envirothon (Aquatics Training)

1.3.1 Scheduled Completion

December 14, 2024

1.3.2 Quantifiable Target

To measure effectiveness, there will be a count taken on the test grades received from the participants tests at the event. This number will be collected through the number of letter grades the participants receive.

1.3.3 Target Audience

- ◊ K-12 Children

1.3.4 Materials for distribution

- ◊ Mechanical City of Dover Report Illicit Discharges pencils

Note: This is only training for the aquatics portion of Envirothon. The actual event, Envirothon, will be held on April 10th, 2025.

1.4 KCD Tree for Every Delawarean Initiative (TEDI) Event

1.4.1 Scheduled Completion

October 5, 2024

1.4.2 Quantifiable Target

The number of distribution materials taken will be recorded to determine effectiveness.

1.4.3 Target Audience

- ◊ Members of the community
- ◊ Families

1.4.4 Materials for distribution

- ◊ Only Rain Down the Drain City flyers
- ◊ City of Dover Public Works hand sanitizers

- ◊ City of Dover Public Works pocket notebooks
- ◊ Report Illicit Discharges Chapsticks
- ◊ City of Dover Public Works magnetic chip clips
- ◊ City of Dover Public Works medium canvas tote bags
- ◊ City of Dover Public Works water bottles

BMPs

1.1 City Vehicle Cards

1.1.1 Scheduled Completion

July 31, 2024

1.1.2 Quantifiable Target

This BMP will be measured by how many illicit discharge reports we receive from employees in the field.

1.1.3 Target audience

- ◊ City Employees

The Stormwater Division will distribute cards that will be velcroed inside of City vehicles for those that are in the field often. The card will contain examples of illicit discharges and the contact number to report them to. This BMP can also be included in the Annual NPDES training.

1.2 Educating the City Campaign

1.2.1 Scheduled Completion

This will be an ongoing project. There is no scheduled completion date.

1.2.2 Quantifiable Target

This BMP will be measured by the number of illicit discharge reports called in.

1.2.3 Target audience

- ◊ City Employees
- ◊ Members of the community
- ◊ Families

Inside City buildings, posters educating staff and visitors on the importance of stormwater management will be hung. These will include topics such as BMPs with examples of illicit discharges and their pictures and where to report any and all illicit discharges if seen. There will also be literature in buildings such as the Dover Public Library, City Hall, and the John W. Pitts Recreational Center. Literature including the Environmental Protection Agency's Stormwater Smart literature. These will be alongside The Delaware Tree Initiative (TEDI) brochures, TEDI Sign-Up card, Delaware Livable Lawns Brochures, and Delaware Livable Lawns Proper Fertilizing card.

1.3 DPW Stormwater webpage

1.3.1 Scheduled Completion

Fall 2025

1.3.2 Quantifiable Target

The number of calls with questions will be used to track the effectiveness of this BMP. High effectiveness would be no citizen calls with stormwater questions through the usefulness of the website.

1.3.3 Target Audience

- ◊ Homeowners
- ◊ K-12 Children
- ◊ Businesses
- ◊ Out-of-state viewers

The Stormwater Division is updating the Stormwater Program page found on the City of Dover website. This will only include the City of Dover website, not the Hub site. The City has limited jurisdiction over the edits made to the website since it was created through a 3rd party. This will give citizens updated information for the City's Stormwater Program. The updated webpage will also provide links to better their personal stormwater management practices and answer any questions or concerns they would have surrounding the stormwater program and other related topics.

1.4 Earth Week Celebration

1.4.1 Scheduled Completion

April 21st, 2025 – April 25th, 2025

1.4.2 Quantifiable Target

The number of attendees will be recorded at each of the events in order to determine the effectiveness of this BMP.

1.4.3 Target audience

- ◊ Homeowners
- ◊ Businesses
- ◊ Families
- ◊ Members of the community

The Stormwater Division hopes to establish celebrating Earth Week with a week's worth of eco-friendly Earth related activities to become an annual celebration. To raise awareness for the event(s), we plan to advertise around the city such as Silver Lake Park, City Hall, the John W. Pitts Recreational Center, and the Dover Public Library. Reports will be written for each of the events turn out.

The schedule for the activities planned includes:

- ◊ Monday
  - In the morning, a Nature Walk in Silver Lake Park as well as a guided tour option for the first hour of the event. In the afternoon, a screening of The Lorax (2012) at the Dover Public Library.
- ◊ Tuesday
  - Litter Pick-up, as well as storm drain labeling, in Silver Lake Park
- ◊ Wednesday
  - Kids Activities at the Dover Public Library
- ◊ Thursday
  - Community Stormwater Day in Silver Lake Park

1.5 Touch-A-Truck Day

1.5.1 Scheduled Completion

July 31, 2025

1.5.2 Quantifiable Target

A QR code to a survey will be posted on the Stormwater Divisions display to measure the effectiveness of this BMP.

1.5.3 Target Audience

- ◊ Homeowners
- ◊ K-12 Children
- ◊ Families

At the next annual Touch-A-Truck Day, the City of Dover Stormwater Division will have a display and small presentation. The display will include instruments that we use in the Stormwater Division and a small presentation will be given on how and why we use these instruments.

Public Participation and Involvement Program

MCM 2: Public Participation and Involvement Program

Permittees are required to create opportunities for public participation and encourage citizens to engage in the MS4 management program for controlling stormwater discharges. Examples of activities that involve the public include stewardship activities such as adopt-a-stream programs, stream clean-ups, litter pick-up days, public surveys, storm drain marking, volunteer water quality monitoring, tree plantings and other pollution prevention events.

To comply with the General Permit, the Stormwater Division of the City of Dover (City) will be hosting a litter pick-up event accompanied by a catch basin labeling event, as well as joining the Silver Lake Commission. At these events, the Stormwater Division will be giving a speech on why these events are important to the MS4 and waterways in general.

BMPs

1.1 Litter Pick-Up in Silver Lake Park

1.1.1 Scheduled Completion

April 22nd, 2024

1.1.2 Quantifiable Target

To measure effectiveness, there will be a “sign-in” area or some type of check in so we can record the number of participants.

1.1.3 Target Audience

- ◊ Families
- ◊ Members of the community

This event will take place in Silver Lake Park. Those who request an instrument to assist them in this event will be provided with a grabber tool. All participants will be given gloves and trash bags. At the beginning of the event, the Stormwater Division will be giving a small speech on the importance of stormwater and how it is imperative to the health of our waterways, and how this clean-up will help.

1.2 Catch Basin Labeling in Silver Lake Park

1.2.1 Scheduled Completion

April 22nd, 2024

1.2.2 Quantifiable Target

The effectiveness of this event will be measured with the Litter Pick-Up.

1.2.3 Target Audience

- ◊ Members of the community

This will take place alongside the Litter Pick-up event. This event will be in Silver Lake Park. None of the catch basins in the park are labeled with a placard informing those who pass that the drains drain to the waterways. At the beginning of the event, the Stormwater Division will be giving a small speech on the importance of stormwater and how it is imperative to the health of our waterways. Those who request an instrument to assist them in this event will be provided with a kneeling pad. All participants will be provided with the placards and their adhesive. Our purpose with this event is to educate citizens on how water that goes down the storm drains do not get treated and are discharged to our waterways.

1.3 Silver Lake Commission

1.3.1 Scheduled Completion

This will be an ongoing project consisting of quarterly meetings. There is no schedule completion date.

1.3.2 Quantifiable Target

The number of citizens that show interest in the presented organization, and/or the number of citizen stormwater concerns, will be measured for this BMP.

1.3.3 Target Audience

- ◊ Homeowners
- ◊ Business owners
- ◊ Members of the community

The Stormwater Division will be sitting in on the Silver Lake Commission when attending the Commission meetings. At these meetings, any and all Dover residents are welcome to attend and contribute to discussions. Here, the Stormwater Division will give a small presentation on an organization we would like to bring attention to that would benefit the community and ultimately Dover's stormwater. Additionally, the Stormwater Division will take note of any citizen concerns surrounding stormwater topics whether it be environmental or infrastructural.

Illicit Discharge Detection and Elimination Program

MCM 3: Illicit Discharge Detection and Elimination Program

Permittees are required to update, implement, manage, and enforce a program to detect and reduce to the maximum extent practicable illicit discharges into the MS4. The program shall include a plan to detect and reduce to the maximum extent practicable non-stormwater discharges, including illegal dumping and spill to the MS4. The permittee shall provide program updates in the annual report.

The Stormwater Division has implemented and managed a methodology for outfall dry weather screening, inlet inspections, and record keeping of previous potential and confirmed illicit discharges. For screening and inspections, the City of Dover – Public Works has created a GIS application of all the inlets and outfalls within the city's limits. The purpose of the application is to choose a randomized inlet or outfall for inspection if the eligibility criteria is not met. Record keeping of all illicit discharges, both potential and confirmed, will be kept on an excel spreadsheet.

Identifying Areas for Inspection & Examination

To decipher which areas are priority areas, we look at the following criteria,

- The age of the infrastructure in the area
- The number of reported and/or found illicit discharges, illegal connections, or illegal dumping in the area
- If there has been a recent spill in the area
- If there has been history of flooding in the area
- If there are any existing drainage issues in the area
- If there is or was construction/work being done in the area

This information can be found using the GIS maps made by Public Works and past survey entries from field inspection(s) survey.

Screening Program

Methodology

The Stormwater Division plans to perform 12 outfall inspections per month and 98 inlet inspections per month to achieve evaluating at least 20% of the City's MS4. A methodology to determine the outfalls and inlets that will receive dry weather screening include,

- How recent its' last inspection was
- If it is in an area with frequent illicit discharges
- If there has been a recent illicit discharge and the conveyance leads to the outfall
- Drainage concerns
- Flooding in the area

Determining Screening(s)

If it does not follow any of the above, a random outfall will be screened. A random outfall will be determined using a GIS application made by the City of Dover - Public Works for randomized screening points. This application is used for both the inlets and the outfalls located within the city. Additionally, when performing inspections, a question on the field inspection survey has been added to record if that particular outfall or inlet needs to be flagged and inspected more often than others to track its condition(s).

This criterion will also be applied when determining inlets that require inspection. If it does not follow any of the above, a random inlet will be inspected. A random inlet will be determined using the same GIS application.

Analyzing Samples

During inspections, if there is an indicator of an illicit discharge present, the Stormwater Division will contact Envirocorp to either deliver or allow us to pick up bottles for sampling. Once these bottles are received, the samples will be properly collected and delivered to Envirocorp to be analyzed. After receiving the data back from the lab, it will be recorded and saved on the outfall or inlets on their field inspection survey entry.

Identifying the Source of an Illicit Discharge

When an illicit discharge is discovered and/or reported, it is the Environmental Scientist's responsibility to follow the trail of the discharge to identify the source. To do this, they may reference the GIS map of the City to find where the pipeline leads. If the source is not visible, they may also use a lateral storm sewer camera. The Department of Public Works currently owns and operates a vCam-6 CCTV Inspection System, made by Vivax-Metrotech, to see inside pipes in the MS4. If the source still can't be located using either strategies, help from other departments or agencies may be required.

Legal Mechanism

The Stormwater Division is currently developing a new, stricter, stormwater ordinance.

The main goal of this new ordinance is to prohibit unauthorized non-stormwater discharges to the MS4 and to provide an avenue for code enforcement due to our current ordinance lacking this.

Our hope with the new ordinance is it will prevent and deter illicit discharges through enforcement and achieve compliance with the permit.

Record Keeping

Record keeping of all illicit discharges, both potential and confirmed, will be kept on an excel spreadsheet.

The fields include the date, address, MS4 violation description, if the illicit discharge was confirmed, who the discharge was reported by, a description of the immediate response, description of the follow-up if applicable, and additional details.

Addressing Public Reporting & Procedures

Citizens are encouraged to call the Department of Public Works phone number, for illicit discharges discovered during office hours. During after hours, there is a 24-hour hotline for

citizens to call and report illicit discharges. Additionally, there is an option for citizens to submit an entry through the Departments [of Public Works] “Contact Us” survey. To access this survey, there is a QR code on “Only Rain Down the Drain” flyer/poster.

City employees are trained annually to recognize illicit discharges and to call either the Stormwater Coordinator, the Environmental Scientist, or the Department of Public Works

When an illicit discharge is discovered, neighbors in the area get a door hanger to notify them, and if the responsible party is identified, a letter is sent to them and any enforcement possible is carried out by Code Enforcement.

SSO Procedures

A Sanitary Sewer Release Record has been created for the personnel from the Dept. of Water / Wastewater that report to the event. The Record Report consists of 3 parts. Part 1 is to gain general information and asks about the SSO and back-ups. Part 2 asks about the clean-up response and notification. Part 3 is the Emergency Release Notification (EPCRA Section 304). Part 3 contains the requirement to contact and inform DNREC, LEPC, and DelDOT (if in DelDOT ROW) of the SSO.

This document, Sanitary Sewer Release Record, has been reviewed and edited by the Stormwater Coordinator. The document has been submitted, reviewed, and approved by the Department, as per the General Permit, MCM 3 requirements, on May 7th of 2024.

Construction & Post Construction Program(s)

MCM 4: Construction Program

MCM 5: Post Construction Program

In order to comply with the General Permit, the City of Dover (City) Stormwater Division has upkept a Memorandum of Agreement (MOA) with Kent County District (KCD). The MOA includes the responsibilities of both agencies per the permit requirements under Minimum Control Measures 4, Construction, and 5, Post Construction.

WHEREAS, the City's compliance with the MS4 permit requirements are dependent upon ensuring that construction and post construction practices are conducted in accordance with requirements contained within MS4 permit conditions within City limits; and

WHEREAS, KCD's responsibilities as a Delegated Agency are dependent upon ensuring that construction and post construction practices within the area of Kent County are conducted in accordance with the State's Sediment and Stormwater Regulations;

Responsibilities:

Dover:

- Assist KCD in achieving compliance with State Sediment and Stormwater Regulations on individual sites within City limits by coordinating issuance of building permits and certificates of occupancy with approvals issued by KCD and by coordinating infrastructure dedication with the KCD to ensure that all stormwater management facilities are functioning properly prior to transfer of infrastructure to City ownership.
- Ultimately responsible and liable for all compliance assistance and enforcement actions relating to construction and post construction stormwater management conditions contained within the City's MS4 permit.

KCD:

- The plan review, construction inspection, and post construction inspection requirements under the City's MS4 permit within the City limits.
- Conducting post construction management and maintenance inspection of stormwater management facilities within the City limits.

- Provide technical assistance to the City with regards to permit implementation, including public outreach and involvement.
- Is solely responsible and liable for all compliance assistance and enforcement actions relating to construction and post construction stormwater management conducted as a Delegated Agency through the State of Delaware's Sediment and Stormwater Program.

Pollution Prevention and Good Housekeeping Program

MCM 6: Pollution Prevention and Good Housekeeping

Permittees are required to update and implement an operations and maintenance program to prevent or reduce to the maximum extent practicable pollutant runoff from municipal operations in accordance with 40 C.F.R. §122.34(b)(6). The permittee will satisfy this MCM by updating, implementing, and maintaining procedures for pollution prevention and good housekeeping at permittee owned and operated facilities, including municipal operations and activities within the MS4 jurisdiction.

The Stormwater Division updated, implemented, and maintained maintenance programs for municipal operations, as well as standard plans for each of the City owned and/or operated properties that could contribute to the discharge of pollutants to the MS4.

Standard Plans

The City has updated and implemented a standard plan for the following departments, included in the plans' creation date and the date they were last updated:

- City Warehouse
    - Creation date: 1/24/2025
    - Last updated: 2/7/2025
- Electric
    - Creation date: 1/24/2025
    - Last updated: 1/29/2025
- Parks and Recreation
    - Creation date: 1/24/2025
    - Last updated: 2/7/2025
- Water / Wastewater
    - Creation date: 1/24/2025
    - Last updated: 2/11/2025

Programs

The City has updated, implemented, and maintained a program for each of the Permits MCMs. Here are the following programs including their creation date and the date they were last updated:

- MCM 1: Public Education and Outreach
    - Creation date: 12/16/2024
    - Last updated: 2/28/2025
- MCM 2: Public Involvement and Participation
    - Creation date: 8/9/2024
    - Last updated: 2/28/2025
- MCM 3: Illicit Discharge Detection and Elimination (IDDE)
    - Creation date: 1/2/2025
    - Last updated: 2/28/2025
- MCM 4: Construction Site Stormwater Runoff Control & MCM 5: Post Construction Stormwater Management (combined plans)
    - Creation date: 1/27/2025
    - Last updated: 2/28/2025
- MCM 6: Pollution Prevention and Good Housekeeping
    - Creation date: 1/28/2025
    - Last updated: 2/28/2025