City of Saint Paul's
STORMWATER MANAGEMENT PROGRAM

Minnesota Pollution Control Agency

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
Permit No. MN 0061263

SAINT PAUL
MINNESOTA

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PART 1 – GENERAL INFORMATION

1.1 BACKGROUND

The National Pollutant Discharge Elimination System (NPDES) program was created in 1990 by the United States Environmental Protection Agency (EPA) to safeguard public waters through the regulation of the discharge of pollutants to surface waters including lakes, streams, wetlands, and rivers. The Minnesota Pollution Control Agency (MPCA) is the local authority responsible for administering this program. Under this program, specific permits are issued to regulate different types of municipal, construction, and industrial activities.

The MPCA issued the first Municipal Separate Storm Sewer System (MS4) NPDES Permit to the City of Saint Paul on December 1, 2000. The MPCA issued the second MS4 NPDES Permit to the City of Saint Paul on January 21, 2011. The City of Saint Paul's current MS4 NPDES Permit was reissued by the MPCA on July 12, 2018. This permit requires the submittal of a revised Stormwater Management Program (SWMP) within 12 months of reissuance. Additionally, the Permit requires the submittal of an Annual Report by June 30th of the subsequent year.

The goal of the SWMP is to set a framework defining how the City will manage, operate, and maintain the MS4 and areas within the City's jurisdiction drained by the MS4 in a manner to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP). The stormwater management activities of the City cover a broad range of responsibilities involving the governing body and almost every department of the City. The City Council and Mayor approve budgets, ordinances, and policies to provide direction for the stormwater program.

1.2 CONTACT INFORMATION

Permit coordination and annual reporting functions are handled by:

Contact Information
Pat Murphy
Department of Public Works
Phone: (651) 266-6254
Email: patrick.g.murphy@ci.stpaul.mn.us

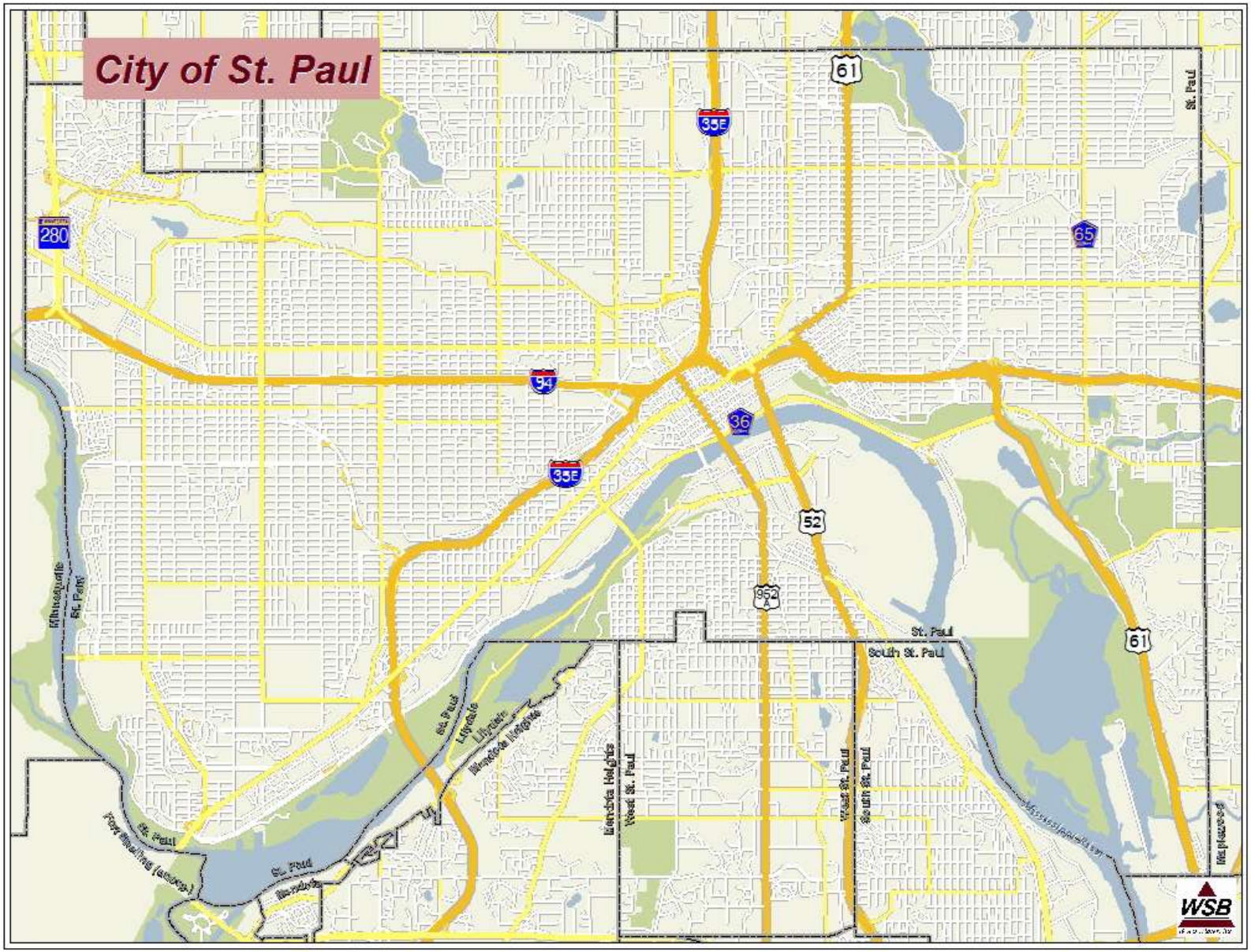
This SWMP is prepared in conformance with requirements of NPDES Permit MN 0061263 issued to the City of Saint Paul on July 12, 2018. This permit, currently in effect, expires July 11, 2023.

To meet the goal of the City's SWMP, employees will need to responsibly and effectively implement relevant tasks related to the management, planning, engineering, and maintenance activities described within, or developed through implementation of, the SWMP. The goal of the SWMP is best accomplished by utilizing a citywide approach. However, certain departments will have a primary role in managing stormwater with respect to the City's MS4. Other departments may have a lesser or more passive role. The three departments serving a primary role in meeting the goal of the SWMP include Public Works, Parks and Recreation, and Safety and Inspections.

The organizational chart shows the structure of the city and the relationship of stormwater compliance between departments.

1.3 PERMIT COVERAGE AREA

This permit applies to the Municipal Separate Storm Sewer System (MS4) which consists of storm sewer system and treatment works for the collection, conveyance, treatment, storage, and discharge of stormwater owned and operated by the City of Saint Paul.


City of St. Paul
61
35E
280
65
94
36
35E
52
952
St. Paul
South St. Paul
61
WSB

1.4 AUTHORIZED DISCHARGES

The permittee identified in Section 1.1 is authorized to discharge stormwater runoff from its MS4 (as defined in 40 CFR and described by the SWMP herein) in accordance with the requirements of the issued permit. The permit does not exempt or otherwise preclude the permittee from complying with the requirements of Watershed Districts, Watershed Management Organizations, the County, or any other local, state, or federal rules and regulations.

Limitations

The permit does not authorize discharges other than stormwater. Non-stormwater discharges may include: combined sewer overflow, non-contact cooling water, sewage, wash water, scrubber water, spills, oil, hazardous substances, fill, commercial equipment and/or vehicle cleaning and maintenance wastewaters. A separate NPDES permit may be required for these discharges.

The permit does not authorize the discharge of stormwater when a separate NPDES permit is required for these activities. For example, while stormwater from construction activity may be discharged from a municipal separate storm sewer system with authorized stormwater discharges, this Permit does not replace or satisfy any other permits required for those discharges.

The permit authorizes only discharges by the Permittee from the portions of the storm sewer system that are under its operational control.

The permit does not allow new or expanded discharges unless the Permittee is in compliance with the requirements of Minn.R. Ch. 7050.0185. The conclusion from the MPCA's December 2009 review of nondegradation for the City of Saint Paul, as set forth in Minnesota Rule 7050.0185, stated that there has been no expanded discharge of stormwaters from the jurisdiction of Saint Paul since 1988. Since this determination by the MPCA, the City has continued to implement the programs mentioned in the review as well as new programs, including but not limited to, the City's SWMP, adherence to watershed district rules and the state construction permit. The implementation of these programs continues to demonstrate that the City of Saint Paul has no new or expanded discharges since the MPCA's 2009 determination.

The permit does not allow the following discharges unless the more stringent requirements for discharges are met with specific criteria:

- Discharges to Wetlands
- Discharges Requiring Environmental Review
- Discharges Affecting Threatened or Endangered Species or their habitat
- Discharges Affecting Historic or Archeological sites.
- Discharges Affecting Source Water Protection Areas.

The permit does not authorize stormwater discharges from any municipal facility where stormwater discharge is authorized under another individual NPDES/SDS permit or other industry-specific general NPDES/SDS permit.

1.5 DEFINITIONS, ABBREVIATIONS AND ACRONYMS

1. "**Active karst**" means geographic areas underlain by carbonate bedrock (or other forms of bedrock that can erode or dissolve) with less than 50 feet of sediment cover.

2. "**Alum or Ferric Chloride Phosphorus Treatment System**" means the diversion of flowing **stormwater** from a **MS4**, removal of phosphorus through the use a continuous feed of alum or ferric chloride additive, flocculation, and the return of the treated **stormwater** back into a **MS4** or **receiving water**.

3. "**Agency**" means Minnesota Pollution Control **Agency** (Minn. Stat. § 116.36, subd. 2).

4. "**Applicable WLA**" means a **Waste Load Allocation** assigned to the **Permittee** and approved by the **USEPA**.

5. "**Best Management Practice**" or "**BMP**" means practices to prevent or **reduce** the pollution of the **waters of the state**, including schedules of activities, prohibitions of practices, and other management practices, and also includes treatment requirements, operating procedures and practices to control plan site runoff, spillage or leaks, sludge, or waste disposal or drainage from raw material storage (Minn. R. 7001.1020, subp. 5).

6. "**Commissioner**" means the **Commissioner** of the Minnesota Pollution Control **Agency** or the **Commissioner**'s designee (Minn. Stat. § 116.36, subd. 3).

7. "**Common plan of development or sale**" means one proposed plan for a contiguous area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. One plan is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur.

8. "**Construction activity**" includes **construction activity** as defined in 40 CFR § 122.26(b)(14)(x) and small **construction activity** as defined in 40 CFR § 122.26(b)(15) and **construction activity** as defined by Minn. R. 7090.0080, subp. 4. This includes a disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated **stormwater** runoff, leading to soil erosion and movement of sediment into **surface waters** or drainage systems. Examples of **construction activity** may include clearing, grading, filling, and excavating.

   Construction activity includes the disturbance of less than one acre of total land area that is a part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb one (1) acre or more. **Construction activity** does not include a disturbance to the land of less than five (5) acres for the

purpose of routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. Routine maintenance does not include activities such as repairs, replacement and other types of non-routine maintenance. Pavement rehabilitation (e.g., mill and overlay projects) is not considered **construction activity**.

9. "**Discharge**" means "discharge of a pollutant" as defined in Minn. R. 7001.1020, subp. 12.

10. "**DNR catchment area**" means the Hydrologic Unit 08 areas delineated and digitized by the Minnesota DNR. The catchment areas are available for download at the Minnesota DNR Data Deli website. **DNR catchment area**s may be locally corrected, in which case the local corrections may be used.

11. "**Green infrastructure**" means a wide array of practices at multiple scales that manage wet weather and that maintains or restores natural hydrology by infiltrating, evapotranspiring, or harvesting and using **stormwater**. On a regional scale, green infrastructure is the preservation or restoration of natural landscape features, such as forests, floodplains and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed. On the local scale, green infrastructure consists of site and neighborhood- specific practices, such as bioretention, trees, green roofs, permeable pavements and cisterns.

12. "**Illicit discharge**" means any discharge to a **municipal separate storm sewer** that is not composed entirely of **stormwater** except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the **municipal separate storm sewer**) and discharges resulting from firefighting activities (40 CFR§ 122.26[b][2]).

13. "**Impaired water**" means waters identified as impaired by the **Agency**, and approved by the **USEPA**, pursuant to section 303(d) of the Clean Water Act (33 U.S.C. § 1313 [d]).

14. **"Impervious Surface"** means a constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. Examples include rooftops, sidewalks, driveways, parking lots, and concrete, asphalt, or gravel roads. Bridges over surface waters are impervious surfaces.

15. "**Large municipal separate storm sewer system**" or "**Large MS4**" means all municipal separate storm sewers that are located in an incorporated place with a population of 250,000 or more owned or operated by the United States, a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, **stormwater**, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage

district or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management Agency under section 208 of the CWA that discharges to waters of the United States.

16. "**Linear Project**" means construction or reconstruction of roads, trails, sidewalks, or rail lines that are not part of a common plan of development or sale. Rehabilitation is not considered reconstruction. Rehabilitation includes mill and overlay and other resurfacing activities within existing right-of-way that do not expose underlying soils.

17. "**Long-term goals**" means those goals established in the **Permittee**'s **stormwater** management program to be accomplished by implementing the NPDES Phase I **MS4** Permit. These goals may have various timeframes and durations including durations longer than one NPDES Phase I **MS4** permit cycle. For example, **long-term goals** may include, but are not limited to, compliance with all **TMDL**s by January 1, 2025; fifty percent (50%) reduction of the annual frequency of street flooding by January 1, 2020; and/or reduction of impervious cover by two percent (2%) within two years of the issuance date of the **SWMP**.

18. "**Maximum Extent Practicable**" or "**MEP**" means the statutory standard (33 U.S.C. § 1342[p][3][B][iii]) that establishes the level of pollutant reductions that an **owner** or **operator** of a regulated **MS4**s must achieve. The **USEPA** has intentionally not provided a precise definition of **MEP** to allow maximum flexibility in **MS4** permitting. The pollutant reductions that represent **MEP** may be different for each **MS4**, given the unique local hydrologic and geologic concerns that may exist and the differing pollutant control strategies. Therefore, the **Permittee** will determine appropriate **BMP**s to satisfy each of the MCMs through an evaluative process. The **USEPA** envisions application of the **MEP** standard as an iterative process.
19. "**Municipal separate storm sewer system**" or "**MS4**" means a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains:

    a. Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, **stormwate**r, or other wastes, including special districts under state law such as a sewer district, flood control district, or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management Agency under section 208 of the federal Clean Water Act, United States Code, Title 33, section 1288, that discharges into **waters of the state**.

    b. Designed or used for collecting or conveying **stormwater**.

    c. That is not a combined sewer.

d. That is not part of a Public Owned Treatment Works as defined at 40 CFR § 122.2.

Municipal separate storm sewer systems do not include separate storm sewers in very discrete areas, such as individual buildings (Minn. R. 7090.0080, subp. 8).

20. "**New development**" means all **construction activity** that is not defined as **redevelopment**.

21. "**Non-stormwater discharge**" means any **discharge** not composed entirely of **stormwater**.

22. "**Other regulatory mechanism**" means any legally enforceable document, such as a contract or other agreement that has penalties such as withholding payments, fines, or other measures to prevent noncompliance.

23. "**Operator**" means the **person** with primary operational control and legal responsibility for **the municipal separate storm sewer system** (Minn. R. 7090.0080, subp. 10).

24. "**Outfall**" means the point source where a **municipal separate storm sewer system discharge**s to a **receiving water**, or the **stormwater discharge** permanently leaves the **Permittee**'s **MS4**. It does not include diffuse runoff or conveyances which connect segments of the same stream or water systems (e.g., when a conveyance temporarily leaves a **MS4** at a road crossing).

25. "**Owner**" means the **person** that owns the **municipal separate storm sewer system** (Minn. R. 7090.0080, subp. 11).

26. "**Permittee**" means a **person** or **person**s, that signs the permit application submitted to the **Agency** and is responsible for compliance with the terms and conditions of this permit.

27. "**Person**" means the state or any Agency or institution thereof, any municipality, governmental subdivision, public or private corporation, individual, partnership, or other entity, including, but not limited to, association, commission, or any interstate body, and includes any officer or governing or managing body of any municipality, governmental subdivision, or public or private corporation, or other entity (Minn. Stat. § 115.01, subd. 10).

28. "**Pipe**" means a closed human-made conveyance device used to transport **stormwater** from location to location. The definition of **pipe** does not include foundation drain **pipe**s, irrigation **pipe**s, land drain tile **pipe**s, culverts, and road sub-grade drain **pipe**s.

29. "**Pollutant of concern**" means a pollutant specifically identified in a **USEPA**-approved **TMDL** report as causing a water quality impairment.

30. "**Receiving water**" means any lake, river, stream or **wetland** that receives **stormwater** discharges from a **MS4**.

31. "**Redevelopment**" means any **construction activity** where, prior to the start of construction, the areas to be disturbed have 15 percent or more of **impervious surface**(s).

32. "**Reduce**" means **reduce** to the **Maximum Extent Practicable** (**MEP**) unless otherwise defined in the context in which it is used.

33. "**Seasonally saturated soil**" means the highest seasonal elevation in the soil that is in a reduced chemical state because of soil voids being filled with water causing anaerobic conditions. **Seasonally saturated soil** is evident by the presence of redoximorphic features or other information determined by scientifically established methods or empirical field measurements.

34. "**Significant materials**" includes, but is not limited to: raw materials, fuels, materials such as solvents, detergents, and plastic pellets: finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA); fertilizers, pesticides, and waste products such as ashes, slag, and sludge that have the potential to be released with **stormwater** discharges. When determining whether a material is significant, the physical and chemical characteristics of the material should be considered (e.g., the material's solubility, transportability, and toxicity characteristics) to determine the material's pollution potential (40 CFR § 122.26[b][12]).

35. "**Stormwater**" means **stormwater** runoff, snowmelt runoff, surface runoff, and drainage (Minn. R. 7090.0080, subp. 12).

36. "**Stormwater hotspot**" means any land use or activity that may generate a higher concentration of hydrocarbons, trace metals, or toxic pollutants than are found in typical **stormwater** runoff.

37. "**Stormwater Management Program**" or "**SWMP**" means a comprehensive program developed by the **Permittee** to manage and reduce the discharge of pollutants in **stormwater** to and from the medium or **large MS4**.

38. "**Structural stormwater BMP**" means a stationary and permanent **BMP** that is designed, constructed and operated to prevent or **reduce** the discharge of pollutants in **stormwater**.

39. "**Total Maximum Daily Load**" or "**TMDL**" means the sum of the individual **Waste Load Allocations** for point sources and load allocations for nonpoint sources and natural background, as more fully defined in 40 CFR § 130.2, paragraph (i). A **TMDL** sets and allocates the maximum amount of a pollutant that may be introduced into a **water of the state** and still assure attainment and maintenance of **water quality standards** (Minn. R. 7052.0010 subp. 42).

40. "**USEPA**" means the U.S. Environmental Protection Agency.

41. "**Waste Load Allocation**" or "**WLA**" means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution, as more fully defined in 40 CFR § 130.2(h). In the absence of a **TMDL** approved by **USEPA** under 40 CFR § 130.7, or an assessment and remediation plan developed and approved according to Minn. R. 7052.0200, subp. 1.C, a **WLA** is the allocation for an individual point source that ensures that the level of water quality to be achieved by the point source is derived from and complies with all applicable **water quality standards** and criteria (Minn. R. 7052.0010 subp. 45).

42. "**Water pollution**" means:

    a. The discharge of any pollutants into any waters of the state or the contamination of any waters of the state so as to create a nuisance or renders such waters unclean, or noxious, or impure so as to be actually or potentially harmful or detrimental or injurious to public health, safety or welfare, to domestic, agricultural, commercial, industrial, recreational or other legitimate uses, or to livestock, animals, birds, fish, or other aquatic life.

    b. The alteration made or induced by human activity of the chemical, physical, biological, or radiological integrity of waters of the state (Minn. Stat. § 115.01, subd. 13(b)).

43. "**Water quality standards**" mean those provisions contained in Minn. R. 7050 and 7052.

44. "**Waters of the state**" means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof (Minn. Stat. § 115.01, subd. 22).

45. "**Water Quality Volume**" means (by type of project):

a. for **new development** or **redevelopment** projects (excluding **linear project**s) the **water quality volume** equals one (1) inch times the new and/or fully reconstructed **impervious surface**s (calculated as an instantaneous volume) and is the volume of water to be treated, through the use of any combination of **BMP**s, as required by this permit; or

b. for **linear project**s, the **water quality volume** equals one (1) inch times the net increase of **impervious surface**s, in addition to a reduction in **stormwater** runoff volume from fully reconstructed surfaces (calculated as an instantaneous volume) and is the volume of water to be treated, through the use of any combination of BMPs, as required by this permit.

46. "**Wetlands**" are those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. **Wetlands** generally include swamps, marshes, bogs, and similar areas. Constructed **wetlands** designed for wastewater treatment are not **waters of the state**. **Wetlands** must have the following attributes:

a. A predominance of hydric soils.

b. Inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a saturated soil condition.

c. Under normal circumstances, support a prevalence of such vegetation (Minn. R. 7050.0186, subp. 1a.B.).

47. ABBREVIATIONS AND ACRONYMS

BMP–Best Management Practice
CFR – Code of Federal Regulations
CWA – Clean Water Act
DNR – Department of Natural Resources
DWSMA – Drinking Water Supply Management Area
ERA – Emergency Response Area
ERPs – Enforcement Response Procedures
IDDE – Illicit Discharge Detection and Elimination
MCM – Minimum Control Measure
MEP – Maximum Extent Practicable
Mgd – Million gallons/day
Mg/L – Milligrams/liter
MPCA – Minnesota Pollution Control Agency
MS4 – Municipal Separate Storm Sewer System
NPDES – National Pollutant Discharge Elimination System
SARA – Superfund Amendments and Reauthorization Act of 1986

SDS – State Disposal System
SU – Standard Units
SWMP – Stormwater Management Program
TMDL – Total Maximum Daily Load
TP – Total Phosphorus
TSS – Total Suspended Solids
USEPA – United States Environmental Protection Agency
WLA – Waste Load Allocation

PART 2 STORMWATER MANAGEMENT PROGRAM

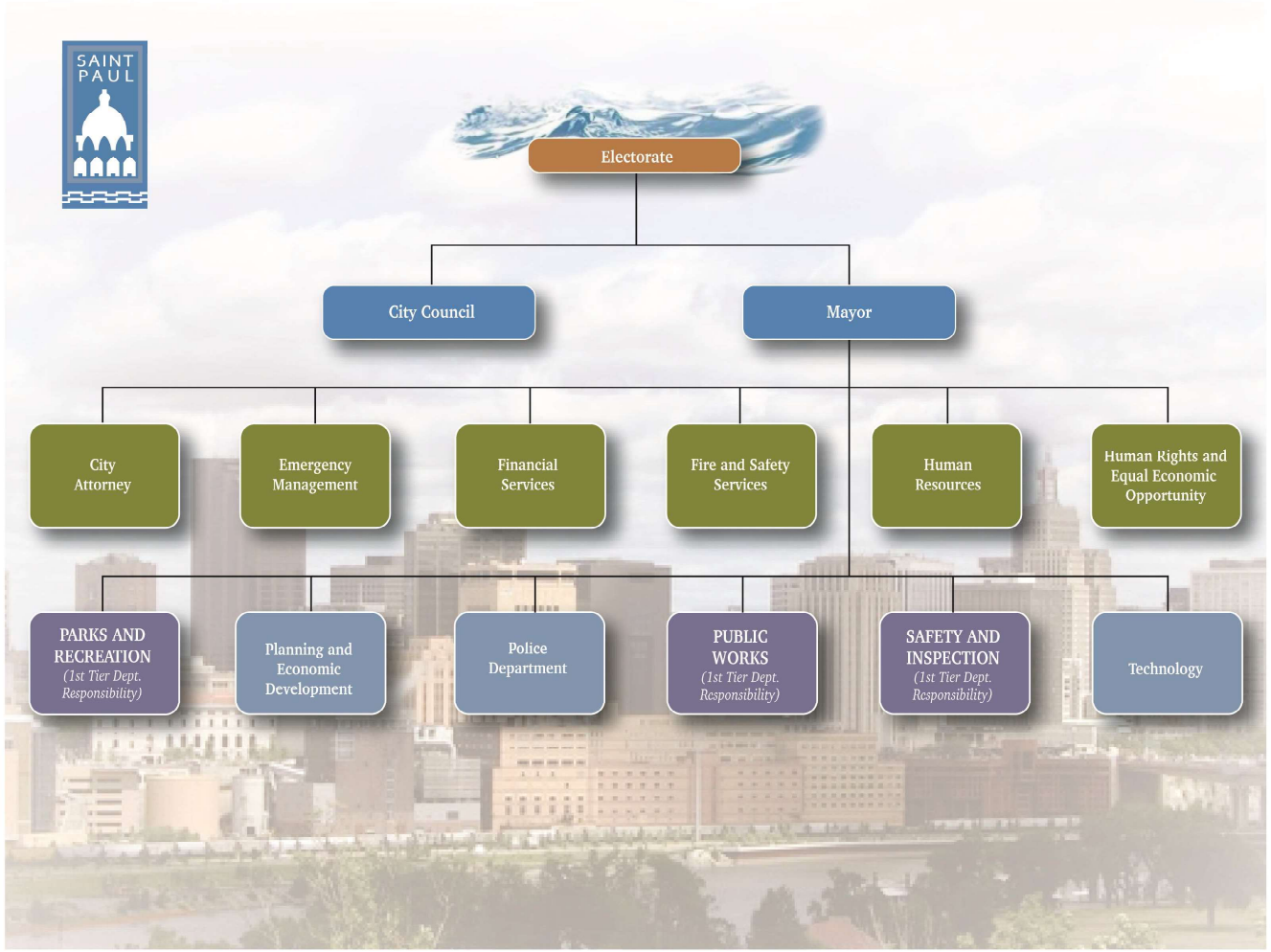
2.1 DETAILS

The following summary of budget items for each minimum control measure is an annual estimate over a 5-year permit cycle. These estimates may change according to specific items of concern that the City of Saint Paul identifies throughout the life of this permit coverage. Any updates or changes to these budget estimates will be a part of the annual report the City of Saint Paul submits to the Minnesota Pollution Control Agency.

2.2 ANNUAL BUDGET

MCM 1	Public Education & Outreach	$100,000
MCM 2	Public Participation & Involvement	$25,000
MCM 3	Illicit Discharge Detection & Elimination	$150,000
MCM 4	Construction Site Erosion & Sediment Control	$100,000
MCM 5	Post Construction Stormwater Management	$70,000
MCM 6	Pollution Prevention & Good Housekeeping	$100,000
MCM 7	Monitoring & Analysis	$200,000
MCM 8	Discharges to Impaired Waters with a TMDL	$30,000

2.3 CITY ORGANIZATIONAL CHART



2.4 MINIMUM CONTROL MEASURE GENERAL REQUIREMENTS

The City of Saint Paul shall manage, operate, and maintain its storm sewer system and areas that the City controls that discharge to its MS4 in a manner to reduce the discharge of pollutants to the MEP. The BMPs selected by the City for the Minimum Control Measures (MCM) shall meet the minimum requirements of the MS4 permit.

Each MCM will include the following:

1. Identification of the sources of pollutants targeted for reduction and the sensitivity of the receiving waters.
2. A description of and the scope of the BMPs for each MCM.
3. Identification of staff and financial resources, including estimated annual budgets, for the permit term dedicated to implementation of the MCM.
4. Measurable goals for each MCM that will be used to determine the success and/or benefits of the MCM.
5. Schedules and a protocol for monitoring, recordkeeping, and reporting.
6. An implementation schedule for new or revised BMPs.
7. A detailed description or copy of any agreement between the City of Saint Paul and partner(s) to implement the MCM describing the rights, roles, and responsibilities of each party to the agreement.

2.5 MINIMUM CONTROL MEASURES

Description
The City of Saint Paul shall manage, operate, and maintain its storm sewer system and areas drained by the storm sewer system within the permittee's jurisdiction in a manner to reduce the discharge of pollutants to the MEP.

MCM 1 Public Education & Outreach
MCM 2 Public Participation & Involvement
MCM 3 Illicit Discharge Detection & Elimination
MCM 4 Construction Site Stormwater Runoff Control
MCM 5 Post-Construction Stormwater Management
MCM 6 Pollution Prevention & Good Housekeeping for Municipal Operations
MCM 7 Stormwater Runoff Monitoring & Analysis
MCM 8 Discharges to Impaired Waters with a TMDL that includes an applicable WLA

2.6 MEASURABLE GOALS

A successful Stormwater Management Program must include both MCM specific goals, as well as long term goals. Demonstrating the City's accomplishment of MCM specific goals verifies compliance with permit requirements and documents that tangible efforts have been made to reduce the impacts of urban stormwater during the permit cycle. The long term goal of reducing the discharge of pollutants to the maximum extent practicable (MEP) will be determined through monitoring, assessment and demonstration of progress towards meeting the City's waste load allocations. The Annual Report will discuss progress toward achieving the goals of the SWMP and shall modify as necessary the priorities, strategies, and monitoring of the SWMP to achieve pollutant reductions to the MEP.

MCM 1: *Public Education & Outreach*

Overview of MCM 1

Description

The objective is to implement a public education program to increase awareness of stormwater impacts to receiving waters and actions that can be taken to reduce those impacts. Everyone's actions can affect the quality of our lakes, wetlands, creeks and the Mississippi River. The City implements public education and outreach programs to reduce the pollutant load to receiving waters, and to promote and facilitate the proper management of stormwater discharges to the storm sewer system. The desired program result is behavior change that will improve water quality.

MCM 1 Specific Measurable Goals

Measurable Goals of each activity are identified in the City's EDUCATION AND OUTREACH WORK PLAN and include increased awareness, increased understanding, acquired skills, and/or desired changes in behavior.

Participating Departments

Public Works
Safety & Inspections
Parks & Recreation

MCM 1 BMP Sheets:

1.1 STORMWATER PUBLIC EDUCATION AND OUTREACH ACTIVITIES

Targeted Pollutants and Potential Sources

Pollutants	***Sources***
Nutrients	Grass clippings and leaves
Pesticides	Fertilizers
Sediment	Soil erosion
Chlorides	Deicing materials
Bacteria	Pet waste
Oil and grease	Pesticides
	Automotive fluids

BMP 1.1: STORMWATER PUBLIC EDUCATION AND OUTREACH ACTIVITIES

Description

The City implements public education and outreach programs in accordance with the *PUBLIC EDUCATION AND OUTREACH WORK PLAN* (See Appendix) to increase the awareness of stormwater pollution impacts on waters of the state to encourage changes in public behavior to reduce impacts to receiving waters.

Work Plan

- Assess ongoing public education activities and identify additional opportunities for coordination. Develop plan for implementation including identification of target audiences, educational goals for each audience and activities to reach goals. This plan will address non-stormwater discharges, proper application of pesticides and fertilizers and proper management of pet waste, leaves and grass clippings. (2018-ongoing)
- Provide monetary support to the Metro WaterShed Partners Clean Water Minnesota Campaign. (2018-ongoing)
- Provide monetary support to the Friends of the Mississippi River Water Quality Education Program. (2018-ongoing)
- Provide monetary support to the Center for Global Environmental Education Adopt-a-Drain Program. (2018-ongoing)
- Provide training for various utility and street construction representatives via the City's Utility Coordination Meeting. (2018-ongoing)
- Provide information on current ordinances related to stormwater management via the City's Site Plan Review Committee. (2018-ongoing)
- Sponsor Ramsey-Washington Metro Watershed District's Waterfest held at Lake Phalen. (2018-ongoing)
- Plan and organize the Spring Parks Clean-up. (2018-ongoing)

MS4 Permit Reference

Requirement: III.C.1
Reporting: IV.D.1

Assessment Process for Annual Reporting

- Quantities and descriptions of educational materials distributed and the number of visits by the public to **stormwater** education websites.
- A summary of the education and outreach activities held including dates of events.
- Any modifications made to the program as a result of the annual evaluation as described in Part III.C.1.b.(5).
- If the **Permittee** relied upon other organizations for some, or all, of its education and outreach program, include a summary of activities conducted by those other organizations.

Participating Departments and Contacts

Public Works: Permit Coordinator
Safety & Inspections: Water Resource Coordinator
Parks & Recreation: Volunteer Coordinator

Overview of MCM 2

Description

The City of Saint Paul will implement a public participation and involvement program in order to solicit public input on the SWMP.

MCM 2 Specific Measurable Goals

Annual meeting and council resolution adopting report. (see BMP Sheet 2.1)

Annual update of stormwater web page. (see BMP Sheet 2.1)

Participating Departments

Public Works
Safety & Inspections

Category 2 BMP Sheets:

2.1 ENCOURAGE & SOLICIT INPUT FROM THE PUBLIC

Targeted Pollutants and Potential Sources

Pollutants	***Sources***
Nutrients	Grass clippings and leaves
Pesticides	Fertilizers
Sediment	Soil erosion
Chlorides	Deicing materials
Bacteria	Pet waste
Oil and grease	Pesticides
	Automotive fluids

BMP 2.1: Encourage & Solicit Input from the Public

Description

Saint Paul citizens are actively engaged in many aspects of the City's governance, being involved through commissions, district councils, volunteer organizations and electronic communications. Other public involvement techniques include workshops, web page accessibility and outreach by elected officials. The objective of this program is to make the SWMP and related documents available to the public and to provide a process for public input in the development and implementation of the SWMP.

Work Plan

- Hold annual public meeting to address the adequacy of the SWMP and Annual Report. Publish a notice of the meeting at least 30 days prior to the meeting. Make a copy of the notice available to the MPCA Commissioner and to governmental entities that have jurisdiction over activities that relate to stormwater management in the drainage area. Publicize notice of annual meeting via the City's website or other social media methods as appropriate.
- Include a summary of oral public input and responses with the Annual Report. Consider the public input and make appropriate adjustments to the SWMP. (ongoing)
- Include a formal council resolution adopting the Annual Report and SWMP. (ongoing)
- Carry out programs that engage volunteers and encourage citizen involvement as described in MCM 1 and provide information on City's website. (ongoing)
- Update websites with most current MS4 documents, including MS4 permit, SWMP, Annual Report, monitoring reports, and other special reports as required by the MS4 permit. (ongoing)

MS4 Permit Reference

Requirements: III.C.2
Reporting: IV.D.2

Assessment Process for Annual Reporting

- A summary of the written public input received on the **SWMP** and the **Permittee**'s response to the input as described in Part III.C.2.
- Any modifications made to the **SWMP** as a result of the input received during the public meeting.
- The date and location of the public meeting as described in Part III.C.2.a.
- A formal resolution from the **Permittee**'s governing body adopting the annual report and the **SWMP** as required in Part III.C.2.e. The resolution must be submitted to the **Agency** no later than August 30th of each year if not available at the time of annual report submittal.

Participating Departments and Contacts

Public Works: Permit Coordinator
Safety & Inspections: Water Resource Coordinator

Overview of MCM 3

Description

The objective of this program is to detect and prevent illicit connections and the improper disposal of wastes into the MS4. To achieve this objective a variety of: training and educational opportunities, investigative measures, and enforcement procedures are employed to prevent these discharges into the MS4 within the scope of this SWMP.

MCM 3 Specific Measurable Goals

Implementation of a non-stormwater discharge ordinance. (See BMP Sheet 3.1)

Continual updating of the storm sewer system map and inventory. (See BMP Sheet 3.3)

Implementation of the Sewer Utility IDDE Field Guide (2018-ongoing)

Public Works ERP for IDDE (2018-ongoing)

Public Works Dry Weather Screening Written Procedures (2018-ongoing)

Execution of a dry weather field screening activities. (See BMP Sheet 3.3 & 6.1.3)

Number and type of training/educational sessions and number of participants. (See BMP Sheets 1.1, 3.1 & 3.2)

Participating Departments

Public Works	Parks & Recreation
Safety & Inspections	Emergency Management
Fire & Safety	Police Department

Category 3 BMP Sheets:

3.1 PROHIBITED DISCHARGE MANAGEMENT PROGRAM

3.2 FIELD SCREENING PROGRAM

3.3 STORM SEWER SYSTEM MAP & INVENTORY

3.4 INDUSTRIAL ACTIVITIES MANAGEMENT PROGRAM

Targeted Pollutants and Potential Sources

Pollutants

Nutrients	Pesticides
Sediment	Chlorides
Bacteria	Oil and grease

Sources

Grass clippings and leaves	Fertilizers
Soil erosion	Deicing materials
Pet waste	Pesticides
Automotive fluids	

BMP 3.1 PROHIBITED DISCHARGE MANAGEMENT PROGRAM

Description

The objective of this program is to effectively prohibit through ordinance or other regulatory mechanism and appropriate enforcement response procedures illicit discharges into the MS4.

Work Plan

- Maintain non-stormwater discharge ordinance. (Chapter 51, Allowable Discharges to the Storm Sewer System, 2013)
- Where non-stormwater discharges from categories listed in Permit Part I.A.2 have been identified by the Permittee as a significant contributor of pollutants, develop, implement and enforce a program to reduce pollutants from the category. (2018-ongoing)
- Develop and administer a program to detect, investigate and eliminate prohibited discharges. (2018-ongoing)
- Respond to reports of prohibited discharges and illicit connections. Investigate, make efforts to determine sources, require corrective action and document. (2018-ongoing)
- If suspicious flows or unusual odors, stains or deposits are observed during routine inspection and operation of storm drain structures, storm tunnels, outfalls, grit chambers and other stormwater conveyance infrastructure, report to Public Works Sewer Utility Division for investigation and documentation. (2018-ongoing)
- Develop and implement a process including a central contact point to receive, track and investigate complaints of prohibited discharges including significant sediment sources through mechanisms such as the website, phone and email. (2018-ongoing)
- Maintain website information about how the public can identify and report spills and about prohibited discharges and how to report violations. (2018-ongoing)
- Maintain/develop Enforcement Response Procedures to address prohibited discharges including temporary or permanent structural pollution control devices. (2018-ongoing)
- Carry out staff training on standard procedures, including notification of the state and federal Duty Officers on spill reporting. (2018-ongoing)

MS4 Permit Reference

Requirements: III.C.3
Reporting: IV.D.3

Assessment Process for Annual Reporting

- The number of spills and **illicit discharge**s that occurred and a description of the response, containment, and cleanup of the spills and **illicit** discharges.
- The number of **illicit discharge** inspections and/or screening activities completed during the reporting year and a description of the response, investigation, and enforcement response procedures utilized to eliminate the **illicit discharge**s.
- Reports of alleged **illicit discharge**s received, including date(s) of the report(s), and a description of the response, investigation, and enforcement response procedures utilized to eliminate the **illicit discharge**(s).

- Sources of **illicit discharge**s, including a description and the responsible party if known.
- Identification of **outfall**s or other areas where **illicit discharge**s have been discovered and a description of the response, investigation, and enforcement response procedures utilized to eliminate the **illicit discharge**(s).
- A description of the education and outreach activities, implemented during the reporting year, to inform municipal employees, the public, and industry about reporting, responding to, and eliminating **illicit discharge**s.

Participating Department and Contacts

Safety and Inspections: Code Enforcement Manager
Senior Building Inspector
Fire Protection Engineer

Public Works: Sewer Utility Engineer

BMP 3.2 STORM SEWER SYSTEM MAP & INVENTORY

Description

The objective of this program is to minimize pollutants in stormwater through the effective use of electronic tools for data storage, retrieval, display and analysis. An electronic inventory and map and electronic inventory is continually being developed and updated to support numerous stormwater management system responsibilities and activities, including operation and maintenance, design, hydrologic and hydraulic modeling, Gopher State One Call locates, capacity, condition and water quality studies, illicit discharge detection and management of spills.

Work Plan

- Incorporate the following into the City's MS4 electronic inventory and map: (2018-ongoing):
    - **Receiving water**s.
    - **Structural stormwater BMP**s (except catch basins and storm drain inlets without sumps), including:
        (a) The size of the subwatershed area draining to the **structural stormwater BMP**.
        (b) The design capacity, estimated design capacity or size of the **structural stormwater BMP**.
    - Land use types.
    - All **pipe**s, ditches and swales, including **stormwater** flow direction. Catch basin lead **pipe**s must be added, when applicable.
    - **Permittee**-owned facilities.
    - **Outfalls**, including:
        1) **Outfall** identification number.
        2) Geographic coordinate of **outfall** location.
        3) Size of **outfall pipe**.
        4) Size of the subwatershed area draining to each **outfall**.
        5) Percent of **impervious surface**s in the subwatershed area draining to each **outfall**.
        6) The number and type of **structural stormwater BMP**s in the subwatershed area that drains to each **outfall**.
    - **Stormwater** inflows from other **MS4**s.

MS4 Permit Reference

Requirements: III.C.3
Reporting: IV.D.3

Assessment Process for Annual Reporting

- A description and the date of the most recent update to the electronic storm sewer system inventory and map completed during the reporting year.

MCM 3: Illicit Discharge Detection & Elimination

Participating Department and Contact

Public Works: Sewer Utility Engineer
Parks & Recreation: Design Manager

BMP 3.3 DRY WEATHER FIELD SCREENING PROGRAM

Description

The objective of this program is to continue to develop, and implement, a dry weather field screening program to detect and eliminate non-stormwater discharges, including illegal dumping, to the system. The City shall inspect each outfall at least once over the five-year term of the current permit for evidence of illicit discharges.

Work Plan

- Develop and implement a program to inspect and screen 20% of outfalls for evidence of illicit discharges in dry weather flow. Screening to include visual observations, field testing and laboratory testing if necessary. (2018 - annually)
- Implement a program to prioritize the investigatation of those areas showing evidence of illicit discharges, during the annual outfall inspection program. (2018-ongoing)
- Implement the Sewer Utility IDDE Field Guide (2018-ongoing)
- Detect, investigate, and eliminate discharges of sanitary sewage from the municipal sanitary sewer system, into the MS4. (2018-ongoing)

MS4 Permit Reference

Requirements: III.C.3.d
Reporting: IV.D.3

Assessment Process for Annual Reporting

- The number of **illicit discharge** inspections and/or screening activities completed during the reporting year and a description of the response, investigation, and enforcement response procedures utilized to eliminate the **illicit discharge**s.
- Identification of **outfall**s or other areas where **illicit discharge**s have been discovered and a description of the response, investigation, and enforcement response procedures utilized to eliminate the **illicit discharge**(s).
- A description of the education and outreach activities, implemented during the reporting year, to inform municipal employees, the public, and industry about reporting, responding to, and eliminating **illicit discharge**s.

Participating Department and Contact

Public Works: Permit Coordinator
Sewer Maintenance Engineer

BMP 3.4 INDUSTRIAL ACTIVITIES MANAGEMENT PROGRAM

Description

The objective of this program is to minimize the discharge of pollutants from industrial activities by administering and enforcing ordinances, exercising municipal authority over activities with high potential for stormwater pollution, and providing information to assist the MPCA in carrying out its industrial permitting program.

Work Plan

- Develop and maintain an inventory of industrial, commerical, or other institutional facilities that discharge non-stormwater flows to the MS4. The inventory will include industrial facilities covered under the MPCA's Industrial Stormwater (ISW) Permit Program. Where available, information for 25 percent of listed ISW permitted facilities will be evaluated annually to supplement MPCA data with required inventory fields. (2019-ongoing)
- Report to the MPCA discharge incidents from discharges subject to the MPCA's NPDES General Industrial Stormwater Permit program or from another permit program. Encourage the discharger to obtain a permit from the MPCA, if one is not already held. (ongoing)
- Develop and implement procedures addressing non-NPDES permitted facilities that City determines to be contributing a substantial pollutant load to the MS4.
    - 2020 Develop criteria for capturing applicable properties and create list of industrial facilities with non-NPDES permitted discharges, including municipal landfills, hazardous waste treatment, disposal and recovery facilities, and section 313 of Title III SARA facilities.
    - 2021 Develop and apply criteria for substantial pollutant loading and stormwater hotspots. Establish priorities.
    - 2022-2023 Develop written procedures to for non-NPDES permitted facilities to include inspection, monitoring, and implementation of control measures for priorty facilities.
- Maintain inventory of stormwater hotspots through use of available information. The MS4 Permit defines "stormwater hotspot" as any land use or activity that may generate a higher concentration of hydrocarbons, trace metals, or toxic pollutants than are found in typical stormwater runoff. (2022 – ongoing)

MS4 Permit Reference

V.C3f

Assessment Process for Annual Reporting

- Number of water and land pollution complaints.

MCM 3: Illicit Discharge Detection & Elimination

- Number of discharge incidents reported to MPCA Industrial Permit Program.
- Industrial facilities inventoried.
- Stormwater hotspots inventoried.
- Number of discharges eliminated from industrial facilities.

Participating Department and Contact

Safety & Inspections: Water Resource Coordinator

MCM 4: Construction Site Erosion & Sediment Control

Overview

Description

The stormwater management objective of this program is to prevent or minimize discharge of pollutants from construction activities that result in a land disturbance of one acre or greater to the MS4 system.

MCM 4 Specific Measurable Goals

Develop and maintain standardized written procedures. (See BMP Sheet 4.1)

Consistent and uniform utilization of standardized forms. (See BMP Sheet 4.1)

Maintain proficiency of field inspectors in construction site erosion and sediment control. (See BMP Sheet 4.1, 4.2)

Maintain records including SWPPP, inspection reports and maintenance reports for City projects. (See BMP Sheet 4.2)

Participating Departments

Public Works
Safety & Inspections
Parks & Recreation

Category 4 BMP Sheets:

4.1 DEVELOPMENT & REDEVELOPMENT CONTROL PROGRAM
4.2 MUNICIPAL CONTROL PROGRAM

Targeted Pollutants and Potential Sources

Targeted Pollutants

Sediment	Solid and sanitary wastes
Phosphorus	Nitrogen
Pesticides	Oil and grease
Concrete truck washout	Construction chemicals
Construction debris	

Potential Sources

Construction activity
Soil erosion
Fertilizers

BMP 4.1: DEVELOPMENT & REDEVELOPMENT CONTROL PROGRAM

Description

The objective of this program is to minimize the discharge of pollutants from construction sites disturbing one acre or more by requiring erosion prevention and sediment control measures. Chapter 52 of the Saint Paul Code of Ordinances requires projects disturbing one acre or more to provide for erosion and sediment control during construction. Sites one or more acres in size are also required to obtain NPDES General Construction Permits from the Minnesota Pollution Control Agency, the Capitol Region Watershed District and the Ramsey-Washington Metro Watershed District.

This program encompasses a variety of individuals responsible for water quality concerns from construction activities. These individuals include designers of erosion control plans; staff responsible for plan review; and, field inspectors with municipal authority over contractors.

Workplan

- Provide site plan review to evaluate erosion and sediment control plans for projects subject to Chapter 52, including demolition, construction and other land disturbances. (ongoing)
- Require site plan approval before commencement of any grading, filling, excavating, storing, stockpiling or disposing of earth materials or performing other land disturbing or land filling activity. (ongoing)
- Develop and maintain standardized written procedures for site plan review to evaluate the adequacy of erosion and sediment control for projects disturbing one acre or more. (2013)
- Continue to implement written procedures for inspecting and enforcing erosion & sediment control on sites. Identify criteria for prioritizing inspection of construction sites. (ongoing)
- Develop and implement a process to receive, track and investigate complaints of construction related erosion and sedimentation issues through mechanisms such as the website, phone and email. (2013 - ongoing)
- Maintain University of Minnesota certification for responsible field and plan review staff. (ongoing)
- Provide information about regulatory requirements to Departments/Divisions carrying out permitting and inspection responsibilities. (ongoing)
- Provide information on external training opportunities to relevant parties as available and aware. (ongoing)

- Provide in-house training for field inspectors and plan reviewers/approvers. Topics to include erosion and sediment control inspections and enforcement, documentation and BMP selection. Trainer will be City staff or outside trainer as appropriate. (ongoing)
- Review, establish and enforce ordinance requirements regarding erosion and sediment control BMPs and to ensure control of construction wastes, stabilization of stockpiles, and proper treatment of dewatering discharges. (2013 - ongoing)

MS4 Permit Reference

V.C4

Assessment Process for Annual Reporting

- Report on number of site plans reviewed and approved.
- Report on number of site erosion and sediment control inspections recorded.
- Report on development and implementation of written procedures for site plan review and erosion and sediment control inspections.
- Report on number of non-compliance incidents that were identified and addressed by municipal inspectors.
- Report on development of citizen complaint process and number of citizen complaints received and addressed.
- Report on number of staff trained related to construction site erosion and sediment control.

Participating Departments and Contacts

Safety and Inspections:	Water Resource Coordinator
	Senior Building Inspector
	Zoning Specialist

BMP 4.2 MUNICPAL CONTROL PROGRAM

Description

The objective of this program is to minimize the discharge of pollutants from construction sites disturbing 1 acre or more carried out by the City by requiring erosion and sediment control measures. Sites one or more acres in size are required to get NPDES General Construction Permits from the Minnesota Pollution Control Agency, the Capitol Region Watershed District and the Ramsey-Washington Metro Watershed District.

This program encompasses a variety of individuals responsible for water quality concerns from construction activities. These individuals include designers of erosion control plans, staff responsible for plan review and field inspectors.

Workplan

- Maintain University of Minnesota certification for responsible field and design staff. (2018-ongoing)
- Provided in-house training for field inspectors. (2018-ongoing)
- Identify a person who will oversee the installation, inspection and maintenance of practices before and during construction. (2018-ongoing)
- Maintain/develop Enforcement Response Procedures to address erosion and sediment control issues on Municipal Projects. (2018-ongoing)
- For projects where City is Owner, maintain records including SWPPP, inspection reports and maintenance reports. (2018-ongoing)
- Provide information about regulatory requirements to Departments/Divisions carrying out projects. (2018-ongoing)
- Provide information on external training opportunities to relevant parties as available and aware. (2018-ongoing)
- Develop and maintain checklists and communication tools for public projects. (2018-ongoing)
- Develop and implement a process to receive, track and investigate complaints of construction related erosion and sedimentation issues through mechanisms such as the website, phone and email. (2018-ongoing)

MS4 Permit Reference

Requirements: III.C.4
Reporting: IV.D.4

Assessment Process for Annual Reporting

- The number of construction stormwater complaints received and the responses to those complaints.
- The number of site inspections completed and a summary of inspection findings.
- The number of violations of the Permitee regulatory mechanism(s) for construction site stormwater runoff control and the types of enforcement response procedures utilized.
- The title of construction stormwater training attended by Permitee staff.

Participating Department and Contact

Safety and Inspections: Water Resource Coordinator
Senior Building Inspector
Public Works: Project Managers
Project Inspectors
Parks and Recreation: Project Managers

Overview

Description

The stormwater management objective of this program is to reduce the discharge of pollutants and stormwater runoff from public and private development and redevelopment projects, as compared to conditions prior to project construction. Redevelopment of existing sites presents the opportunity to lessen the impacts of urbanization on the lakes, creeks and Mississippi River in Saint Paul, since most present land uses were created prior to regulation under the Clean Water Act.

MCM 5 Specific Measurable Goals

Document work practices (See BMP Sheets 5.1, 5.2, 5.3)

Participating Departments

Public Works
Safety & Inspections
Parks & Recreation

Category 5 BMP Sheets:

5.1 DEVELOPMENT & REDEVELOPMENT MITIGATION PROGRAM
5.2 COMPLIANCE PROGRAM FOR PRIVATE SITE CONTROLS
5.3 MUNICIPAL MITIGATION PROGRAM

Targeted Pollutants and Potential Sources

Targeted Pollutants

Nutrients
Sediment
Bacteria

Potential Sources

Soil erosion
Fertilizers
BMP maintenance

BMP 5.1: DEVELOPMENT & REDEVELOPMENT MITIGATION PROGRAM

Description

The objective of this program is to minimize the post-construction discharge of pollutants and stormwater runoff volume from construction projects disturbing one acre or more. Chapter 52 of the Saint Paul Code of Ordinances requires projects disturbing one acre or more to provide post-construction stormwater management. Sites one or more acres in size are also required to obtain NPDES General Construction Permits from the Minnesota Pollution Control Agency, the Capitol Region Watershed District and the Ramsey-Washington Metro Watershed District.

Projects are reviewed through the City's site plan review process, which is facilitated by the Department of Safety and Inspections. The Site Plan Review Committee is made up of staff from various departments including the PW Sewer Utility, Saint Paul Regional Water Services, PW Traffic Division, Zoning and Fire & Safety. Building permits are not issued until site plan review approval is formally attained.

Workplan

- As part of Site Plan Review, provide stormwater-related requirements to applicants. (ongoing)
- Review and administer ordinances that regulate construction projects disturbing one acre or more. (ongoing)
- Implement City Stormwater Design Standards Manual (2019-ongoing)
- Review and approve land-disturbing projects for compliance with post-construction stormwater management requirements including ongoing maintenance responsibilities, storm sewer capacity and connection issues. (ongoing)
- Ensure that the hydraulic and pollutant loading capacity of downstream structural stormwater management devices are not negatively affected by increased pollutant or runoff loadings. (ongoing)
- Require that, after construction, applicant certifies that the stormwater management facilities have been built according to approved plans and as-built plans have been submitted. (ongoing)
- Implement recommendations from Runoff Volume Reduction Plan. (2015-ongoing)

MS4 Permit Reference

V.C5

Assessment Process for Annual Reporting

- Narrative on number of projects reviewed, number of projects approved, number and type of structural BMPs constructed or installed.

Participating Departments and Contacts

Safety and Inspections: Zoning Specialist

MCM 5: Post-Construction Stormwater Management

BMP 5.2 COMPLIANCE PROGRAM for PRIVATE SITE CONTROLS

Description

The objective of this program is to implement a program for maintenance, inspection, record keeping and reporting of private stormwater devices constructed in accordance with the City's requirements.

Workplan

- Require certification by Professional Engineer that stormwater devices have been built according to approved plans. (ongoing)
- Develop a procedure to ensure maintenance, inspection, record keeping and reporting of privately owned controls. (2013)
- Develop procedure to determine if devices are not functioning and how to issue and administer non-compliance orders. (2014)
- Develop and maintain a list of privately owned BMPs for which the City established agreements for long term operation. (2014 - ongoing)
- Communicate on City's website about training opportunities provided by other entities, such as UM extension and watershed districts, for BMP maintenance procedures. (ongoing)

MS4 Permit Reference

V.C5

Assessment Process for Annual Reporting

- Narrative on development of procedures.
- Number of new listings entered for privately owned BMPs.
- Once procedures are implemented, identify percent compliance with submittal of compliance reporting documents.

Participating Department and Contact

Safety and Inspections: Water Resource Coordinator
Public Works Sewer Utility: Permit Coordinator

BMP 5.3 MUNICIPAL MITIGATION PROGRAM

Description

The stormwater management objective of this practice is to reduce the discharge of pollutants through the proper planning, design, and construction management of projects carried out by the City.

Workplan

- Review plans and specifications for impact on surface waters and on the stormwater system. (ongoing)
- Inspect stormwater management facilities during construction and periodically to determine that the stormwater management devices are functioning properly. (ongoing)
- For Public Works Projects, submit record drawings of additions, modifications and removals to stormwater management facilities to the PW Sewer Utility for update of the GIS database. (ongoing)
- For Parks and Recreation Projects, submit record drawings of additions, modifications and removals to stormwater management facilities to the Parks Design Section for update of databases. (ongoing)
- Evaluate potential of street reconstruction/construction projects for reduction of runoff volume, reduction of water quality impacts on receiving waters and retrofitting existing BMPs to provide additional pollutant removal from stormwater discharges. (ongoing)
- Ensure that the hydraulic and pollutant loading capacity of downstream structural stormwater management devices are not negatively impacted by increased pollutant or runoff loadings. (ongoing)
- Establish pollutant and volume reduction BMP design requirements for storm sewer addition or modification projects, consistent with reliable and efficient conveyance of stormwater. (2013)
- Develop and maintain checklists and other communication tools for public projects regarding stormwater requirements and BMP design. (2013 – ongoing)
- Implement City Stormwater Design Standards Manual (2019-ongoing)

MS4 Permit Reference

Requirements: III.C.5
Reporting: IV.D.5

Assessment Process for Annual Reporting

- Inventory of new Stormwater Management Practices installed with City capital improvement projects.

Participating Department and Contact

Public Works Sewer Utility Division: Sewer Utility Engineer
Public Works Street Construction: Street Engineering & Construction Engineer
Parks & Recreation: Design Manager

Overview of MCM 6

Description

The objective of this program is to minimize the discharge of pollutants through the proper operation and maintenance of the storm sewer system, public streets, municipal parking lots and municipal equipment yards.

MCM 6 Specific Measurable Goals

Document work practices. (See BMP Sheets 6.1, 6.7, and 6.8)

Inspect and evaluate targeted segments of the storm sewer and tunnel system based on condition. (See BMP Sheet 6.1)

Inspect, evaluate and maintain outfalls on a 5-year schedule where 20% of the outfalls are inspected each year. (See BMP Sheet 6.3)

Annually inspect and clean as necessary stormwater ponds and structural pollution control devices (See BMP Sheet 6.4)

Train staff in good housekeeping and pollution prevention.

Participating Departments

Public Works

Safety and Inspections

Parks & Recreation

Category 6 BMP Sheets:

6.1 STORM SEWER SYSTEM OPERATION & MAINTENANCE

6.2 CATCH BASIN/MANHOLE OPERATION & MAINTENANCE

6.3 OUTFALL OPERATION & MAINTENANCE

6.4 STORMWATER POND/STRUCTURAL POLLUTION CONTROL DEVICE OPERATION & MAINTENANCE

6.5 HANDLING & DISPOSAL of REMOVED MATERIALS

6.6 STREET SWEEPING PROGRAM

6.7 ROADWAY DEICING MATERIALS MANAGEMENT

6.8 CITY PARKING LOT & EQUIPMENT YARD MANAGEMENT

6.9 FIELD OPERATIONS MANAGEMENT

6.10 STORMWATER RUNOFF VOLUME REDUCTION PLAN

Targeted Pollutants and Potential Sources

Pollutants
Nutrients
Pesticides
Sediment
Chlorides
Bacteria
Oil and grease

Sources
Grass clippings and leaves
Fertilizers
Soil erosion
Deicing materials
Pet waste
Pesticides
Automotive fluids

BMP 6.1: STORM SEWER SYSTEM OPERATION & MAINTENANCE

Description

The objective of this program is to minimize the discharge of pollutants through proper and cost effective operation and maintenance of the City's storm sewer system. General operations and maintenance efforts include inspections, cleaning, repairs, rehabilitation and reconstruction.

Workplan

- Inspect, maintain and enhance condition and effectiveness of existing infrastructure. (See BMP Sheets 6.2 thru 6.4 for specific infrastructure components.) (ongoing)
- Continue assessment program to prioritize repairs and rehabilitation needs. Repair and rehabilitate storm sewers and tunnels based on prioritizaton. (ongoing)
- Schedule and perform major repairs, rehabilitation or reconstruction considering budget, staff availability and other work. For major rehabilitation or reconstruction projects, look for opportunities to include structural BMPs to improve water quality. (ongoing)
- Develop preventative maintenance plans that establishes cost effective protocols for maintenance of the MS4 system and structural pollution control devices. (ongoing)
- Submit as-built drawings of additions, modifications and removals of stormwater management facilities to Public Works Sewer Utility for use in update of sewer database. (ongoing)
- Utilize the Public Works 24-hour assistance line for reporting maintenance concerns that need to be inspected and addressed by PW Operations staff. Track and follow up on complaints/notices regarding storm sewers. (ongoing)
- Prevent erosion and sedimentation from maintenance, repair and rehabilitation projects through implementation of erosion and sediment control measures. (ongoing)
- During MS4 system cleaning operations, apply sediment control measures to prevent removed material from re-entering the storm sewer system and properly dispose of removed materials. (ongoing)
- Maintain and develop as necessary standard operating procedures for sewer maintenance staff to prevent pollution in their daily activities. (2013 - ongoing)
- Respond to emergencies. (ongoing)
- Limit infiltration of seepage, such as from sanitary sewer system, pipe bedding or groundwater. (ongoing)
- Train staff on best current practices, including construction site erosion control. (ongoing)

MS4 Permit Reference

Requirements: III.C.6.f
Reporting: IV.D.6.d

Assessment Process for Annual Reporting

- Report on storm sewer and tunnel repair and rehabilitation projects.
- Report on miles of storm sewers and tunnels assessed, miles of storm sewers and tunnels cleaned and amount of material removed.
- Report on development of standard operating procedures.
- Narrative of training activities including number of staff trained and types of training conducted.

Participating Department and Contact

Public Works Sewer Utility Division: Sewer Utility Engineer

BMP 6.2: CATCH BASIN/MANHOLE OPERATION & MAINTENANCE

Description

The objective of this program is to minimize the discharge of pollutants through the proper operation and maintenance of the MS4 system's catch basins and manholes. Catch basins are structures located along the city's street system that provide entrance of stormwater runoff into the storm sewer system.

Workplan

- Complete Catch Basin Sump Management Plan (submitted see Appendix).
- Manage catch basins and manholes with sumps in accordance with Catch Basin Sump Management Plan (ongoing).
- Track and follow up on complaints and notices of plugged or damaged catch basins and manholes (ongoing).
- Inspect catch basin structures, as part of the sewer assessment program, to ensure they are operational, so as not to restrict flow and cause localized flood damage. (ongoing)
- Prioritize observed or reported plugged or damaged catch basins for repair and/or cleaning. (ongoing)
- Inspect manhole structures, as part of the sewer assessment program, to ensure they are operational and safe for access. Manhole inspection includes checking pipe inverts, benches, steps, walls, castings and rings. (ongoing)
- When cleaning, capture and properly dispose of removed materials. (ongoing).

MS4 Permit Reference

Requirements: III.C.6.f
Reporting: IV.D.6.d

Assessment Process for Annual Reporting

- Report on number of catch basins and manholes cleaned and/or repaired and quantity of material removed.
- Report on implementation of the catch basin sump management program.

Participating Department and Contact

Public Works Sewer Utility Division: Sewer Utility Engineer

BMP 6.3: OUTFALL OPERATION & MAINTENANCE

Description

The objective of this program is to minimize the discharge of pollutants through the proper operation and maintenance of outfalls from the MS4 system to receiving water bodies.

Workplan

- Track and follow up on complaints of damaged outfall structures and/or erosion surrounding outfall structures (ongoing).
- Operate outfalls in a condition that stabilizes shorelines, streambanks and steep slopes from damaging erosion. (ongoing)
- Inspect outfalls on a 5-year schedule where 20% of the outfalls are inspected each year. Evaluate the general condition of structures, determine if any significant erosion has occurred, make minor repairs and inspect for sediment deltas. (ongoing)
- If major structural repair or maintenance work is identified, prioritize and schedule based on impact of condition to receiving waterbody, available personnel, budget funding, and coordination with other essential operations. (ongoing)
- If suspicious flows or unusual odors, stains or deposits are observed report to Sewer Dispatch for further investigation and resolution (see BMP Sheet 3.3). (ongoing)

MS4 Permit Reference

Requirements: III.C.6.e.2
Reporting: IV.D.6.c

Assessment Process for Annual Reporting

- A brief description of all **outfall** inspection findings including any improvement projects completed at the **outfall** locations.

Participating Department and Contact

Public Works Sewer Utility Division: Sewer Utility Engineer

BMP 6.4: STORMWATER POND/STRUCTURAL POLLUTION CONTROL DEVICE OPERATION & MAINTENANCE

Description

The objective of this program is to minimize the discharge of pollutants through the proper operation and maintenance of stormwater ponds and water quality devices. Stormwater ponds, filtration/infiltration areas, and structural controls are water quality devices that manage stormwater runoff. General operations and maintenance efforts include assessment and maintenance of the functionality of stormwater ponds and water quality devices.

Workplan

- Track and follow up on complaints/notices regarding stormwater ponds and water quality devices. (ongoing)
- Inspect and maintain as necessary to preserve the integrity and intended function of the facility as per maintenance agreements with the watershed districts in accordance with the following document where appropriate: Gulliver, J.S., A. J. Erickson, and P. T. Weiss (editors). 2010. "Stormwater Treatment: Assessment and Maintenance." University of Minnesota, St. Anthony Falls Laboratory. Minneapolis, MN. http://stormwaterbook.safl.umn.edu/ (2013 – ongoing)
- Manage City's stockpile, storage and material handling areas to prevent pollutant discharges or the potential for pollutant discharges. Inspect weekly when material is actively handled and monthly when not actively handled. (ongoing)
- When cleaning, capture and properly dispose of removed materials. Manage contaminated sediments in accordance with "Managing of Dredged Materials In the State of Minnesota", MPCA, June 2009. (ongoing).
- Maintain and develop as necessary standard operating procedures.
- Complete Stage 1 pond inventory. (submitted February 2012 and found in Appendix)
- Inspect stormwater ponds on a 5-year schedule where 20% of the ponds are inspected each year.
- Inspect and maintain outlets for debris, litter and heavy vegetation, and protect against erosion. (ongoing)
- Inspect and maintain trash guards to prevent clogging of the downstream storm piping. (ongoing)
- Inspect inlets for erosion and sediment deposits, install energy dissipation if needed. (ongoing)
- Mow those areas designed for mowing. For ponds, a vegetated buffer adjacent to the normal water level is typically maintained where feasible, to provide filtration of runoff and wildlife habitat. (ongoing)

MS4 Permit Reference

Requirements: III.C.6.f
Reporting: IV.D.6.d

Assessment Process for Annual Reporting

- Report on number of stormwater ponds and structural pollution control devices inspected, assessed and cleaned, by category. Include date of inspection, date and results of assessment, antecedent weather conditions and nature of repairs.

Participating Department and Contact

Public Work Sewer Utility Division: Sewer Utility Engineer

BMP 6.5: HANDLING & DISPOSAL of REMOVED MATERIALS

Description

The objective of this stormwater management program is to minimize the discharge of pollutants through proper handling of stored and stockpiled materials such as those removed from the storm sewer system.

Workplan

- During MS4 system cleaning, storage and disposal operations, apply sediment control measures to prevent removed material from re-entering the storm sewer system. (ongoing)
- Manage City's stockpile, storage and material handling areas to prevent pollutant discharges or the potential for pollutant discharges. Inspect weekly when material is actively handled and monthly when not actively handled. (ongoing)

MS4 Permit Reference

Requirements: III.C.6.f
Reporting: IV.D.6.e

Assessment Process for Annual Reporting

- By categories shown in BMP Sheet 6.1-4, report estimated annual total mass (pounds) removed, characterization and destination(s) of material removed.

Participating Department and Contact

Public Works Sewer Utility Division: Sewer Utility Engineer

BMP 6.6 STREET SWEEPING PROGRAM

Description

The objective of this program is to minimize the discharge of pollutants to the storm sewer system and receiving waterbodies by removing leaf litter, sediment and debris from streets and gutters before the materials and the pollutants attached to them can be washed into storm drain inlets. The other objectives of the street sweeping program are to protect public health and safety, and to improve cleanliness and livability. The program is divided into several categories, that vary in frequency and work practices, to systematically address the approximately 744 miles of residential streets, 127 miles of arterial streets and the city's approximately 330 miles of alleys. They can be described by two general programs: Spring and Fall Citywide comprehensive sweeping programs, and general sweeping activities outside of those two major activities.

Workplan

- Operate and maintain public rights of way to minimize discharge of pollutants. (ongoing)
- Maintain roadways in a manner that works to prevent wash-off of pollutants during rainfall and snowmelt. (ongoing)
- Develop and maintain written operating procedures for practices specific to pollutant control and reduction. (2013 – ongoing)
- Carry out sweeping programs. (ongoing)
    - Class I-A & B Downtown or Loop streets
    - Class II - Outlying Commercial and Arterial Streets
    - Class III - Residential Streets
    - Class IV - Oiled and Paved Alleys
    - Class V and VI - Unimproved Streets and Alleys
- Use sampling and literature values to estimate the amount of total sediment (TSS) and total phosphorus (TP) per mass of debris being removed. (ongoing)
- Properly dispose of removed materials. (ongoing).
- Manage City's stockpile, storage and material handling areas to prevent pollutant discharges or the potential for pollutant discharges. Inspect weekly when material is actively handled and monthly when not actively handled. (ongoing)

MS4 Permit Reference

Requirements: III.C.6.g
Reporting: IV.D.6.e.5

Assessment Process for Annual Reporting

- Date of Spring and Fall residential street sweeping activities
- Approximate amount of material removed by street sweeping activities

Participating Departments and Contacts

Public Works Street Maintenance Division: Street Maintenance Engineer

BMP 6.7: ROADWAY DEICING MATERIALS MANAGEMENT

Description

The objective of this program is to minimize the runoff of deicing materials applied to roadways under its jurisdiction, consistent with public safety and to properly store deicing materials.

Workplan

- Operate and maintain public rights of way to minimize discharge of pollutants, while addressing public safety and balancing environmental impacts and cost. (ongoing)
- Use weather forecasting information including pavement temperatures to make appropriate deicing material application decisions. (ongoing)
- Use appropriate deicing materials and application rates for weather conditions, vehicle and pedestrian usage. (ongoing)
- Use smart spreading concepts and procedures as available and appropriate for conditions. (ongoing)
- Keep salt and sand stockpiles covered and maintain good housekeeping at loading sites. (ongoing)
- Conduct training for operators, foremen and supervisors. (ongoing)
- Continue to seek practices and programmatic changes that will reduce salt loads to surface waters without compromising safety. (ongoing)
- Calibrate spreaders. (ongoing)
- Study cost and benefit of retrofitting trucks with temperature sensing or other equipment. (ongoing)
- Develop manual of practices for various conditions, applications, and handling of deicing materials. (2013 – ongoing)

MS4 Permit Reference

Requirements: III.C.6.g
Reporting: IV.D.6.e.6

Assessment Process for Annual Reporting

- Report on quantity of deicing materials, chemicals, and sand applied.
- Report location and description of deicing materials storage facilities.
- Report number of staff attending training on use of salt.

Participating Departments and Contacts

Public Works Street Maintenance Division: Street Maintenance Engineer

BMP 6.8: CITY PARKING LOT & EQUIPMENT YARD MANAGEMENT

Description

The objective of these activities is to minimize the discharge of pollutants by utilizing proper fleet and building maintenance practices, and proper operation and maintenance of parking lots and equipment and storage yards. Program categories include the following:

a) Saint Paul Parks and Recreation

- Parks Facilites, Recreation Centers
- Maintenance Facility at 1100 Hamline Avenue

b) Public Works

- Maintenance Facility at 891 Dale Street (includes Street Maintenance, Traffic Operations and Municipal Equipment)
- Maintenance Facility at 419 Burgess (Sewer Maintenance)
- Asphalt Plant at 456 Burgess
- Storage Yard at 380 Como Avenue
- Storage Yard at 310 Victoria Street

Workplan

- Develop and maintain Stormwater Pollution Prevention Plans for Maintenance and Storagequipment yards. (2014 and ongoing)
- Operate and maintain municipal property to minimize discharge of pollutants. (ongoing)
- Train staff on proper operation and maintenance activities to minimize discharge of pollutants and non-stormwater discharges from City maintenance facilities. (ongoing)
- For equipment washing areas, incorporate controls such as inlet protection and perimeter controls, or runoff collection systems, to prevent material from entering the MS4 system. Inspect controls weekly when wash areas are actively used. (ongoing)
- Manage City's stockpile, storage and material handling areas to prevent pollutant discharges or the potential for pollutant discharges. Inspect weekly when material is actively handled and monthly when not actively handled. (ongoing)

MS4 Permit Reference

Requirements: III.C.6.a-b
Reporting: IV.D.6.a

Assessment Process for Annual Reporting

- Narrative of training activities
- Report on development of standard operating procedure

Participating Departments and Contacts

Public Works Street Maintenance Division: Street Maintenance Engineer
Public Works Municipal Equipment Division: Manager
Public Works Sewer Utility: Sewer Utility Engineer
Parks & Recreation: Operations Manager

BMP 6.9: FIELD OPERATIONS MANAGEMENT

Description

The objective of this program is to minimize the discharge of pollutants from the operation and maintenance of City right-of-way and park property.

Workplan

- Train staff on good housekeeping for field operations. (ongoing)
- Annually review Water Resource Protection Policy with Public Works and Parks field operation staff. (ongoing)
- Develop and maintain standard operating procedures for practices including vegetation management, proper lawn maintenance and fertilizer and pesticide use, equipment cleaning and vehicle maintenance. (2013-ongoing)
- Manage City's stockpile, storage and material handling areas to prevent pollutant discharges or the potential for pollutant discharges. Inspect weekly when material is actively handled and monthly when not actively handled. (ongoing)

MS4 Permit Reference

Requirements: III.C.6.a-b
Reporting: IV.D.6.a

Assessment Process for Annual Reporting

- Narrative of training activities
- Report on development of standard operating procedures

Participating Departments and Contacts

Public Works Street Maintenance Division: Street Maintenance Engineer
Parks and Recreations: Operations Manager

BMP 6.10 STORMWATER RUNOFF VOLUME REDUCTION PLAN

Description

The objective of this program is to conduct a study of how stormwater volume reduction practices will best fit into Saint Paul's overall goals of stormwater management for projects that disturb one acre or more. Volume reduction practices include infiltration, bio-infiltration, stormwater reuse, evapotranspiration, minimizing and disconnecting impervious surfaces.

Workplan

By July 2020, resubmit to MPCA a plan for stormwater runoff volume reduction goals associated with post-construction stormwater management. The plan will be developed to meet permit requirements and to assist the City in meeting the rules of local watershed districts. Coordination with local watershed districts will be part of the planning process. The plan will be implemented upon approval from the MPCA. The plan shall include a framework for determination of the feasibility of on-site stormwater volume reduction based on site characterics and BMP design features including:

- Efforts to minimize and disconnect impervious cover
- Managing stormwater quantity and quality as close to the source as possible
- Site soils
- Depth of groundwater table
- Sources of pollution
- Available space for BMPs
- Depth of bedrock
- Karst features
- Site soil contamination
- Installation, operation and maintenance costs

Workplan will address alternative compliance measures for projects that can not meet the volume reduction requirements on site including consideration of a stormwater volume reduction crediting system. Plan will also address tools for assessment process for annual reporting including: number and types of volume reduction practices implemented, number and types of alternative compliance projects and volume of runoff capture/reduced annually.

MS4 Permit Reference

Requirments: III.C.6.i
Reporting: IV.D.6.f

Assessment Process for Annual Reporting

- Narrative of progress towards plan development and implementation.

Participating Department and Contact

Public Works Sewer Utility: Permit Coordinator
Safety & Inspections: Water Resource Coordinator

Overview

Description

The objective of this program is to quantify stormwater volumes and pollutant loads from the MS4 and to provide information on the effectiveness of the SWMP. Sampling is performed throughout the year at various types of sites. Specifically the purpose of the analysis is to: characterize pollutant event mean concentrations, estimate pollutant load and volume to water bodies, estimate effectiveness of devices and practices and calibrate and verify stormwater models.

MCM 7 Specific Measurable Goals

Completion of each annual monitoring and analysis program.

Participating Departments

Public Works

Category 7 BMP Sheets:

7.1 Monitoring Program

Targeted Pollutants and Potential Sources

Parameters outlined in Permit.

BMP 7.1 MONITORING PROGRAM

Description

The objective of this program is to develop and implement a monitoring, analysis, and reporting program for stormwater leaving the MS4. Moniotoring efforts could be combined with partner agencies including: adjacent municipalities, MPCA, Capitol Region Watershed District, Mississippi Watershed Management Organization, Ramsey-Washington Metro Watershed District, Metropolitan Council Enviromental Services.

Work Plan

- Continue monitoring activities at a minimum of six sites within the MS4. Sites may be comprised of the following: installed BMPs, outfalls to the Mississippi River, representative land use areas, and contributions from upstream jurisdictions. (2018-ongoing)
- Continue collaboration with partner agencies to maximize the utilization of equipment, and share monitoring results for analysis. (2018-ongoing)
- Report the results of the monitoring program on the City's Stormwater Web Page. (2018-annually)

MS4 Permit Reference

Requirement: III.C.7
Reporting: IV.D.7

Assessment Process for Annual Reporting

- Proposed **SWMP** modifications to substitute sources of monitoring and analysis data including a discussion of how the data will be utilized to demonstrate compliance with this permit and how it will characterize the nature of **stormwater discharge**s.
- Any significant operational differences in monitoring and monitoring protocols as established in Part III.C.7.
- A dataset plus a brief narrative description of the monitoring results collected by the **Permittee**, or any other entity on behalf of the **Permittee**, including data with tabulations, statistics, summary tables and graphics, by monitoring site with **receiving water** location description, including for all sites:
    - Continuous flow data.
    - Analytical data for all samples identified as storm composite or grab with corresponding flows and storm event periods identified.
    - Estimates of storm event rainfall that generated the sampled **discharge**s, including approximate duration between each sampled storm event and the end of the corresponding previous measurable storm event.
    - Loading calculations: estimated event, seasonal, and annual

loads (total phosphorus, chloride, total suspended solids, volatile suspended solids, inorganic suspended solids by difference (TSS – VSS = ISS), and total nitrogen.

- Summary information including drainage area and estimated annual total **discharge** volume, storm event **discharge** volume, storm event discharge values that were used to calculate event-scale pollutant loads, runoff yield (inches/year), analyte flow weighted mean concentrations (event, seasonal, and annual) and analyte annual mean concentrations.
- Map showing **receiving water**s and representative land use management site locations as described in Part III.C.7.b.
- Estimated effectiveness (e.g., removal efficiency, load reduction, etc.) of **structural stormwater BMP**s.
- Calibration and verification of stormwater models, as applicable.

Participating Department and Contact

Public Works Sewer Utility: Permit Coordinator

MCM 8: Discharges to Impaired Waters with a TMDL

Overview

Description

Under the requirements of the federal Clean Water Act, waters that do not meet water quality standards are considered impaired. The Clean Water Act requires states to develop a clean-up plan for impaired waters. The clean-up plan and the process used to create it is a Total Maximum Daily Load (TMDL). A TMDL must identify all sources of the pollutant causing a water body to violate standards. The TMDL also determines the amount by which each source must reduce its contribution to ensure a water body meets applicable water quality standards. Each of the MS4s within a TMDL study area is given a Waste Load Allocation (WLA). The MS4 WLA is a numerical maximum pollutant discharge goal for pollutants in stormwater runoff from each MS4.

MCM 8 Specific Measurable Goals

Submit WLA form to the MPCA within 9-months of permit issuance (March 2019)
Submit Annual Assessment of WLA Progress form to MPCA (annually)

Participating Departments

Public Works
Safety and Inspections

Category 8 BMP Sheets:

8.1 TMDL Program

Targeted Pollutants and Potential Sources

Pollutants identified in approved TMDL.

BMP 8.1: TMDL Program

Description

Stormwater runoff from Saint Paul is discharged to several surface waterbodies including the Mississippi River. Several of these have been listed on Minnesota's Impaired Waters List for having the presence of concentrations of certain pollutants identified at levels higher than Minnesota standards. A TMDL study has been completed and approved for the following:

- Como Lake: Phosphorus (2010)
- Battle Creek, Como Lake, Kasota Ponds, Mallard Marsh: Chloride (2016)
- Mississippi River: TSS (2016)
- Battle Creek: TSS (2017)
- Fish Creek: E. coli (2017)
- Wakefield Lake: Phosphorus (2017)

Work Plan

TMDL Study process:

- Provide early and significant involvement in the TMDL process. Provide information, data and expertise unique to Saint Paul. Participate in pollutant source identification, modeling assumptions and TMDL equation development. Work to ensure that the study is considering all cost-effective options for achieving water quality, and that the study is emphasizing the importance of locally led decisions on where and how to spend local money to address water quality issues. Work to ensure that MS4 WLAs are equitable and adequately address reasonable assurance provisions. Work to ensure that implementation plans are done concurrently with TMDL studies, are feasible, constructible, and cost-effective. Work to ensure that TMDL based projects can be implemented in a manner that is consistent with the City's goals and objectives. (ongoing)

EPA approved TMDL:

- Develop a general timeline and strategy for general activities to be conducted within each permit cycle, such as mapping the existing conveyance system, developing the means to calculate pollutant loads, identifying existing structural and non-structural BMPs, developing the means to evaluate their effectiveness, calculating effectiveness and comparing to the WLA, assessing and comparing the cost and benefit of new or modified BMPs, addressing level of funding in light of identified needs, developing modifications to the SWMP if needed, and implementing new or modified BMPs if needed.

- For an individual WLA, track City practices and calculate their effectiveness for progress in reducing loads to meet WLAs assigned to the Saint Paul MS4. Review the adequacy of the SWMP. If the SWMP will need to be modified to make reasonable progress in meeting the approved individual WLA, use knowledge gained through adaptive management over time to develop additional or modified practices or programs.
- For a categorical WLA, participate with other stakeholder MS4s (typically as members of a watershed organization) to track practices of the stakeholder MS4s and calculate their effectiveness for progress in reducing loads to meet categorical WLAs. As a group, review the adequacy of existing practices and programs. If the Saint Paul SWMP will need to be modified to make reasonable progress in meeting the approved categorical WLA, use knowledge gained through adaptive management over time to develop additional or modified practices or programs.
- Work with the partner agencies on approved TMDLs and assigned WLAs. (2018-ongoing)

MS4 Permit Reference

Requirements: III.D
Reporting: IV.D.8

Assessment Process for Annual Reporting

- On a form provided by the **Commissioner**, an assessment of progress toward meeting each **applicable WLA**. The assessment of progress must include:
    - A list of all **BMP**s being applied to achieve each **applicable WLA**. For each **structural stormwater BMP**, the **Permittee** must provide a unique identification (ID) number and geographic coordinate. If the listed **structural stormwater BMP** was inventoried during the 2011 Phase I **MS4** permit term, the same ID number must be used.
    - A list of all **BMP**s the **Permittee** submitted with the **TMDL** compliance schedule and the stage of implementation for each **BMP**.
    - An updated estimate of the cumulative reductions in loading achieved for each **pollutant of concern** associated with each **applicable WLA**.
    - An updated narrative describing any adaptive management strategies used (including projected dates) for making progress toward achieving each **applicable WLA**.
    - The results of the comparison(s) of estimated pollutant loading(s) to each **impaired water** in the **Permittee**'s jurisdiction and the **Permittee**'s **WLA** for that **impaired water**.

Participating Departments and Contacts

Public Works: Permit Coordinator
Safety & Inspections: Water Resource Coordinator

PART 3 – ASSESSMENT REPORTING AND SUBMITTALS

3.1 STORMWATER MANAGEMENT PROGRAM ASSESSMENT

The City will complete an annual assessment of its Stormwater Management Program based on results of information collected and analyzed during the reporting period. The purpose of the Stormwater Management Program assessment is to provide information for improving performance, including but not limited to reducing pollutant loading and runoff volumes, and to optimize associated planning and design, construction, operation and maintenance of the MS4. The Stormwater Management Program assessment will be in the format of a written report entitled Stormwater Permit Annual Report.

3.2 RECORD KEEPING

The City will keep records required by this permit for at least three years beyond the term of this permit.

3.3 PUBLIC AVAILABILITY

The City will make its Stormwater Management Program available to the public.

3.4 ANNUAL REPORTING

The City will submit an annual report in accordance with all reporting requirements of the permit. In addition to this annual report, the City will also hold a public meeting to discuss the program and the annual reporting details.

3.5 REPORTING AND OTHER SUBMITTALS

MS4 Permit TMDL Attachment Spreadsheet	March 12, 2019
Stormwater Management Program	July 12, 2019
Retrofit Plan	July 12, 2020
Application for Reauthorization, TMDL Worksheet, & Anti-Degradation Assessment	January 12, 2023
Stormwater Management Program Assessment/Annual Reports	June 30 of subsequent Year

PART 4 – APPENDIX

4.1 PUBLIC EDUCATION AND OUTREACH WORK PLAN

4.2 PUBLIC WORKS DRY WEATHER FIELD SCREENING PROCEDURES

4.3 PUBLIC WORKS IDDE ENFORCEMENT RESPONSE PROCEDURES

4.4 PUBLIC WORKS ENVIRONMENTAL ENFORCEMENT RESPONSE PROCEDURE

4.5 PUBLIC WORKS SWPPP STANDARD OPERATING PROCEDURE

4.6 PUBLIC WORKS POND ASSESSMENT PROCEDURE AND SCHEDULE

4.7 CATCH BASIN SUMP MANAGEMENT PLAN

4.8 STORMWATER POND INVENTORY

City of Saint Paul

Public Education and Outreach Work Plan

NPDES Permit MN0061263

Updated March 2023

2022 Stormwater Mural at Phalen Pavilion Park

1. Multi-lingual program for residents and businesses to increase the level of awareness about stormwater runoff impacts to receiving waters. This activity must utilize a variety of communication tools and methods to reach target audiences and inform them of strategies to reduce pollutants in stormwater runoff.

   Specific Activities:

   a. **Friends of the Mississippi River Water Quality Education Program:** is implemented annually within Saint Paul. The target audience is groups of volunteers comprised of residents or community members (businesses, neighborhood groups, organizations). Major components of the program include: storm drain stenciling, distribution of door hangers, litter clean-up events, educational programs and workshops.

      Various stormwater runoff impact topics are presented through the Program including: pet waste disposal, leaves/grass impacts, litter/trash impacts, proper disposal of hazardous wastes, proper application of fertilizers, car washing techniques, salt application, etc.

      2018 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 1,113 volunteers and completed 1,976 volunteer hours on water quality improvement activities including: stenciling 2,224 storm drains, distributing 5,738 door hangers, coordinating 2 litter clean-up outings, 31 classroom educational presentations, 2 community education workshops, and 1 storm drain mural project.

      2019 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 1,259 volunteers and completed 2,426 volunteer hours on water quality improvement activities including: stenciling 2,521 storm drains, distributing 7,686 door hangers, coordinating 3 litter clean-up outings, 29 classroom educational presentations, 2 community education workshops, and 1 storm drain mural project.

      2020 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 125 volunteers to carry out 337 volunteer hours on water quality improvement activities that included: stenciling 1,013 storm drains, distributing 1,199 door hangers, coordinating 1 litter clean-up outing, 12 classroom presentations, 1 special event (Children's Water Festival virtually), and 1 storm drain mural project. FMR incorporated a TMDL fact sheet into their educational programs and at public events.

      2021 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 643 volunteers to carry out 1,168 volunteer

hours on water quality improvement activities that included: stenciling 1,368 storm drains, distributing 2,220 door hangers, coordinating 12 litter clean-up outings, 11 classroom presentations, 7 field trips, 670 virtual engagements with online curriculum, and 1 storm drain mural project. Updated the door hanger that is distributed during stenciling events.

2022 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 666 volunteers to carry out 918 volunteer hours on water quality improvement activities including: stenciling 1,265 storm drains, distributing door hangers, coordinating 4 litter clean-up outings, 7 educational programs, 2 community education workshops, and 1 storm drain mural project. FMR also incorporated TMDL fact sheets into their educational programs and at public events.

2023 Measurable Goals of the Program include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program seeks to: engage 750 volunteers to carry out 1,500 volunteer hours on water quality improvement activities including: stenciling 2,200 storm drains, distributing 3,500 door hangers, coordinating 2-3 litter clean-up outings, 5-10 educational programs, 2 community education workshops, and 1 storm drain mural project. FMR also plans to incorporate TMDL fact sheets into their educational programs and at public events.

Responsible Municipal Staff: Stormwater Permit Coordinator

b. **Adopt-a-Drain Program:** is implemented annually within Saint Paul. The target audience are individual property occupants within Saint Paul. Major components of the program include: marketing of the Program, distribution of door hangers, distribution of welcome packets/signs, and collection of data.

   Various stormwater runoff impact topics are presented through the Program including: pet waste disposal, leaves/grass impacts, litter/trash impacts, proper disposal of hazardous wastes, salt application, etc.

   2018 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: distributed 9,600 door hangers, encouraged adoption of 561 storm drains, delivered signs and welcome packets, and continued management of the Adopt-a-Drain website.

   2019 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior with an emphasis in the Battle Creek subwatershed. To accomplish these goals, the Program: distributed 2,400 door hangers, encouraged adoption of 851 storm

drains, delivered signs and welcome packets, and continued management of the Adopt-a-Drain website.

2020 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior focusing in the Summit-University neighborhoods. To accomplish these goals, the Program: mailed 5,999 postcards, encouraged adoption of 565 storm drains, delivered signs and welcome packets, and continued managing the Adopt-a-Drain website.

2021 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior focusing in the Woodlawn-Jefferson, Wheelock Pkwy and Jefferson-W. Seventh neighborhoods. To accomplish these goals, the Program: delivered 2,000 door hangers, encouraged adoption of 375 storm drains, delivered signs and welcome packets, and continued managing the Adopt-a-Drain website. Updated the door hanger that is distributed in targeted promotion areas.

2022 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in St. Paul. To accomplish these goals, the Program: mailed postcards, encouraged adoption of 319 storm drains, delivered signs and welcome packets, and continued managing the Adopt-a-Drain website.

2023 Measurable Goals of the Program include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior focusing in various neighborhoods. To accomplish these goals, the Program seeks to: distribute door hangers, encourage adoption of storm drains, deliver signs and welcome packets, and continue management of the Adopt-a-Drain website.

Responsible Municipal Staff: Stormwater Permit Coordinator

c. **Watershed Partners and Clean Water Minnesota:** is a collaborative outreach project and coalition providing resources to member organizations to aid in water quality education. The City of Saint Paul is member of this organization, and annually contributes financial resources to the coalition. The target audience is residents and community stakeholders of the member organizations including watershed districts, cities, counties, higher education, etc.

   Various stormwater runoff impact topics are presented through the Program including: lawn care techniques, urban agriculture, native planting/restoration, environmental health, etc. Additionally, the organization sponsors the clean water exhibits at the Minnesota State Fair.

   Annual Measurable Goals of the Program include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program seeks to: create monthly blog posts with timely and

consistent messages to encourage behaviors that improve water quality, generate photographs that feature local residents taking action to protect lakes and rivers, enhance a metro wide Adopt-a-Drain online registration system, conduct monthly meetings with partner activities and presentations, and develop and implement clean water exhibits at the Minnesota State Fair.

Responsible Municipal Staff: Stormwater Permit Coordinator

d. **No-Parking Sign Water Quality Message:** In 2022 a Water Quality message was included in the printing of temporary No-Parking Signs. The temporary No-Parking Signs are used citywide to prevent parking during programmed street sweeping, snow removal and street repair activities. The message advocates for keeping storm drains clear to prevent localized flooding and to promote knowledge of impacts to water quality in the Mississippi River.

   Annual Measurable Goals of the No-Parking Sign Water Quality Message include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior.

   Responsible Municipal Staff: Stormwater Permit Coordinator

2. Educate the public, businesses, and commercial applicators on the proper application of pesticides, herbicides, and fertilizers and the benefits of retaining grass clippings and leaf litter on lawn surfaces.

   Specific Activities:

   a. **Friends of the Mississippi River Water Quality Education Program:** is implemented annually within Saint Paul. The target audience is groups of volunteers comprised of residents or community members (businesses, neighborhood groups, organizations). Major components of the program include: storm drain stenciling, distribution of door hangers, litter clean-up events, educational programs and workshops.

      Various stormwater runoff impact topics are presented through the Program including: pet waste disposal, leaves/grass impacts, litter/trash impacts, proper disposal of hazardous wastes, proper application of fertilizers, car washing techniques, salt application, etc.

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2021 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 643 volunteers to carry out 1,168 volunteer hours on water quality improvement activities that included: stenciling 1,368 storm drains, distributing 2,220 door hangers, coordinating 12 litter clean-up outings, 11 classroom presentations, 7 field trips, 670 virtual engagements with online curriculum, and 1 storm drain mural project. Updated the door hanger that is distributed during stenciling events.

2022 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 666 volunteers to carry out 918 volunteer hours on water quality improvement activities including: stenciling 1,265 storm drains, distributing door hangers, coordinating 4 litter clean-up outings, 7 educational programs, 2 community education workshops, and 1 storm drain mural project. FMR also incorporated TMDL fact sheets into their educational programs and at public events.

2023 Measurable Goals of the Program include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program seeks to: engage 750 volunteers to carry out 1,500 volunteer hours on water quality improvement activities including: stenciling 2,200 storm drains, distributing 3,500 door hangers, coordinating 2-3 litter clean-up outings, 5-10 educational programs, 2 community education workshops, and 1 storm drain mural project. FMR also plans to incorporate TMDL fact sheets into their educational programs and at public events.

Responsible Municipal Staff: Stormwater Permit Coordinator

b. **Adopt-a-Drain Program:** is implemented annually within Saint Paul. The target audience are individual property occupants within Saint Paul. Major components of the program include: marketing of the Program, distribution of door hangers, distribution of welcome packets/signs, and collection of data.

   Various stormwater runoff impact topics are presented through the Program including: pet waste disposal, leaves/grass impacts, litter/trash impacts, proper disposal of hazardous wastes, salt application, etc.

   2018 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: distributed 9,600 door hangers, encouraged adoption of 561 storm drains, delivered signs and welcome packets, and continued management of the Adopt-a-Drain website.

   2019 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior with an emphasis in the Battle Creek subwatershed. To accomplish these goals, the Program: distributed 2,400 door hangers, encouraged adoption of 851 storm drains, delivered signs and welcome packets, and continued management of the Adopt-a-Drain website.

   2020 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior focusing in the Summit-University neighborhoods. To accomplish these goals, the Program: mailed 5,999 postcards, encouraged adoption of 565 storm drains, delivered signs and welcome packets, and continued managing the Adopt-a-Drain website.

   2021 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior focusing in the Woodlawn-Jefferson, Wheelock Pkwy and Jefferson-W. Seventh neighborhoods. To accomplish these goals, the Program: delivered 2,000 door hangers, encouraged adoption of 375 storm drains, delivered signs and welcome packets, and continued managing the Adopt-a-Drain website. Updated the door hanger that is distributed in targeted promotion areas.

   2022 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in St. Paul. To accomplish these goals, the Program: mailed postcards, encouraged adoption of 319 storm drains, delivered signs and welcome packets, and continued managing the Adopt-a-Drain website.

   2023 Measurable Goals of the Program include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior focusing in various neighborhoods. To accomplish these goals, the Program seeks to:

distribute door hangers, encourage adoption of storm drains, deliver signs and welcome packets, and continue management of the Adopt-a-Drain website.

Responsible Municipal Staff: Stormwater Permit Coordinator

c. **Watershed Partners and Clean Water Minnesota:** is a collaborative outreach project and coalition providing resources to member organizations to aid in water quality education. The City of Saint Paul is member of this organization, and annually contributes financial resources to the coalition. The target audience is residents and community stakeholders of the member organizations including watershed districts, cities, counties, higher education, etc.

   Various stormwater runoff impact topics are presented through the Program including: lawn care techniques, urban agriculture, native planting/restoration, environmental health, etc. Additionally, the organization sponsors the clean water exhibits at the Minnesota State Fair.

   Annual Measurable Goals of the Program include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program seeks to: create monthly blog posts with timely and consistent messages to encourage behaviors that improve water quality, generate photographs that feature local residents taking action to protect lakes and rivers, enhance a metro wide Adopt-a-Drain online registration system, conduct monthly meetings with partner activities and presentations, and develop and implement clean water exhibits at the Minnesota State Fair.

   Responsible Municipal Staff: Stormwater Permit Coordinator

d. **No-Parking Sign Water Quality Message:** In 2022 a Water Quality message was included in the printing of temporary No-Parking Signs. The temporary No-Parking Signs are used citywide to prevent parking during programmed street sweeping, snow removal and street repair activities. The message advocates for keeping storm drains clear to prevent localized flooding and to promote knowledge of impacts to water quality in the Mississippi River.

   Annual Measurable Goals of the No-Parking Sign Water Quality Message include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior.

   Responsible Municipal Staff: Stormwater Permit Coordinator

e. **Pesticide and Fertilizer Applicator Licensing**: The Department of Safety and Inspections maintains a City Ordinance (Chapter 377) and Licensing system for pesticide and fertilizer applicators.

   Responsible Municipal Staff: Water Resources Coordinator

3. Educate the public on proper pet waste disposal.

   Specific Activities:

   a. **Friends of the Mississippi River Water Quality Education Program:** is implemented annually within Saint Paul. The target audience is groups of volunteers comprised of residents or community members (businesses, neighborhood groups, organizations). Major components of the program include: storm drain stenciling, distribution of door hangers, litter clean-up events, educational programs and workshops.

      Various stormwater runoff impact topics are presented through the Program including: pet waste disposal, leaves/grass impacts, litter/trash impacts, proper disposal of hazardous wastes, proper application of fertilizers, car washing techniques, salt application, etc.

      2018 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 1,113 volunteers and completed 1,976 volunteer hours on water quality improvement activities including: stenciling 2,224 storm drains, distributing 5,738 door hangers, coordinating 2 litter clean-up outings, 31 classroom educational presentations, 2 community education workshops, and 1 storm drain mural project.

      2019 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 1,259 volunteers and completed 2,426 volunteer hours on water quality improvement activities including: stenciling 2,521 storm drains, distributing 7,686 door hangers, coordinating 3 litter clean-up outings, 29 classroom educational presentations, 2 community education workshops, and 1 storm drain mural project.

      2020 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 125 volunteers to carry out 337 volunteer hours on water quality improvement activities that included: stenciling 1,013 storm drains, distributing 1,199 door hangers, coordinating 1 litter clean-up outing, 12 classroom presentations, 1 special event (Children's Water Festival virtually), and 1 storm drain mural project. FMR incorporated a TMDL fact sheet into their educational programs and at public events.

      2021 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program: engaged 643 volunteers to carry out 1,168 volunteer hours on water quality improvement activities that included: stenciling 1,368 storm drains, distributing 2,220 door hangers, coordinating 12 litter clean-up

outings, 11 classroom presentations, 7 field trips, 670 virtual engagements with online curriculum, and 1 storm drain mural project. Updated the door hanger that is distributed during stenciling events.

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2023 Measurable Goals of the Program include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program seeks to: engage 750 volunteers to carry out 1,500 volunteer hours on water quality improvement activities including: stenciling 2,200 storm drains, distributing 3,500 door hangers, coordinating 2-3 litter clean-up outings, 5-10 educational programs, 2 community education workshops, and 1 storm drain mural project. FMR also plans to incorporate TMDL fact sheets into their educational programs and at public events.

Responsible Municipal Staff: Stormwater Permit Coordinator

b. **Adopt-a-Drain Program:** is implemented annually within Saint Paul. The target audience are individual property occupants within Saint Paul. Major components of the program include: marketing of the Program, distribution of door hangers, distribution of welcome packets/signs, and collection of data.

   Various stormwater runoff impact topics are presented through the Program including: pet waste disposal, leaves/grass impacts, litter/trash impacts, proper disposal of hazardous wastes, salt application, etc.

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   2019 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior with an emphasis in the Battle Creek subwatershed. To accomplish these goals, the Program: distributed 2,400 door hangers, encouraged adoption of 851 storm drains, delivered signs and welcome packets, and continued management of the Adopt-a-Drain website.

2020 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior focusing in the Summit-University neighborhoods. To accomplish these goals, the Program: mailed 5,999 postcards, encouraged adoption of 565 storm drains, delivered signs and welcome packets, and continued managing the Adopt-a-Drain website.

2021 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior focusing in the Woodlawn-Jefferson, Wheelock Pkwy and Jefferson-W. Seventh neighborhoods. To accomplish these goals, the Program: delivered 2,000 door hangers, encouraged adoption of 375 storm drains, delivered signs and welcome packets, and continued managing the Adopt-a-Drain website. Updated the door hanger that is distributed in targeted promotion areas.

2022 Measurable Goals of the Program included: increased awareness, increased understanding, acquired skills, and/or desired changes in St. Paul. To accomplish these goals, the Program: mailed postcards, encouraged adoption of 319 storm drains, delivered signs and welcome packets, and continued managing the Adopt-a-Drain website.

2023 Measurable Goals of the Program include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior focusing in various neighborhoods. To accomplish these goals, the Program seeks to: distribute door hangers, encourage adoption of storm drains, deliver signs and welcome packets, and continue management of the Adopt-a-Drain website.

Responsible Municipal Staff: Stormwater Permit Coordinator

c. **Watershed Partners and Clean Water Minnesota:** is a collaborative outreach project and coalition providing resources to member organizations to aid in water quality education. The City of Saint Paul is member of this organization, and annually contributes financial resources to the coalition. The target audience is residents and community stakeholders of the member organizations including watershed districts, cities, counties, higher education, etc.

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meetings with partner activities and presentations, and develop and implement clean water exhibits at the Minnesota State Fair.

Responsible Municipal Staff: Stormwater Permit Coordinator

d. **No-Parking Sign Water Quality Message:** In 2022 a Water Quality message was included in the printing of temporary No-Parking Signs. The temporary No-Parking Signs are used citywide to prevent parking during programmed street sweeping, snow removal and street repair activities. The message advocates for keeping storm drains clear to prevent localized flooding and to promote knowledge of impacts to water quality in the Mississippi River.

   Annual Measurable Goals of the No-Parking Sign Water Quality Message include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior.

   Responsible Municipal Staff: Stormwater Permit Coordinator

4. Educate the public and commercial applicators on the proper management and application of de-icing and anti-icing compounds for winter maintenance.

   Specific Activities:

   a. **Friends of the Mississippi River Water Quality Education Program:** is implemented annually within Saint Paul. The target audience is groups of volunteers comprised of residents or community members (businesses, neighborhood groups, organizations). Major components of the program include: storm drain stenciling, distribution of door hangers, litter clean-up events, educational programs and workshops.

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Responsible Municipal Staff: Stormwater Permit Coordinator

b. **Adopt-a-Drain Program:** is implemented annually within Saint Paul. The target audience are individual property occupants within Saint Paul. Major components of the program include: marketing of the Program, distribution of door hangers, distribution of welcome packets/signs, and collection of data.

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Responsible Municipal Staff: Stormwater Permit Coordinator

c. **Watershed Partners and Clean Water Minnesota:** is a collaborative outreach project and coalition providing resources to member organizations to aid in water quality education. The City of Saint Paul is member of this organization, and annually contributes financial resources to the coalition. The target audience is residents and community stakeholders of the member organizations including watershed districts, cities, counties, higher education, etc.

   Various stormwater runoff impact topics are presented through the Program including: lawn care techniques, urban agriculture, native planting/restoration, environmental health, etc. Additionally, the organization sponsors the clean water exhibits at the Minnesota State Fair.

   Annual Measurable Goals of the Program include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program seeks to: create monthly blog posts with timely and consistent messages to encourage behaviors that improve water quality, generate photographs that feature local residents taking action to protect lakes and rivers, enhance a metro wide Adopt-a-Drain online registration system, conduct monthly meetings with partner activities and presentations, and develop and implement clean water exhibits at the Minnesota State Fair.

   Responsible Municipal Staff: Stormwater Permit Coordinator

d. **No-Parking Sign Water Quality Message:** In 2022 a Water Quality message was included in the printing of temporary No-Parking Signs. The temporary No-Parking Signs are used citywide to prevent parking during programmed street sweeping, snow removal and street repair activities. The message advocates for keeping storm drains clear to prevent localized flooding and to promote knowledge of impacts to water quality in the Mississippi River.

   Annual Measurable Goals of the No-Parking Sign Water Quality Message include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior.

   Responsible Municipal Staff: Stormwater Permit Coordinator

5. Educate developers and contractors on construction site and post-construction stormwater management BMP design, construction, and maintenance methods.

   Specific Activities:

   a. **Utility Coordination Meeting:** is held annually to present information related to various utility and street improvement projects occurring within the City limits. The target audience for this meeting is contractors, city staff, and utility companies.

Various stormwater runoff impact topics are presented at this Meeting including illicit discharges and erosion and sediment control measures. Also made available at this meeting is a document detailing Erosion and Sediment Control for Utility Projects in the Right-of-Way.

Annual Measurable Goals of the meeting include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the meeting seeks to: inform contractors and utility companies of erosion and sediment control requirements the City has in place.

Responsible Municipal Staff: Right-of-Way Engineer, Water Resource Coordinator

b. **Chapter 52- Stormwater Runoff Ordinance:** is enforced for development projects occurring in the City. The target audience for this Ordinance is developers and city staff.

Various stormwater runoff impact topics are presented within this Ordinance including: temporary erosion and sediment control devices and maintenance, permanent stormwater BMPs, rate control, etc. The Ordinance is applied by the City's Site Plan Committee at the time a development seeks City approvals. The Site Plan Committee uses the review as a forum to educate about temporary and permanent stormwater controls.

Annual Measurable Goals of the Ordinance include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Ordinance seeks to: inform contractors, developers, and city staffs of various Stormwater Runoff requirements the City has in place.

Responsible Municipal Staff: Sewer Utility Regulatory & Records Engineer, Water Resource Coordinator

6. Educate the public about impaired waters within the jurisdiction and the TMDLs developed to address the impairments.

Specific Activities:

a. **Friends of the Mississippi River Water Quality Education Program:** in 2020 a TMDL Fact Sheet was prepared summarizing TMDLs, causes, locations, solutions. The Fact Sheet is available on the City's website and is promoted at various public events by Water Quality Education consultants.

Annual measurable goals of the fact sheet include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior.

b. **Watershed Partners and Clean Water Minnesota:** is a collaborative outreach project and coalition providing resources to member organizations to aid in water

quality education. The City of Saint Paul is member of this organization, and annually contributes financial resources to the coalition. The target audience is residents and community stakeholders of the member organizations including watershed districts, cities, counties, higher education, etc.

Various stormwater runoff impact topics are presented through the Program including: lawn care techniques, urban agriculture, native planting/restoration, environmental health, etc. Additionally, the organization sponsors the clean water exhibits at the Minnesota State Fair.

Annual Measurable Goals of the Program include: increased awareness, increased understanding, acquired skills, and/or desired changes in behavior. To accomplish these goals, the Program seeks to: create monthly blog posts with timely and consistent messages to encourage behaviors that improve water quality, generate photographs that feature local residents taking action to protect lakes and rivers, enhance a metro wide Adopt-a-Drain online registration system, conduct monthly meetings with partner activities and presentations, and develop and implement clean water exhibits at the Minnesota State Fair.

Responsible Municipal Staff: Stormwater Permit Coordinator

Department of Public Works
Written Procedure for Dry Weather Field Screening of the MS4

Illicit discharges to the City's storm sewer have the potential to contribute high levels of pollutants including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria. Pollutant levels from these illicit discharges have been shown to degrade water quality, and threaten aquatic, wildlife and human health.

Definition
Illicit discharges are defined as any discharge into the City's storm sewer system that is not composed entirely of stormwater.

Examples
Examples of illicit discharges found in urban areas include the following:
- Sanitary sewer connections, dumping, and spills into the storm sewer.
- Non-Residential Car/Truck washing operations.
- Discharges from residential laundry or carpet wash waters.
- Pavement saw cutting slurry discharges.
- Directional drilling bentonite effluent.
- Construction debris or sediment run-off.
- Dumping of automobile fluids, household toxics, and paint.
- Liquid fertilizers and pesticides.
- Spills on roadways (overturned truck, fluid leak, etc.).

Prioritization (Part III.C.3.d.1)
Potions of the Public Storm Sewer System will be prioritized for field screening based on the following activities:
- Citywide Sewer Maintenance Activities (Cleaning, Inspection, Repair)
- Outfall Inspection
- Pond Inspection
- Citywide Monitoring Activities
- Video Inspection of Storm Sewers

Investigation (Part III.C.3.d.1)
Illicit Discharges detected in the Public Right-of-Way (ROW) will be investigated by the Department of Public Works Right-of-Way Division (PW-ROW).

Illicit Discharges detected in the Public Storm Sewer System will be investigated by the Department of Public Works Sewer Utility Division.

Investigation will follow the *City of St. Paul Sewer Utility Illicit Discharge Detection and Elimination (IDDE) Field Guide.*

Areas or Locations to be Evaluated (Part III.C.3.d.2)
Areas or locations to be evaluated include the following:
- Storm Sewer System Components (Pipe, Manholes, Catch Basins)
- River and Pond Outfalls

- Monitored Sites (BMPs, Outfalls to Mississippi River, Representative land use areas, contributions from upstream jurisdictions)

Schedule for Field Screening Activities (Part III.C.3.d.3)
Field screening activities to occur on the following schedule:
- Storm Sewer Components (as opportunities arise during routine maintenance activities)
- River and Pond Outfalls (Minimum of 20% Annually)
- Monitored Sites (Minimum of 6 Sites Annually)

Pollutants of Interest (Part III.C.3.d.4)
Pollutants of interest are identified within the *City of St. Paul Sewer Utility Illicit Discharge Detection and Elimination (IDDE) Field Guide.*

Evaluation Procedures (Part III.C.3.d.5)
Evaluation procedures are identified within *City of St. Paul Sewer Utility Illicit Discharge Detection and Elimination (IDDE) Field Guide,* and include the following:
- Physical Indicators (unusual flow, color, odor turbidity, etc.)
- Biological Indicators (algae growth, fish kills, vegetation condition, etc.)
- Chemical Indicators (temperature, ammonia, boron, RCRA Metals, etc.)

Sampling Procedures (Part III.C.3.d.6)
Sampling procedures are identified within *City of St. Paul Sewer Utility Illicit Discharge Detection and Elimination (IDDE) Field Guide,* and include the following:
- Flow, Color, Odor, Turbidity
- Tier I & II Parameters

Record Keeping (Part III.C.3.d.7)
Record keeping includes the following:
- Outfall Inspection Checklist
- Spill Report Form

Public Safety Duty Officer Notification (Part III.C.3.d.8)
Notification to the Public Safety Duty Officer is identified within the *IDDE Enforcement Response Plan* and *City of St. Paul Sewer Utility Illicit Discharge Detection and Elimination (IDDE) Field Guide.*

Department of Public Works
Illicit Discharges
Enforcement Response Procedure

Illicit discharges to the City's storm sewer have the potential to contribute high levels of pollutants including heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria. Pollutant levels from these illicit discharges have been shown to degrade water quality, and threaten aquatic, wildlife and human health.

Definition
Illicit discharges are defined as any discharge into the City's storm sewer system that is not composed entirely of stormwater.

Examples
Examples of illicit discharges found in urban areas include the following:
- Sanitary sewer connections, dumping, and spills into the storm sewer.
- Truck washing.
- Discharges from residential laundry or carpet wash waters.
- Pavement saw cutting slurry discharges.
- Directional drilling bentonite effluent.
- Construction debris or sediment run-off.
- Dumping of automobile fluids, household toxics, and paint.
- Liquid fertilizers and pesticides.
- Spills from roadways.

Investigation
Illicit Discharges detected in the Public Right-of-Way (ROW) shall be investigated by the Department of Public Works Right-of-Way Division (PW-ROW).

Notifications
If the source of the Illicit Discharge originates from Private Property, the ROW Division will notify the Department of Safety and Inspections to enact their Investigation and Enforcement Procedures. DSI Contact: 651-266-8989, dsicomplaints@ci.stpaul.mn.us

If the source of the Illicit Discharge originates from City Park Property, the ROW Division will notify the Department of Parks and Recreation to enact their Investigation and Enforcement Procedures. Parks and Recreation Contact: 651-266-6400

Reporting
Illicit Discharges detected in the Public Right-of-Way (ROW) shall be reported to the Minnesota Duty Officer (651-649-5451). PW ROW inspectors shall contact the Minnesota Duty officer as soon as practical, but no less than 24-hrs. after an Illicit Discharge has been detected in the ROW. PW ROW will provide the information to the Duty Officer:

- Name of caller and contact information.
- Date, time and location of the incident.
- Whether the Police or Fire have been notified of incident.

- Materials and quantity involved in the incident.
- Responsible party of incident (property/business owner) and contact information.
- Any surface waters or sewers impacts.
- Actions taken.

Enforcement

PW-ROW shall be responsible for enforcement of Illicit Discharges originating from an activity within the ROW. PW-ROW has the authority to conduct the following enforcement actions:

- Stop Work. PW ROW can order the immediate cessation of any work in the ROW. Reference: City of Saint Paul Code of Ordinances. Chapter 135 - Right-of-Way Permits, Section 135.15 – Inspection.
- Revocation of Permits. PW ROW can order the revocation of any ROW permit. Reference: City of Saint Paul Code of Ordinances. Chapter 135 - Right-of-Way Permits, Section 135.18 – Revocation of permits.
- Police Action. Notification and coordination with City of Saint Paul Police Department.

Documentation

PW-ROW shall be responsible for documentation of Illicit Discharges originating from an activity within the ROW. Documentation of Illicit Discharges shall include the following:

- Responsible Party. Name of the person or responsible entity.
- Date, time, and location.
- Description of the discharge.
- Corrective actions taken.
- Enforcement used to compel compliance, e.g., verbal warning, written notice, citation, stop work order, withholding of local authorizations, etc.
- Documentation that the Illicit Discharge was reported to Minnesota Duty Officer including date and time reported Duty Officer, and Report Number.
- Resolutions.

City Sewer System

Illicit Discharges detected within the Public storm sewer system shall be investigated by the Department of Public Works Sewer Utility Division. Upon determining the point of entry to the Storm Sewer System, the Sewer Division will notify the appropriate Enforcement Department. Sanitary spills and the repairing defective Sewers shall be addressed by the Sewer Utility Policy - Sanitary Spills and Repairing Defective Sewers.

Department of Public Works Construction Division
Environmental Enforcement
Response Procedure

Construction projects have the potential to negatively impact the surrounding, and even outlying, environment in several ways if the proper measures are not taken. To prevent harmful influence to the environment, Public Works has in-place procedures to prevent, respond to and mitigate incidents.

Construction

Public Works construction personnel in conjunction with competent personnel designated by awarded Contractors are prepared to handle Public Works construction projects and all ecological threats that accompany the work. As with all aspects of the construction the contractor acts as Quality Control (MnDOT SPC 1717.2.A) while the Public Works representatives act as Quality Assurance. Together the team can prevent most incidents of negative impact to the surrounding environment.

Documentation

The Public Works Project Inspector records all activity and findings in a Daily Diary for assessment and action required by the Contractor to keep the work site in compliance with the SWPPP permit. In addition to the Daily Diary, the Project Inspector and the Erosion Control Supervisor, designated competent and certified personnel by the Contractor, keep inspection reports required by the SWPPP to ensure compliance of all BMPs and erosion control measures. Pictures and site maps are also used to clarify areas of interest or that require attention.

Non-Compliance

Non-Compliance occurs when the in-place BMPs are ineffective or if an unforeseen circumstance arises that threatens erosion or contamination both on and off the construction project.

After non-compliant measures are detected by inspection, the Contractor is verbally requested to correct the issue within the proper time period of time enumerated by the SWPPP. If the time period elapses and the issue remains, a written request is issued to the Contractor to bring the BMP back into compliance. If the site remains non-compliant after 24 hours beyond issuance of the written request PW will charge liquidated damages to the Contractor per the governing specifications of the project.

Reporting

The public is encouraged to contact officials with questions they may have not only with the construction process but with environmental questions and concerns. By having extra witnesses to the conditions that reside on the project we are able to ascertain the situation with accounts of those who are seeing the process on nights, weekends, holidays or any day there may not be construction or PW staff present. The residents impacted by the project are given the ability to contact by phone or email the following:

- PW Construction Office
- Project Engineer(s)
- Project Inspector
- Public Works After Hours Emergency Line
- Contractor's Office

Enforcement

Infractions are investigated to determine cause and liability. Upon discovery of possible contamination of any kind the work shall stop according to MnDOT SPC 1402.2 *Differing Site Conditions* to determine if the work has materially changed and the nature of the change that has occurred. The investigation will reveal if the Contractor provided reasonable protection to the water, land and air in accordance with 1717.1.B,C,D and 1717.2.

If the Contractor is unable to bring the jobsite into compliance with the SWPPP permits and erosion control provisions within 24-hours of the written order issued by PW representatives they will be subject to liquidated damages in the amount of $500 per calendar day deduction in accordance with PW governing specifications. The Contractor is also liable for additional damages or fines in the case of negligent actions. "The Contractor shall hold the City harmless for any fines or sanctions caused by the Contractor's actions or inactions regarding compliance with the permit or erosion control provisions of the Contract documents". (City of St. Paul Governing Specifications 1717)

If the Contractor is unable to demonstrate the ability to operate under the provisions of the permits and erosion control provisions the City of St. Paul will, pursuant of MnDOT 1808 and 1809, terminate the contract.

City of St. Paul
Department of Public Works
Street Design/Construction/Sidewalks
Standard Operating Procedures

SWPPP Inspections

The Storm Water Pollution Prevention Plan for each construction project administered by Public Works requires adherence to the Minnesota Pollution Control Agency mandates. The mandates can be found in the SWPPP within the plans and specifications for each project. The SWPPP details what instigates inspection and what must be inspected.

Each inspector is given report logs which they are required to maintain. The logs are to be kept with the official project documents when the project is complete alongside the contractors' required inspection logs which are collected after project completion and held for a minimum of three years.

Inspections are done once every seven days and within 24 hours of a rainfall event of .5" or more. The areas of interest are detailed in the SWPPP and summarized in the logs. Pictures and maps are utilized when projects are of increasing size and they can help with specificity. Once the inspection is complete the results are discussed with the Erosion Control Supervisor provided by the contractor and addressed in the proper time period.

Department of Public Works
Written Procedure and Schedule for Total Suspended Solids and Total Phosphorus Treatment Effectiveness of Saint Paul Public Works Ponds

Ponds have the ability to attenuate runoff flow rate and remove pollutants from stormwater. Pollutants that have the ability to be removed include Total Suspended Solids and Total Phosphorus.

Procedure for Total Suspended Solid and Total Phosphorus Treatment Effectiveness:

- Utilize Program for Predicting Polluting Particle Passage through Pits, Puddles, & Ponds (P8), or other available software, to estimate treatment effectiveness.
- Utilize the existing monitoring program to determine actual treatment effectiveness.

Schedule

- As detailed Hydrologic and Hydraulic Modeling, and corresponding Water Quality Modeling, is completed on a Subwatershed Basis.
- As Capital Projects warrant the analysis of a local pond.
- Via Citywide Monitoring Activities.

Ponds Evaluated

- Barge Channel North and South Ponds: Evaluated in 2018 via P8 Modeling.
- Trout Brook (Maryland, Magnolia, Jenks): Evaluated 2015-2018 via Monitoring Activities.
- Bush-Desoto Pond: Evaluated 2018-2019 via Capital Project Feasibility Study.

(list to be updated as evaluations occur)

City of Saint Paul
MS4 Catch Basin Sump Management Plan
October 2013

Description

A catch basin is an inlet to the storm sewer system that typically includes a grate or curb inlet where stormwater enters the catch basin. Catch basins may include a sump to capture coarse sediment and debris. The performance of sump catch basins at removing coarse sediment and debris depends on the design of the catch basin and routine maintenance to retain the storage available in the sump to capture sediment. Cleaning catch basin grates, while ensuring proper runoff conveyance from City streets, also removes accumulated sediments, trash and debris.

Maintenance Protocol including Targeted Priority Areas.

The City currently has 26,200 catch basins with sumps. The City has set a goal of cleaning 2,000 catch basin sumps annually. Maintenance resources are directed towards sumps based on several factors. Maintenance protocol factors include communication from citizen observations, prior to repair or reconstruction of a catch basin, or, as required upstream of water quality BMPs. Plugged catch basins are elevated in the maintenance protocol for cleaning. Damaged catch basins are cleaned prior to repair. Sediment control structures upstream of water quality best management practices are cleaned annually as required by watershed district rules.

Twenty percent of the 2,000 sumps (400 sumps) will be cleaned in targeted priority areas. Examples of targeted priority areas include drainage areas to water bodies with approved TMDLS, water bodies identified for protection and other areas as determined by City.

Integration with Street Sweeping Program

The City implements many distinct municipal operations which together address pollution prevention and good housekeeping. In addition to a catch basin cleaning program, the City carries out street sweeping program, performed by the Street Maintenance Division. The street sweeping program targets the pick-up of street sediment, debris and leaves prior to their reaching catch basins.
The City's stormwater permit requires that the City consider integrating the catch basin cleaning program with the street sweeping program. While the road network is a common denominator, these are independent programs carried out by separate divisions in the Public Works Department; each program has distinctly different goals and operational constraints. Careful consideration has revealed several important practical limitations which render integration infeasible.

- Street sweeping is performed during day and night, while catch basin cleaning must be performed during the day.
- Street sweeping is performed citywide each year. Due to the quantity of sump catch basins, only a portion of the City is done each year.

- Street sweeping is generally seasonal and intended to address conditions associated with snowmelt or leaf fall. In contrast, catch basin sumps address sediment and debris which accumulates in the interim months between seasons. At times it can be difficult to predict precisely when conditions are suitable to begin sweeping operations. Catch basin cleaning can occur throughout a season.

In reviewing these BMPs, the City does not feel that integration is a feasible option.

Catch Basin Sump Replacement

New knowledge regarding practices for urban sediment disposal, as well as long-term experience with catch basin sump performance including resuspension of sediment particles, has led the City to conclude that sumps are not a cost-effective sustainable BMP. The quantity of sump catch basins and their effectiveness are highly disproportionate to the level of resources that can be reasonably directed to meet permit requirements. The City is also concerned with the mosquito and other vector breeding that takes place in these sumps.

Starting with the 2014 construction season, the City plans to stop building sumps on its catch basins as a standard practice. In addition, the City plans to remove the catch basin sumps as the opportunities arrive with street reconstruction and other projects. Water quality BMPs will be installed with these projects. Structures with sumps will continue to be installed as pre-treatment for water quality BMPs and will continue to be part of the BMP menu for design consideration on a project basis.

City of Saint Paul
MS4 Stage 1 Pond Inventory
February 2012

			Waterbody Location		
	Type	Unique ID	Coordinate System	X Coord	Y Coord
1	Stormwater Pond	Arlington/Arkwright	Ramsey County	577254.07	170382.36
2	Stormwater Pond	Atwater/Western	Ramsey County	568966.62	163905.93
3	Stormwater Pond	Birmingham/Minnehaha	Ramsey County	588647.76	162743.51
4	Stormwater Pond	Birmingham/York	Ramsey County	588478.02	164695.76
5	Stormwater Pond	Bush/Desoto	Ramsey County	578032.97	163385.60
6	Stormwater Pond	Crosby Business Park	Ramsey County	562095.18	144719.54
7	Stormwater Pond	Crosby Outlet	Ramsey County	561910.34	142942.79
8	Stormwater Pond	Etna/Third	Ramsey County	588774.99	161190.05
9	Stormwater Pond	Flandrau/Case	Ramsey County	591313.54	166310.30
10	Stormwater Pond	Hazel/Nokomis	Ramsey County	594128.41	163797.70
11	Stormwater Pond	Hazel/Ross	Ramsey County	593731.61	163950.98
12	Stormwater Pond	High Bridge East	Ramsey County	571357.01	153101.35
13	Stormwater Pond	High Bridge West	Ramsey County	570796.71	152671.24
14	Stormwater Pond	Hillcrest Knoll	Ramsey County	591668.35	172051.53
15	Stormwater Pond	Phalen Blvd/Burr East	Ramsey County	578689.27	163749.04
16	Stormwater Pond	Phalen Blvd/Burr West	Ramsey County	578389.28	163730.42
17	Stormwater Pond	Phalen Blvd/Earl	Ramsey County	584928.10	164496.81
18	Stormwater Pond	Phalen Blvd/Johnson Pkwy	Ramsey County	587622.54	166745.26
19	Stormwater Pond	Phalen Blvd/Karl Neid	Ramsey County	581411.36	164002.84
20	Stormwater Pond	Pleasant View	Ramsey County	565100.52	151542.51
21	Stormwater Pond	Flandrau/Hoyt	Ramsey County	590875.41	169272.73
22	Stormwater Pond	Sims/Agate	Ramsey County	575640.33	164789.28
23	Stormwater Pond	Sylvan/Acker	Ramsey County	572693.26	163004.90
24	Stormwater Pond	Terrace Ct./Whitall	Ramsey County	576968.69	163994.98
25	Stormwater Pond	Westminister/Mississippi	Ramsey County	576685.67	168557.28
26	Stormwater Pond	Wheelock Parkway - Lower	Ramsey County	577630.69	172868.05
27	Stormwater Pond	Wheelock Parkway - Upper	Ramsey County	578084.86	173115.78
28	Stormwater Pond	Wildview/Lenox	Ramsey County	596335.23	145705.21
29	Stormwater Pond	Burg/Stinchfield	Ramsey County	597600.24	138720.31
30	Stormwater Wetland	Arlington/Jackson	Ramsey County	573607.19	171157.24
31	Stormwater Wetland	Mallard Marsh	Ramsey County	546191.03	167681.03
32	Stormwater Wetland	Suburban Pond	Ramsey County	593319.34	157544.72
33	Stormwater Wetland	Willow Reserve	Ramsey County	569146.05	168916.27
34	Wetland	Airport Marsh	Ramsey County	583541.06	149452.80
35	Wetland	Fairview/North	Ramsey County	551965.38	165466.44
36	Wetland	Phalen Wetland	Ramsey County	587127.06	168361.07
37	Wetland	Unnamed (South of Pig's Eye Lk)	Ramsey County	595033.84	140796.85
38	Wetland	Unnamed (Warner/Fish Hatchery)	Ramsey County	587121.21	156723.81
39	Lake	Beaver Lake	Ramsey County	598018.93	166624.51
40	Lake	Como Lake	Ramsey County	562862.35	168738.56
41	Lake	Crosby Lake	Ramsey County	560462.30	141435.66
42	Lake	Loeb Lake	Ramsey County	567353.87	167376.70
43	Lake	Phalen Lake	Ramsey County	585264.12	171752.49
44	Lake	Pickerel Lake	Ramsey County	568095.27	146042.47
45	Lake	Pig's Eye Lake	Ramsey County	592246.34	145247.70
46	Lake	Upper Lake	Ramsey County	558000.27	139867.05