
# MS4 STORMWATER MANAGEMENT PLAN (SWMP)

City of Great Falls, Montana

November 2023

City of Great Falls, MT
PO Box 5021
Great Falls, MT 59403

# Contents

## Attachments

Attachment A: Enforcement & Response Plan
Attachment B: IDDE Corrective Action Plan
Attachment C: MCM-4 SWPPP Review Checklist
Attachment D: MCM-4 Inspection Checklist
Attachment E: MCM-4 Prioritization Protocol
Attachment F: MCM-5 Post-Constructin Review Checklist
Attachment G: MCM-5 Inspection Checklist
Attachment H: MCM-5 Prioritization Protocol
Attachment I: Wet Weather Stormwater Sampling & Analysis Plan

# Definitions / Acronyms

BMPs – Best Management Practices
COGF – City of Great Falls
ECP – Erosion Control Permit
ERP – Enforcement Response Plan
GP – General Permit
IDDE – Illicit Discharge Detection and Elimination
LID – Low Impact Development
MCM/MCMs – Minimum Control Measures
MPDES – Montana Pollutant Discharge Elimination System
MS4 – Municipal Separate Storm Sewer System
MTDEQ/DEQ – Montana Department of Environmental Quality
NOV – Notice of Violation
OCCGF – Official Code of the City of Great Falls
RECP – Residential Erosion Control Plan
SOPs – Standard Operating Procedures
SWMP – Stormwater Management Plan
SWMT – Stormwater Management Team
SWPPP – Stormwater Pollution Prevention Plan
TSS – Total Suspended Solids

# Introduction

This document is the Stormwater Management Plan (SWMP) for the City of Great Falls (COGF) as is required by the Montana Department of Environmental Quality (MTDEQ) under the General Permit for Stormwater Discharges associated with Small Municipal Separate Storm Sewer Systems (MS4s). The SWMP is updated on an annual basis and describes how COGF administers an MS4 program in order to comply with the requirements within the current MTDEQ MS4 permit. The requirements are categorized into the following Minimum Control Measures (MCMs):

- MCM-1 & 2: Public Education, Outreach, Involvement, and Participation
- MCM-3: Illicit Discharge Detection and Elimination
- MCM-4: Construction Site Stormwater Management
- MCM-5: Post-Construction Site Stormwater Management
- MCM-6: Pollution Prevention and Good Housekeeping

*Note: this document does not include any of the requirements for non-traditional MS4s as the City of Great Falls does not have any facilities fall under that classification.*

# Chapter 1: MCMs 1 and 2: Public Education, Outreach, Involvement, and Participation

- Implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff.
- Implement a public involvement/participation program to involve key target audiences in the development and implementation of the SWMP that complies with state and local public notice requirements.

## 1.1: Minimum Measures & Required BMPs

a. Develop and continue to utilize the permittee's stormwater website for public involvement.

i. Annually review and update a stormwater website that, at a minimum, includes the following:

- A copy of, or link to, this General Permit (MTR040004)
- A copy of the Notice of Intent application form submitted to DEQ including all supplemental information
- Access to outreach strategy information and materials
- Applicable outreach event information
- Most current version of the SWMP and any supporting documents
- At a minimum, five years of most recent annual reports submitted to DEQ
- A mechanism for providing public input for the SWMP including contact information and directions for comments, questions, and complaints
- Information regarding how to identify and report illicit discharges
- Permittee requirements for construction activities and how to submit related complaints
- The Notice of Intent application form and supplemental application information, the updated General Permit and a minimum of five years of annual reports must be posted on the website within 90 days of the effective dates of this General Permit.

ii. Provide a minimum of one opportunity annually for the public to provide comments on the SWMP. Document all relevant inputs, responses, and SWMP modifications made as a result.

b. Determine key target audiences most appropriate for stormwater education and outreach.

i. Based on the permittee's local knowledge of stormwater pollutant generating activities within their MS4, document which business types and/or residential behaviors from the list below are common sources of pollutants, illicit discharges, spills, and/or dumping within the permitted MS4 boundaries. Select a minimum of four applicable key target audiences to address pollutant generating behavior through stormwater education and outreach.

**Residential Behaviors:**

- Car Washing/Care
- General Common Education
- Hazardous Waste Disposal
- Home Chemical Care
- Lawn & Garden Care
- Pet Waste

**Business Types:**

- Carpet Cleaning/Restoration Companies
- Construction Industry
- Gas Stations
- Industrial Facilities & Operations
- Landscapers
- Mobile Cleaning/ Pressure Washing
- Post Construction Facility Owners
- Restaurant or Food Trucks

*Note: DEQ may approve or require additional key target audiences*

ii. Review Key target audiences annually and identify the pollutants associated with each.

c. Identify and develop outreach formats, distribution channels, and messages for each key target audience and associated stormwater polluting behavior. Include approaches for involving the public in SWMP development and implementation.

i. For each key target audience, select a minimum of one outreach strategy listed below. At least two outreach strategies must be active.

**Passive Outreach Strategies:**

- Advertisements
- Brochures/ Fliers
- Business Specific Emails
- Community Artwork/ Murals
- Educational Signage
- Informative Articles or Stories
- Social Media
- Sponsorship of Community Events
- Targeted Door Hangers
- Utility Bill Inserts
- Vehicle Wraps

**Active Outreach Strategies:**

- Cleanup Days/ Events
- Community Meetings/ Presentation
- Community Stormwater Surveys
- Form a Citizen Stormwater Advisory Panel
- Host AmeriCorps Member
- Industry Specific Training
- Participation in Community Events
- Pet Waste Stations
- Public Tours
- Public Workshops
- Rain Garden Adoption/ Building Program
- Storm Drain Adoption Program
- Student Outreach/ Class Work
- Water Quality Monitoring with Citizen Volunteers

*Note: MTDEQ may approve or require additional outreach strategies.*

ii. Each year, the permittee must implement at least four activities. The activities can be the same or different from year to year. For each key target audience, identify the outreach strategies and planned timeframe for implementation for the upcoming year and include this information in the annual report.

d. Distribute and/or perform outreach to target audiences and track performance/ public involvement.

i. Implement the identified outreach strategies (from Part II.A.1.c.i., above) for each key target audience.

**Performance Tracking Methods:**

- Community Surveys
- Illicit Discharge Events
- Percent of Population Reached
- Performance Audits
- Total Distribution
- Total Event Participants
- Total Weight Collected
- Website Analytics

*Note: MTDEQ may approve or require additional performance tracking methods*.

ii. For each key target audience and their associated outreach strategy, document participation and feedback using one or more of the performance tracking methods.

iii. Maintain records on selected key target audiences, outreach strategies, and performance tracking methods. Use the resulting information and/or measurements to direct education and outreach resources most effectively and document modifications in the SWMP.

## 1.2: Responsible Party

The City of Great Falls Environmental Division will responsible for the implementation of the required BMPs. More specifically, the Environmental Division Manager, the Environmental Program Specialist, and the Stormwater Specialist.

### 1.2.1: MCMs 1 and 2: BMP a.i & a.ii

COGF regularly reviews and updates the City's stormwater website to reflect any program updates and / or modifications.

COGF provides the opportunity for the public to comment on the SWMP once per year by posting a public notice in the Great Falls Tribune. The most current SWMP is available for review on the City's stormwater website as well as in the City's Public Works Admin Building located at 1005 25th Ave NE in Great Falls, MT. All relevant feedback is documented along with any modifications to the SWMP resulting from public input and / or responses.

### 1.2.2: MCMs 1 and 2: BMP b.i through d.iii

On an annual basis, COGF reviews data including but not limited to illicit discharge reports / investigations, previous instances of spills / dumping, citizen complaints, etc. to determine applicable key target audiences. Education and outreach activities are then tailored to each target audience in order to address pollutant generating behavior. The following are the key target audiences selected for 2022:

1. General Common Education
    a. Associated pollutants: Varied depending on source / activity
    b. Outreach Strategy
        i. World of Work (WOW) Expo (Active)
            1. Performance Tracking: Number of participants
        ii. Great Falls High School (GFHS) Storm drain Marker Project (Active)
            1. Performance Tracking: Number of students & markers
        iii. Great Falls College – Science Fun (Active)
            1. Performance Tracking: Number of students
2. Landscapers
    a. Associated pollutants: Nutrients, TSS, Sediment
    b. Outreach Strategy
        i. Business Specific Mailing (Passive)
            1. Performance Tracking: Number of mailings sent
3. Restaurants
    a. Associated pollutants: Fats, Oils, Greases, Cleaning agents
    b. Outreach Strategy
        i. Onsite Inspection & Brochure (Fats, Oils, and Grease) (Passive)
            1. Performance Tracking: Number of inspections & brochures distributed
4. Lawn & Garden Care
    a. Associated pollutants: Nutrients, TSS, Sediment
    b. Outreach Strategy
        i. Social Media (Passive)

1. Performance Tracking: Number of interactions

# Chapter 2: MCM 3: Illicit Discharge Detection and Elimination

- Develop, implement, and enforce a program to detect and eliminate illicit discharges into the small MS4.
- Develop and annually update a storm sewer system map showing the location of all outfalls and the names/locations of all receiving waters.
- Through ordinance or other regulatory mechanism to the extent allowable under state or local law, effectively prohibit non-stormwater discharges into the MS4 and implement appropriate enforcement procedures and actions.
- Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to the MS4.
- Inform employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

## 2.1: Minimum Measures & Required BMPs

a. Identify categories of non-stormwater discharges or flows that are significant contributors of pollutants to the MS4.

i. Determine which potential non-stormwater discharges or flows to the Small MS4, including but not limited to a consideration of those listed below, are significant contributors of pollutants.

**Non-Stormwater Discharges or Flows:**

- Water Line Flushing
- Landscape Irrigation
- Diverted Stream Flows
- Rising Ground water
- Uncontaminated Ground water Infiltration
- Uncontaminated Pumped Ground water
- Discharges from Potable Water Sources
- Foundation Drains
- Air Conditioning Condensation
- Irrigation Water
- Springs
- Water from Crawl Space Pumps
- Footing Drains
- Lawn Watering
- Individual Residential Car Washing
- Flows from Riparian Habitats and Wetlands
- Dechlorinated Swimming Pool Discharges
- Street Wash Water

*Note: Discharges or flows from firefighting activities are excluded from the effective prohibition against non-stormwater and only need to be addressed where they are identified as significant sources of pollutants to surface waters.*

ii. In the SWMP, document and update annually:
- A list of potential non-stormwater discharges the permittee has identified as significant contributors of pollutants (i.e., illicit discharges). Include the pollutants associated with each illicit discharge, and any local controls or conditions placed on these discharges.
- A list of potential non-stormwater discharges the permittee has determined as non-significant contributors of pollutants (i.e., occasional incidental discharges) and will not be addressed as illicit discharges, based on the information available to the permittee. Include the pollutants associated with each type of discharge and any local controls or conditions placed on these discharges.

b. Inventory stormwater sewer infrastructure to track illicit discharges, contain spills, and determine high priority areas.

i. Annually review and update a map of the MS4's storm drainage system to accommodate the provisions of a comprehensive Illicit Discharge Detection and Elimination (IDDE) program and SWMP including, but not limited to, the following:
- Outfall locations
- Inlets
- Open channels
- Subsurface conduits/pipes
- Dry wells (discharges to ground water directly)
- Manholes
- Other similar discrete conveyances
- Surface waters that receive discharges from outfalls

ii. Using inspection and screening results, storm sewer maps, and other appropriate data, list, label, or highlight determined high priority outfalls. When determining high priority outfalls, permittees must consider, at a minimum, the following:
- Industrial areas
- Areas with previous illicit discharges
- Known illegal dumping areas
- Oldest portions of storm sewer infrastructure
- Areas with onsite sewage disposal systems
- Areas discharging to an impaired water body

*Note: the permittee must identify a minimum number of high priority outfalls not equaling zero, based on the knowledge of potential illicit discharges in their MS4. High priority outfalls shall be reviewed and updated annually.*

iii. Update the map annually and make available for review by the Department upon request.

c. Develop/update an Illicit Discharge Investigation and Corrective Action Plan to consistently and effectively investigate suspected illicit discharges and connections and track subsequent compliance actions.

i. Maintain and annually update an Illicit Discharge Investigation and Corrective Action Plan. The plan should describe the processes that will be used to locate the source of an illicit discharge and refer to the permittee's Enforcement Response Plan (in Part II.A.2.d.i, below) for execution of appropriate enforcement actions. At a minimum, this plan shall include processes to:

- Investigate a suspected illicit discharge within seven calendar days. Document circumstances that prevent this timeframe.
- Prioritize illicit discharges suspected of being sanitary sewage and/or significantly contaminated for investigation first.
- Confirmed illicit discharges must be eliminated within a timeframe of six months from the date of discovery. Where applicable, document circumstances that prevent this timeframe.
- Notify Montana DEQ and appropriate agencies of illicit discharges believed to be an immediate threat to human health or the environment.
- Document that a good faith effort was made to find the source of the illicit discharge and document each phase of the investigation in a case file.
- Resolve and document the conclusion of all investigations.

*Note: The outfall where any illicit discharge is detected shall continue to be considered high priority and should be investigated as required in this permit. If further investigation and corrective action results show the incident was isolated, with no indication of habitual illicit discharge, the outfall may be removed from the high priority list during annual review, as required in section II.A.2.b.ii., above.*

ii. Implement the Illicit Discharge Investigation and Corrective Action Plan. When an illicit discharge is identified, the permittee must cease, or require the cessation of, the discharge within a timeframe of six months. After the illicit discharge has been eliminated, the permittee must also minimize surface contamination by removing, or requiring the removal of, surface residue or other types of pollutant sources.

iii. Maintain documentation which describes investigations conducted and corrective actions taken per the Illicit Discharge Investigation and Corrective Action Plan. Submit a summary with each annual report.

d. Through ordinance or other regulatory mechanism to the extent allowable under state or local law, effectively prohibit discharge of non-stormwater into the regulated storm sewer system and implement appropriate enforcement procedures and actions.

i. Maintain, update, and implement a formal Enforcement Response Plan (ERP) for illicit discharges. At a minimum, the ERP must describe or identify the following:

- Legal authority (through ordinance, formal policies, or memoranda of understanding) to eliminate and abate illicit discharges
- Staff with enforcement authority
- Enforcement actions available
- An enforcement escalation process
- A schedule utilized to quickly and consistently eliminate the source of the discharge, abate any damages, and reduce the chance of reoccurrence.

To the extent allowable under local and state law, the ERP must include informal, formal, and judicial responses, such as the following:

**Informal:**

- Telephone Notification
- Verbal/Written Notice
- Meetings

**Formal:**

- Administrative Order
- Compliance Schedule
- Order to Show Cause
- Monetary Penalty (Administrative)
- Suspended Service
- Notice of Violation (NOV)

**Judicial:**

- Injunctive Relief
- Consent Decree
- Civil Penalties
- Criminal Penalties

ii. Permittees with legal authority must adopt an ordinance or other regulatory mechanisms to prohibit illicit discharges, which shall include a provision prohibiting any occasional incidental non-stormwater discharge event. Review the ordinance or regulatory mechanisms once per permit cycle and update as needed.

Permittees without legal authority to enact an ordinance or other regulatory mechanisms to prohibit illicit discharges must develop and implement written policies and procedures to exert authority (to the extent allowable) over MS4 users, such as employees, the traveling public, contractors, etc… Review these written policies and procedures once per permit cycle and update as needed.

iii. Solicit assistance from neighboring MS4s, as necessary, to detect and eliminate illicit discharges that may originate within the neighboring MS4 and formalize in cooperative agreements (i.e. memoranda of understanding). Agreements shall specify investigation and enforcement responsibilities and shall be described in each permittee's ERP and Illicit Discharge Investigation and Corrective Action Plan. Formalize cooperative agreements with all neighboring MS4s, as necessary, to implement the IDDE program.

e. Inspect all outfalls during dry weather to detect illicit discharges and connections into the MS4.

i. Inspect and screen **all** the permittee's outfalls during dry weather using the outfall field screening protocol developed by the *Center for Watershed Protection*, or an equivalent process. Using the protocol, if illicit discharge potential is determined, the permittee shall use the procedures identified above for tracing and removing an illicit discharge. **This process shall be completed by the end of the permit cycle.**

ii. Inspect and screen identified **high priority** outfalls (from II.A.2.b.ii, above) during dry weather **a minimum of once per year** and submit a summary of screening results with each annual report.

## 2.2: Responsible Party

The City of Great Falls Environmental Division will responsible for the implementation of the required BMPs. More specifically, the Environmental Division Manager, the Environmental Program Specialist, and the Stormwater Specialist.

### 2.2.1: MCM-3: BMP a.i & a.ii

COGF has evaluated the following non-stormwater discharges in order to determine if they are a significant contributor of pollutants to the City's storm drain system and its receiving waters.

1. Water line & hydrant flushing
    a. Associated pollutant(s): Chlorine, TSS
    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): NO
    d. Local Control(s): COGF SOPs
2. Landscape Irrigation, Irrigation Water, Lawn Watering
    a. Associated pollutant(s): Nutrients
    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): NO
    d. Local Control(s): None; no history of observed issues
3. Discharges from Potable Water Sources
    a. Associated pollutant(s): Chlorine, nutrients
    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): NO
    d. Local Control(s): None; no history of observed issues
4. Rising Groundwater, Flows from Riparian Habitats and Wetlands, Diverted Stream Flows, Springs
    a. Associated pollutant(s): varied depending on location and source of water
    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): NO
    d. Local Control(s): None; no history of observed issues
5. Uncontaminated Groundwater Infiltration
    a. Associated pollutant(s): varied depending on location and source of water
    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): NO
    d. Local Controls: COGF inspection & maintenance schedule / repairs
6. Uncontaminated Pumped Groundwater
    a. Associated pollutant(s): varied depending on location and source of water
    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): YES
    d. Local Control(s): Requirement to obtain MT DEQ Dewatering Permit
7. Foundation Drains, Water from Crawl Space Pumps, Footing Drains
    a. Associated pollutant(s): varied depending on location and source of water

    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): YES
    d. Local Control(s): COGF requires analytical testing prior to discharge approval
8. Air Conditioning Condensation
    a. Associated pollutant(s): none
    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): NO
    d. Local Control(s): None, no history of observed issues
9. Individual Residential Car Washing
    a. Associated pollutant(s): Wash water, soaps, oil & grease, etc.
    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): NO
    d. Local Control(s): None, no history of observed issues
10. Dechlorinated Swimming Pool Discharges
    a. Associated pollutant(s): Chlorine
    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): NO
    d. Local Control(s): must infiltrate on property or receive approval from COGF for discharge
11. Street Wash Water
    a. Associated pollutant(s): TSS, nutrients, oil & grease
    b. Significant contributor of pollutants (yes/no): NO
    c. Addressed as illicit discharge (yes/no): NO
    d. Local Control(s): COGF SOPs

### 2.2.2: MCM-3: BMP b.i through b.iii

COGF regularly reviews and updates the City's inventory of the MS4 storm drain system and utilizes the City's asset management software (Cartegraph) to map the components of the storm drain system. Based on previous incidents of illicit discharges, known areas of concern, areas with large amounts of commercial development, etc. COGF has identified the following outfalls to be high priority:

1. Outfall #5
2. Outfall #7
3. Outfall #8
4. Outfall #9
5. Outfall #10
6. Outfall #11
7. Outfall #12
8. Outfall #13
9. Outfall #14
10. Outfall #15
11. Outfall #16
12. Outfall #17
13. Outfall #18
14. Outfall #19
15. Outfall #20
16. Outfall #21

17. Outfall #22
18. Outfall #23
19. Outfall #66

These outfalls are inspected on an annual basis during dry weather conditions. Additionally, this list is reviewed and updated annually.

### 2.2.3: MCM-3: BMP c.i through c.iii

COGF reviews and updates the City's Illicit Discharge Investigation and Corrective Action Plan on an annual basis. This plan is utilized when an illicit discharge is identified to ensure proper documentation of the event, require cessation of the event and also that any necessary remedial actions are conducted in a timely manner.

### 2.2.4: MCM-3: BMP d.i through d.iii

COGF has an existing Enforcement and Response Plan (ERP) for illicit discharges. The ERP is reviewed on an annual basis and updated as needed (Attachment A).

Sections 13.2.160, 13.2.170, and 13.2.180 of the Official Code of the City of Great Falls (OCCGF) include provisions prohibiting illicit discharges. These sections of ordinance are reviewed during each permit cycle and updated as needed.

COGF does not rely on assistance from any neighboring MS4s. COGF communicates and coordinates with the neighboring MS4s, however, duties/responsibilities are not shared or relied upon from those MS4s.

### 2.2.5: MCM-3: BMP e.i through e.ii

COGF inspects and screens all the City's stormwater outfalls during dry weather conditions at a minimum of once per permit cycle. Outfalls determined to be high priority (see 2.2.2 above) are inspected during dry weather conditions at a minimum of once per year. All outfall inspections are conducted utilizing the field screening protocol developed by the Center for Watershed Protection or an equivalent process.

## Chapter 3: MCM 4: Construction Site Stormwater Management

- Develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre, including activities that are part of a larger common plan of development or sale that would disturb one acre or more.
- Develop and implement, at a minimum, the following:
    - An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state and local law;
    - Requirements for site operators to implement appropriate erosion and sediment control BMPs, and to control waste;

- Procedures for site plan reviews that incorporate consideration of potential water quality impacts;
- Procedures for receipt and consideration of information submitted by the public; and
- Procedures for site inspection and enforcement control measures.

## 3.1: Minimum Measures & Required BMPs

a. Require that all regulated construction projects within the Small MS4 submit a construction stormwater management plan (site plan) prior to construction. The plan shall be consistent with state and local requirements and incorporate consideration of potential water quality impacts including stormwater pollution prevention through appropriate erosion, sediment, and waste control BMPs. A stormwater pollution prevention plan (SWPPP) developed pursuant to the MPDES General Permit, MTR100000 for Stormwater Discharges Associated with Construction Activity (MPDES Stormwater Construction GP), may substitute for this site plan.

   i. Update and implement a construction stormwater management plan review checklist that documents, at a minimum, the requirements described in the Technology-Based Effluent Limitations of the most current MPDES Stormwater Construction GP for all regulated construction projects. The checklist shall be used to ensure consistent review of submitted plans and to determine and document compliance with state and local requirements.

b. Ensure that all construction stormwater management controls are installed, operated, and maintained to function as designed.

   i. Update and implement a site inspection form or checklist to complete consistent and thorough regulated project inspections for all regulated construction projects. The checklist shall include, at a minimum, the requirements described in the Technology-Based Effluent Limitations of the most current MPDES Stormwater Construction GP.

   ii. Maintain a regulated project inventory to include, at minimum, the following:

      - If the project is covered under the most current MPDES Stormwater Construction GP and if so, the associated authorization number
      - The location, size, and topography of the site
      - The proximity of the site to waterbodies for each project

   iii. Utilize a protocol to determine the priority and minimum routine inspection frequency of construction stormwater management controls. Priority is to be determined using, at a minimum, the following criteria:

      - Project size
      - Proximity to a water body
      - Steepness of the project site slopes
      - Discharge to waterbodies impaired for pollutants expected from construction projects
      - Past record of non-compliance by the operator of the construction site

      The protocol shall establish the following minimum routine inspection frequency for all determined high priority projects:

      - Once at commencement of construction after BMPs have been implemented

- Once within 48 hours after each rain event of 0.25 inches or greater
- Once within 48 hours after each occurrence of runoff from snowmelt due to thawing conditions that cause visible surface erosion at the site
- Once at the conclusion of the project prior to finalization (i.e. release of bond, issuance of certificate of occupancy, etc.)

In addition, the protocol shall include recidivism reduction and corrective measures at non-compliant sites, such as processes for:

- Additional onsite visits;
- Increased inspection frequency;
- Written notice of violations;
- Stop work orders; and
- Advancement to enforcement via the ERP process, as discussed below in II.A.3.c.iii.

iv. The permittee must annually identify and inspect a minimum number of projects not equaling zero. Conduct and document inspections using the inspection form and determined routine inspection frequency protocol. If a routine inspection identifies non-compliance, or a failure to implement appropriate control measures that cannot be corrected at the time of initial inspection, the permittee must verify and confirm issues have been corrected within 14 days of documentation of non-compliance. If the illicit discharge has not ceased after 14 days, or control measures are still inadequate, the permittee must advance the non-compliant site through the established ERP process (II.A.3.c.iii).

c. Through ordinance or other regulatory mechanisms to the extent allowable under state and local law, effectively require controls of construction related pollutants (such as sediment and erosion) on regulated construction projects and implement appropriate enforcement procedures/actions.

i. Adopt and implement an ordinance or other mechanism to require construction stormwater controls on private and permittee-owned regulated projects. At a minimum, the regulatory mechanism must:

- Require the construction stormwater management minimum standards (described as Technology-Based Effluent Limitations in the most current MPDES Stormwater Construction GP) to be implemented on all regulated construction projects.
- Provide the permittee the authority to inspect privately-owned construction stormwater management controls

ii. The Enforcement Response Plan (ERP) developed in II.A.2.d.i shall be implemented and maintained to ensure compliance with construction stormwater management regulatory mechanisms on regulated projects including private property. The ERP must include informal, formal, and judicial responses (as listed in II.A.2.d.i.). Additionally, the ERP shall include sanctions and enforcement mechanisms to achieve compliance and must describe or identify, at a minimum, the following:

- How the permittee will eliminate and abate illegal construction discharges
- Staff with enforcement authority
- Enforcement actions available

- Enforcement escalation processes including a schedule to quickly and consistently eliminate the source of the discharge
- How the permittee will facilitate abatement of the damages and reduce the chance of reoccurrence

In addition, the ERP must also include non-monetary construction project-specific penalties such as stop work orders, bonding requirements, and/or permit denials for non-compliance. Review the written ERP once per permit cycle and document updates in the SWMP, as needed.

## 3.2: Responsible Party

The City of Great Falls Environmental Division will responsible for the implementation of the required BMPs. More specifically, the Environmental Division Manager, the Environmental Program Specialist, and the Stormwater Specialist.

### 3.2.1: MCM-4: BMP a.i

For any project resulting in one (1) acre or more of disturbance, COGF requires applications to include Stormwater Pollution Prevention Plans (SWPPPs). COGF provides comments/feedback on SWPPP submittals through the City's Development Review Process. SWPPPs must be reviewed and approved by COGF prior to issuance of a Building Permit and/or commencement of any onsite construction activities.

For any project resulting in less than one (1) acre but more than 10,000 square feet of disturbance, COGF requires applications to include a COGF Erosion Control Plan (ECP). COGF provides comments/feedback on ECP submittals during the City's Development Review Process. ECPs must be reviewed and approved by COGF prior to issuance of a Building Permit and/or commencement of any onsite construction activities.

Additionally, for single family residential projects, COGF issues Residential Erosion Control Permits (RECPs). RECPs are completed by COGF staff and included as an attachment to the applicants Build Permit Application Approval. RECPs include a list of typical BMPs that can/should be utilized at residential construction sites as well as examples of installation specifications.

### 3.2.2: MCM-4: BMP b.ii through b.iv

At a minimum, COGF conducts final inspections of all projects that fall under the three categories referenced in 3.2.1 above. All onsite inspections are conducted utilizing the City's approved site inspection form and checklist (Attachment B) to ensure inspections are consistent and thorough. The checklist includes the requirements described in the Technology-Based Effluent Limitations of the most current MPDES Stormwater Construction General Permit.

All regulated projects are mapped and inventoried in the City's asset management software (Cartegraph).

All regulated projects are prioritized utilizing the City's prioritization protocol (Attachment C). Projects determined to be high priority have requirements for additional inspection frequency.

Upon receipt of a complaint (phone call, email, internal notification, etc.) for a regulated project, COGF conducts compliance inspections in order to verify the complaint and assist in alleviating any instance of non-compliance. Instances of non-compliance are handled in accordance with the City's ERP.

### 3.2.3: MCM-4: BMP c.i through c.iii

COGF has an Enforcement and Response Plan (ERP) to ensure compliance at regulated project sites. The ERP is reviewed on an annual basis and updated as needed (Attachment A).

Sections 17.16.21 and 17.48 of OCCGF include provisions requiring construction stormwater controls at regulated project sites.

# Chapter 4: MCM 5: Post-Construction Site Stormwater Management

- Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale. Ensure that controls are in place to prevent or minimize water quality impacts.
- Develop and implement strategies that include a combination of structural and non-structural BMPs appropriate for the community.
- Develop and implement an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under state or local law.
- Ensure adequate long-term operation and maintenance of post-construction BMPs.

## 4.1: Minimum Measures & Required BMPs

a. Require that all regulated development projects submit a site plan consistent with state and local post-construction requirements, which incorporates consideration of potential water quality impacts including appropriate post-construction stormwater management controls.

   i. Update and implement a plan review checklist to ensure consistent review of submitted plans and to determine and document compliance with state and local post-construction requirements.

   ii. Require that all regulated projects implement post-construction stormwater management controls that are designed to infiltrate, evapotranspire, and/or capture for reuse the post-construction runoff generated from the first 0.5 inches of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation (runoff reduction requirement). For projects that cannot meet 100% of the runoff reduction requirement, the remainder of the runoff from the first 0.5 inches of rainfall must be either:

      - Treated onsite using post-construction stormwater management controls expected to remove 80 percent total suspended solids (TSS);
      - Managed offsite within the same sub-watershed using post-construction stormwater management controls that are designed to infiltrate, evapotranspire, and/or capture for reuse; or

- treated offsite within the same sub-watershed using post-construction stormwater management controls expected to remove 80 percent total suspended solids (TSS)

Permittees allowing offsite treatment shall do the following:

- Develop and apply criteria for determining the circumstances under which offsite treatment may be allowed. The criteria must be based on multiple factors, including but not limited to technical or logistic infeasibility, such as:
    - Lack of available space
    - High ground water Permit
    - Ground water contamination
    - Poorly infiltrating soils
    - Shallow bedrock
    - Prohibitive costs
    - A land use that is inconsistent with capture and reuse or infiltration of stormwater

  *Determinations may not be based solely on the difficulty and/or cost of implementation. The permittee must develop a formal review and approval process for determining projects eligible for offsite treatment. The offsite treatment option is to be used only after available onsite options have been evaluated and documented through the permittee's developed formal review and approval process.*
- Maintain an inventory of regulated projects which utilize offsite treatment for post-construction stormwater runoff. The inventory must include the following information for each approved project:
    - Geographic location of the project
    - Location of offsite treatment
    - Documentation of the rationale for approval of offsite treatment

b. Ensure that all post-construction stormwater management controls are installed, operated, and maintained to function as designed.

i. Update and implement an inspection form or checklist to ensure consistent and thorough inspections of post-construction stormwater management controls.

ii. Maintain an inventory (including at a minimum, a description and location) of all new permittee-owned and private post-construction stormwater management controls installed since the effective date of this permit.

iii. Maintain an inventory (including at minimum, a description and location) of all existing permittee-owned and private high priority post-construction stormwater management controls installed prior to the effective date of this permit.

iv. Utilize a protocol to determine the priority and minimum routine inspection frequency of post-construction stormwater management controls. Priority must be determined based on potential water quality impacts using specific criteria, which at a minimum shall include:

- Operation and maintenance needs of the practices
- Proximity to water body

- Drainage area treated
- Land use type
- Location within an impaired waterbody watershed

The permittee must annually identify a minimum number of projects for inspection not equaling zero.

v. Inspect all **permittee-owned** high priority post-construction stormwater management controls annually and document findings and resulting compliance actions.

vi. Develop a program to either conduct inspections of private high priority post-construction stormwater management controls, or to require self-inspection and reporting by owners. Inspect or have inspected all high priority privately-owned post-construction stormwater management controls annually. Document findings and resulting compliance actions.

c. To the extent allowable under state or local law, effectively require, through ordinance, or other regulatory mechanism, post-construction stormwater management controls on regulated projects and implement appropriate enforcement procedures and actions.

i. Adopt and implement an ordinance or other regulatory mechanism to require post-construction stormwater management controls on regulated projects that, at a minimum, include the performance standard described in Part II.A.4.a.ii, above. Review the ordinance or regulatory mechanism once per permit cycle and update as needed.

ii. The ERP developed in II.A.2.d.i shall be implemented and maintained to ensure compliance with installation, operation, and maintenance requirements for post-construction stormwater management controls on regulated projects including private property. The ERP must include informal, formal, and judicial responses (as listed in II.A.2.d.i.). Additionally, at a minimum, the ERP must describe or identify the following:

- Legal authority to require inspection and maintenance of post-construction stormwater management controls
- Staff with enforcement authority
- Enforcement actions available
- An enforcement escalation processes
- A schedule to be utilized to quickly and consistently enforce compliance with post-construction requirements.

d. Incorporate recommendations and requirements into plans, policies, and ordinances which allow and support the utilization of LID (low impact development) concepts and green infrastructure on public and private property.

i. Assess and document existing ordinances, policies, programs, and studies to identify whether the following LID concepts (both structural and non-structural BMPs) have been implemented to promote protection of stormwater runoff quality associated with new and redevelopment projects:

- Directing growth to identified areas
- Protecting sensitive areas such as wetlands and riparian areas
- Maintaining and/or increasing open space

- Providing buffers along sensitive water bodies
- Minimizing impervious surfaces
- Minimizing disturbance of soils and vegetation

ii. By the end of the third year of the permit cycle, develop and submit a plan outlining any needed modifications to relevant codes, ordinances, policies, and programs to implement LID/green infrastructure concepts. The plan shall include, but is not limited to, the preventative actions identified above that have not yet been implemented and proposed timelines for any needed code, ordinance, policy or programmatic updates. If modifications to codes, ordinances, policies, or programs are not needed, submit a plan/overview of any work scheduled or completed to implement LID/green infrastructure concepts, such as those listed above.

## 4.2: Responsible Party

The City of Great Falls Environmental Division will responsible for the implementation of the required BMPs. More specifically, the Environmental Division Manager, the Environmental Program Specialist, and the Stormwater Specialist.

### 4.2.1: MCM-5: BMP a.i & a.ii

COGF requires all regulated projects implement post-construction stormwater management controls that are designed to infiltrate, evapotranspire, and/or capture for reuse the post-construction runoff generated from the first 0.5 inches of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation (runoff reduction requirement). COGF reviews, provides comments/feedback, and issues approval of proposed post-construction designs through the City's Development Review Process. The City's post-construction plan review checklist, Storm Drain Design Manual, Design and Construction Standards as well as the Montana Post-Construction Stormwater BMP Design Guidance Manual are utilized when reviewing proposed designs.

All regulated projects are mapped and inventoried in the City's asset management software (Cartegraph).

### 4.2.2: MCM-5: BMP b.i through b.vi

At a minimum, COGF conducts an initial inspection (Certificate of Occupancy Inspection) of all regulated post-construction projects. All onsite inspections are conducted utilizing the City's approved site inspection form and checklist (Attachment D) to ensure inspections are consistent and thorough.

All regulated projects are mapped and inventoried in the City's asset management software (Cartegraph).

All regulated projects are prioritized utilizing the City's previously developed prioritization protocol (Attachment E). Projects determined to be high priority have requirements for additional inspection frequency.

All permittee-owned post-construction stormwater management controls have been determined to be high-priority and are inspected on an annual basis.

Additionally, COGF has developed/implemented Stormwater Maintenance Agreements that all privately owned regulated projects are required to complete. These agreements are between the private property owner and COGF and are notarized and filed at the Cascade County Clerk & Recorder Office. The language in the agreement requires the private property owner to operate and maintain the onsite post-construction stormwater management controls in accordance with an operation and maintenance manual approved by COGF. The agreements also incorporate inspection requirements, reporting requirements, etc. and grant COGF the authority to conduct maintenance activities if the private property owner fails to do so. The private property owner can then be held responsible to compensate the City for any required maintenance activities they fail to execute.

Upon receipt of a formal complaint (phone call, email, internal notification, etc.) for a regulated project, COGF conducts compliance inspections in order to verify the complaint as well as assist in alleviating any instance of non-compliance. Instances of non-compliance are handled in accordance with the City's ERP.

### 4.2.3: MCM-5: BMP c.i through c.ii

COGF has an Enforcement and Response Plan (ERP) to ensure compliance at regulated project sites. The ERP is reviewed on an annual basis and updated as needed (Attachment A).

Sections 17.16.22 and 17.52 of OCCGF include provisions requiring post-construction stormwater controls at regulated project sites.

### 4.2.4: MCM-5: BMP d.i through d.ii

COGF has begun the process to review and assess the City's current ordinances, policies and programs to identify whether LID concepts have been implemented to promote protection of stormwater runoff quality associated with new and redevelopment projects.

By the end of 2024 COGF will develop and submit a plan outlining modifications (if needed) to relevant ordinances, policies and programs to implement LID concepts.

# Chapter 5: MCM 6: Pollution Prevention and Good Housekeeping

- Develop and implement an operation and maintenance program that includes a training component and has the goal of preventing or reducing pollutant runoff from municipal operations. The program must include employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

## 5.1: Minimum Measures & Required BMPs

a. Implement an operation and maintenance program to prevent or reduce pollutant runoff from permittee-owned/operated facilities and field activities.

i. Maintain a written inventory of permittee-owned/ operated facilities and activities that have the potential to contribute contaminants to the MS4. The inventory should include, at a minimum, the following:

**Facilities:**

- Maintenance and storage yards
- Waste handling and disposal areas
- Vehicle fleet or maintenance shops with outdoor storage areas
- Salt/sand storage locations
- Snow or dredge material disposal areas operated by the permittee

**Activities:**

- Park and open space maintenance
- Parking lot maintenance
- Building maintenance
- Road maintenance/deicing
- Stormwater system maintenance including catch basin cleaning

Organize facilities/activities into labeled categories and list the possible contaminants from each. List the local department(s) and position(s) responsible for pollution prevention of each facility/activity. Update the inventory annually.

ii. For each category established, maintain written standard operating procedures (SOPs) aimed at preventing or reducing pollutant contributions from municipal operations. Each SOP must contain, at a minimum, the following:

- Identified stormwater pollution controls (structural and non-structural controls, and operation improvements) installed, implemented, and/or maintained to minimize the discharge of contaminants.
- Inspection procedures for facilities and their structural stormwater controls, which at a minimum must include:
    - An annual visual inspection of each applicable facility.
    - A verification that the written facility procedures, documentation, and site map are current.
    - Visual observation of locations and areas where stormwater from facilities is discharged off-site, to state waters, or to a storm sewer system that drains to state waters.
    - Visual observation of facility conditions, including pollutant sources and control measures, to identify control measures that are inadequate or needing maintenance. All inadequate control measures shall be modified or replaced as soon as possible, but no later than six months from visual inspection. If a control measure cannot be modified or replaced within the six-month timeframe due to infeasibility (such as financial burden or time commitment of capital improvement projects), the permittee will provide a written explanation and a schedule for improvement with the following year's annual report. Document facility inspections and communication with relevant department personnel regarding inadequate control measures.

Evaluate/update each SOP at least once over the term of this permit and submit any updates to SOPs with the annual report.

iii. Maintain a map that identifies the locations of facilities and activities identified. Update the map annually.

iv. Conduct stormwater pollution prevention training in compliance with section II.B (below) for all permittee staff directly involved with implementing SOPs. Retain records of completed trainings and attendance.

### 5.2: Responsible Party

The City of Great Falls Environmental Division will responsible for the implementation of the required BMPs. More specifically, the Environmental Division Manager, the Environmental Program Specialist, and the Stormwater Specialist.

#### 5.2.1: MCM-5: BMP a.i through a.iv

COGF maintains an inventory of permittee-owned and operated facilities that have the potential to contribute contaminants to the MS4 (see below).

- Central Garage
- Environmental
- Fire Department
- Great Falls Housing Authority
- Great Falls Water
- Park & Recreation
- Sanitation
- Streets
- Traffic
- Utilities

COGF has developed standard operating procedures (SOPs) for each of the facilities listed above. The SOPs are aimed at preventing or reducing pollutant contributions from municipal operations. Each SOP was developed in cooperation with members of each facility in order to ensure they are customized and optimized for that facility's operations. Staff responsible for implementation of the work associated with SOPs are trained during the 1st and 4th year of this permit term (see Chapter 5). All SOPs are evaluated at least once during the permit cycle and will be modified / updated as needed. Additionally, the locations of these facilities are shown on a map that is updated annually.

## Chapter 6: Training

COGF attends / participates in various local, state and regional training opportunities in order to provide updated / additional knowledge to the individuals responsible for implementing the elements of the City's MS4 program.

1. Stormwater Management Team (SWMT)
    a. The SWMT attends / participates in trainings on a yearly basis in order to stay up-to-date on constantly evolving stormwater related regulations.
2. Construction Site Personnel

    a. Construction site personnel attend / participate in trainings on a yearly basis in order to stay up-to-date on evolving stormwater related regulations.
3. Post-Construction Site Personnel
    a. Post-construction site personnel attend / participate in trainings on a yearly basis in order to stay up-to-date on evolving stormwater related regulations.
4. Field and Facility Personnel
    a. Field and facility personnel are provided training during the 1st and 4th year of the permit term or if / when facility SOPs are updated.

## Chapter 7: Monitoring Requirements

COGF conducts, at a minimum, semi-annual stormwater monitoring in order to better understand the overall impact the City may have on the local waterbodies. Samples are collected upstream of the City and downstream of the City on the Missouri River, the Sun River, and the City's outfall into Sand Coulee Creek. Additionally, samples are collected at various location within the City's stormwater collection system. All sampling is conducted in accordance with the City's MS4 Wet Weather Sampling and Analysis Plan (Attachment F).