



Water & Environmental
TECHNOLOGIES



MS4: Review of Changes for Stormwater Management Plan (SWMP)

Stephen Coe P.E.
Dylan Livingston





Water & Environmental
TECHNOLOGIES

MS4 Introduction

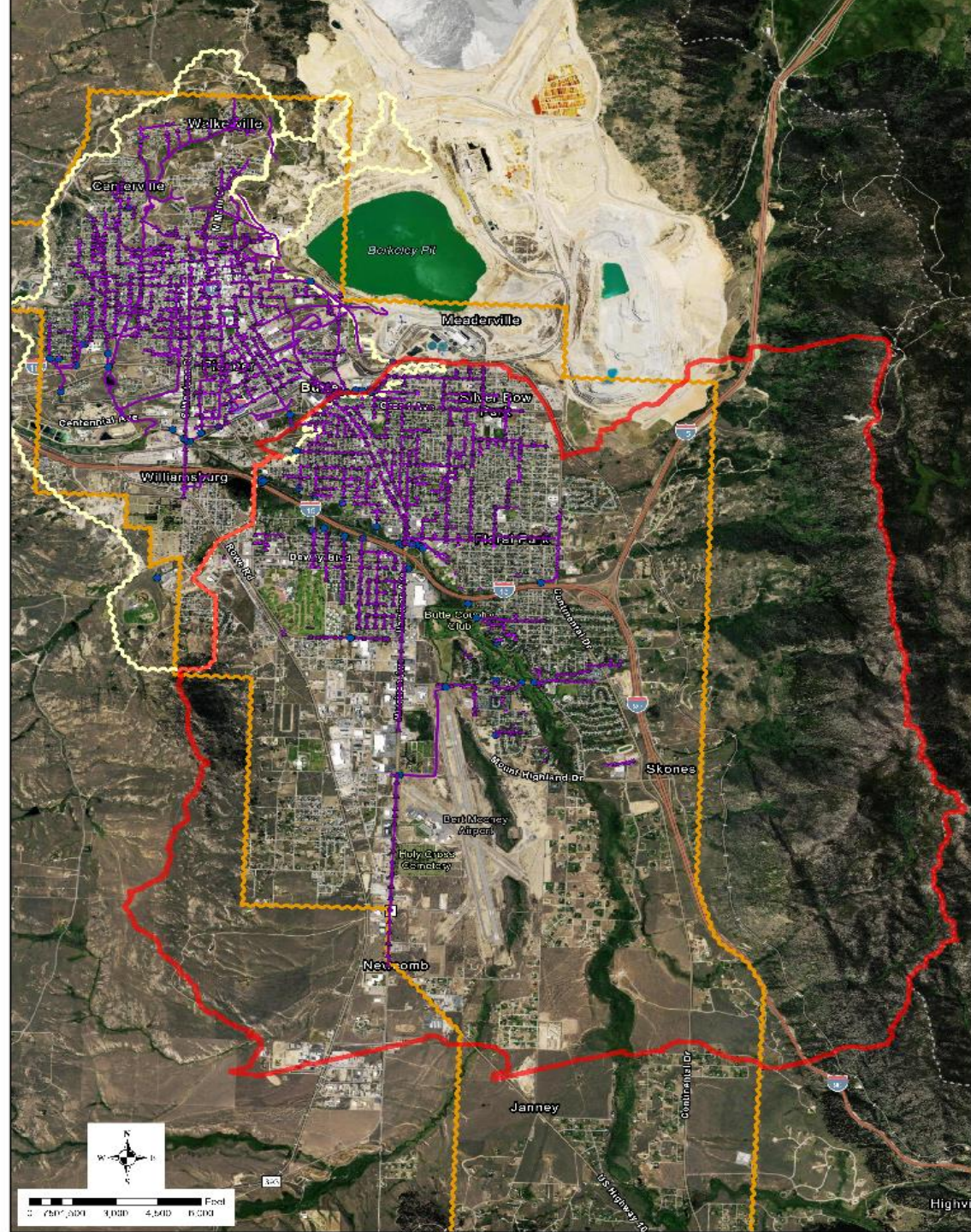
Montana Pollutant Discharge Elimination System (MPDES) General Permit MTR040000 is a fifth generation Comprehensive General Permit for stormwater discharges associated with Small Municipal Separate Storm Sewer Systems (MS4s).

MS4 Introduction

- National Pollutant Discharge Elimination System
 - 1990 cities >100,000 population were required to manage stormwater
 - 1999 cities >10,000 population were required to manage stormwater
 - EPA authorized MDEQ to administer MS4 program in Montana
 - 7 cities, 3 counties, 3 non-traditional permittees
- Receiving Waters of Stormwater
 - Silver Bow Creek
 - Blacktail Creek
 - Sand Creek
 - Basin Creek
 - Grove Gulch Creek

MS4 Introduction

- Butte
 - Traditional MS4
 - Boundary encompasses the entire urban area within the urban limits boundary including the sewer district
 - 29.7 square miles
 - Large network of storm drains, catch basins, retention ponds, ditches and other conveyances
- Superfund Responsibilities
 - Maintenance of Superfund Stormwater Structures (SSWS)
- Additional Permits in MS4 Boundary
 - Metro Sewer: MPDES Effluent Discharge, Multi-Sector General Permit for SW Discharge Assoc. with Industrial Activity
 - Construction Permits over 1-acre





Water & Environmental
TECHNOLOGIES



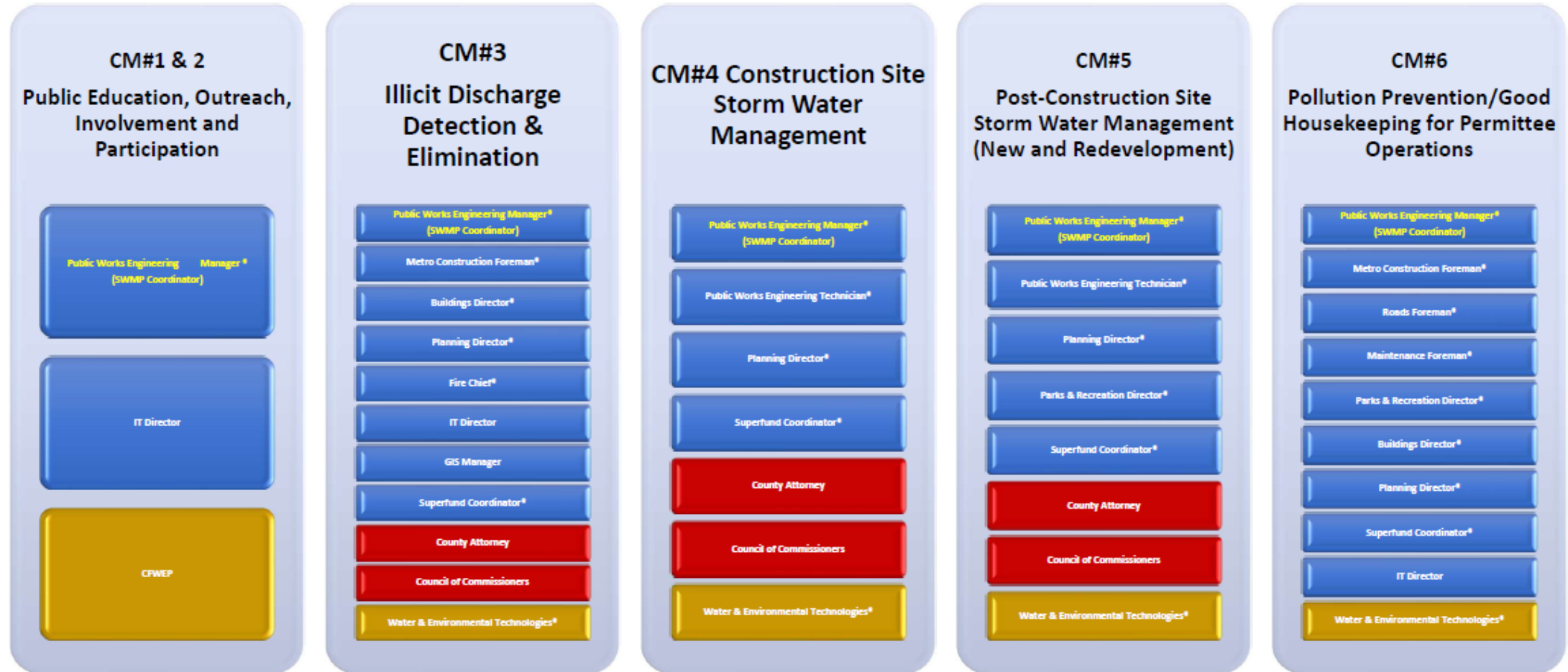
SWMP Introduction

The permittee must develop, document, maintain and implement a SWMP which includes management practices, control techniques, system designs, good standard engineering practices, and such other provisions necessary to reduce the discharge of pollutants from the permitted Small MS4 to the MEP.

SWMP Introduction

- Six Minimum Control Measures (MCMs)
 - Public Education, Outreach, Involvement, and Participation
 - Illicit Discharge Detection & Elimination
 - Construction Site Stormwater Management
 - Post-Construction Site Stormwater in New and Redevelopment
 - Pollution Prevention/Good Housekeeping
- Stormwater Management Team
 - Comprised of persons responsible for implementation of the SWMP
 - Establish, document, and execute formalized mechanisms for regular communication to ensure permit compliance and timely reporting
 - Primary SWMP coordinator followed by Org Chart

Butte-Silver Bow MS4 Stormwater Control Measure Responsibility Organizational Chart



Legend:



* SWMP Team Member

SWMP Introduction

- MDEQ may require changes to the SWMP as needed to:
 - Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4
 - Include more stringent requirements necessary to comply with the new federal statutory or regulatory requirements
 - Include other conditions deemed necessary by the Department to comply with the goals and requirements of the Montana Water Quality Act
 - Update BMPs to improve program effectiveness based on information and/or data submitted in permittee's annual reports

SWMP Design/Overview

- Permit defines and supplies Minimum Control Measures and Required BMPs
 - SWMP has been designed and updated to follow current table of MCMs and BMPs from new permit.
 - Also includes a Due Date and Measurable Goals for each MCM/BMP

Permit No.: MTR040000
Page 7 of 41

Minimum Measure	Required BMP
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 storm water discharges on water bodies and the steps the public can take to reduce pollutants in storm water 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.	
a. Develop and continue to utilize the permittee's storm water website for public involvement.	i. Annually review and update a storm water website that, at a minimum, includes the following: • A copy of, or link to, this General Permit • 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 input, responses, and SWMP modifications made as a result.

SWMP Changes-Summarized

- Previously BMPs were to be instituted by a set date of permit term. BSB met those during previous permit term and now SWMP requires maintenance and review annually.
- Summary of review and updates provided in Annual Report, due by March 1st of each year
- MCM 1&2 Combined
- MCM 7 Removed – Project Management

MCM Changes - Summarized

- Minimum Control Measures (MCMs) 1 & 2: Public education, outreach, involvement, and participation
 - Minimum of one opportunity annually for the public to provide comments on the SWMP
 - Identify four applicable key target audiences to address through education and outreach
 - One outreach strategy for each applicable key target audience Two outreach strategies active at minimum
 - Maintain records on selected key target audiences, etc. Use information to direct education and outreach resources effectively, document in the SWMP

MCM Changes - Summarized

- MCM 3: Illicit Discharge Detection and Elimination
 - Increased verbiage defining high priority outfalls (b.ii.)
 - *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.*
 - *BSB has 5 high priority outfalls to be inspected annually*
 - List non-stormwater discharges that are significant and non significant contributors of pollutants (a.ii)
 - *Include the pollutants associated with each illicit discharge, and any local controls or conditions placed on these discharges.*

Example: Non-Stormwater Discharges

MS4 General Permit Part II.A.3.a.i **2021 annual assessment of non-storm water discharge or flows**

Significant contributors of pollutants are as follows:

1. Water line flushing/fire hydrant flushing

Why:

Water line flushing and fire hydrant flushing are municipal operations which discharge chlorinated water onto streets and have the potential to mix with oil & grease, sediment, debris, and other pollutants. These non-storm water discharges have the potential to reach area surface waters via municipal storm water system and are allowable if all conditions are met.

Associated pollutants may include:

- Total Suspended Solids (TSS)
- Oil & Grease
- Metals
- Chlorine
- Debris

MCM Changes - Summarized

- MCM 5: Post-Construction Site Stormwater Management
 - 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

By the end of the third year of the permit cycle, develop and submit a plan to modify relevant codes, ordinances, policies, and programs to implement LID/green infrastructure concepts, or provide justification why implementation is not feasible. The plan shall include, but is not limited to, the preventative actions identified above that have not yet been implemented.

Training Requirements - Summarized

Permit No.: MTR040000

Page 25 of 42

B. Training

The permittee is required to conduct and/or coordinate, at a minimum, the following trainings and document applicable personnel participation. All new hires that fall into the categories below (section II.B.1-4) with potential to impact storm water pollutant contributions must receive the equivalent amount of the following training within 90 days of their hire date.

1. Storm Water Management Team

1st Year of Permit Term: Conduct comprehensive training for all members of the storm water management team to educate them about permit updates and implementation responsibilities for the upcoming permit term.

2. Construction Site Personnel

At a minimum of once during the permit term, conduct Construction Site Storm Water Pollution Prevention Plan (SWPPP) training for personnel, including inspectors and plan reviewers, responsible for the implementation of the Construction Site Storm Water Management Minimum Measure (MCM 4). Training shall include, at a minimum, inspection protocol and implementation of the MS4's ERP.

3. Post-Construction Site Personnel

At a minimum of once during the permit term, conduct plan review and stormwater facility inspection training for all personnel responsible for the implementation of the Post-Construction Site Storm Water Management Minimum Measure (MCM 5). Inspector training shall include, at a minimum, inspection protocol and implementation of the MS4's ERP.

4. Field and Facility Personnel

1st and 4th years of Permit Term: Conduct field and facility training for MS4 personnel responsible for completing work activities with storm water pollution potential. This shall include any staff or field crews subject to oversight through SOPs as part of the Pollution Prevention and Good Housekeeping Minimum Measure (MCM 6). The training must provide, at a minimum, education regarding the following:

- An overview of this permit and the requirements contained herein.
- Potential storm water impacts.
- The detection and elimination of illicit discharges.
- BMPs necessary to minimize discharges of pollutants during permittee activities or the operation of permittee-owned facilities.
- Any SOP updates completed as a result of the required work under MCM 6.

Top-Down Training

- Presentation to be provided to Department Heads/Members of the SWMT to educate field/facility personnel
- *New Hire Paperwork includes SW in BSB document*
- *SWMP available online*
- *Large inventory of information/resources is available for you and your team*
- *Training assistance available*



Water & Environmental
TECHNOLOGIES

Questions?

waterenvtech.com • (406) 782-5220

