

## **City of Missoula**

# **Small MS4 Storm Water Management Program**

**Prepared for MPDES Permit No. MTR040007**

**Prepared By:**

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# INTRODUCTION

## Executive Summary

Storm water management is a critical municipal interest. The effectiveness and efficiency of storm water management have a direct impact on public health and safety, surface water quality, wildlife habitat, and future development. Consequently, the Federal government amended the Clean Water Act (CWA) in 1987 to regulate the management of storm water runoff from municipalities and specific industrial classifications. Recent state and federal regulations ("Phase II") promulgated in response to those amendments require that designated municipalities obtain and maintain coverage under a Statewide General Permit by March of 2003. The City of Missoula has prepared this Storm Water Management Program (SWMP) in fulfillment of the requirements of that permit.

The purpose of this SWMP is to describe efforts proposed by the City to control discharge of pollutants to State Waters in storm water. The SWMP includes descriptions of storm water management activities that will be undertaken during the second cycle of the statewide general permit, which extends through December 2021. The program has been built around a suite of programmatic elements that the City has already implemented, is in the process of developing for implementation, or plans to develop in order to meet new or revised requirements set forth in the latest General Permit. Together, these programmatic elements address the six Minimum Control Measures (MCMs) required under the Statewide General Permit:

- Public Education – The City must continue to educate the public in its permitted jurisdiction about the importance of the storm water program and the public's role in that program.
- Public Involvement / Participation – The City must continue to comply with all state and local notice requirements when implementing a public involvement / participation program.
- Illicit Discharge Detection and Elimination – The City must continue to adopt and enforce ordinances or take equivalent measures to prohibit illicit discharges. The City must also implement a program to detect illicit discharges.
- Construction Site Storm Water Runoff Control – The City must continue to develop a program to control the discharge of pollutants from construction sites greater than one acre in size within its permittee jurisdiction.
- Post-Construction Storm Water Management in New Development and Redevelopment – The City must continue to require long-term post-construction best management practices (BMPs) that protect water quality and control runoff flow to be incorporated into development and significant redevelopment projects.
- Pollution Prevention / Good Housekeeping for Municipal Operations – The City must continue to examine its activities and develop programs to prevent the discharge of pollutants from these activities. The City must also educate staff on pollution prevention practices.

The program is designed to reduce the discharge of pollutants from the City's municipal separate storm sewer system (MS4) to the maximum extent practicable (MEP) and to protect water quality. Based on EPA's 2008 303(d) list, water bodies that the City discharges to, which are impaired, include the Clark Fork River, Bitterroot River, Grant Creek, and Rattlesnake Creek. In addition, the areas within the City storm water jurisdiction can be characterized as primarily residential, with some commercial, and very little industrial. Based on these factors, the pollutants of concern / causes of impairment targeted by the City's Storm Water Management Program will include:

- Chlorophyll-a
- Nitrogen, Nitrate
- Organic Enrichment (Sewage)
- Phosphorus
- Sedimentation/Siltation

The City has also identified additional potential contaminants and causes of impairment of concern, which are not required to be addressed by the Department of Environmental Quality. These identified contaminants and causes of impairment include:

- Arsenic
- Biological indicators such as fecal coliform
- Cadmium
- Chloride
- Copper
- Excess Algal Growth
- Lead
- Litter and Trash
- Magnesium Chloride
- Oil, Hydro carbons, including PAHs
- Pesticides
- Sodium Chloride
- Stream bank Alteration
- Temperature

The Missoula area has a long history of addressing water quality issues. In 1988, the Missoula City-County Health Department applied for and obtained Sole Source Aquifer designation from the US EPA. This designation requires that all projects which obtain federal funding be reviewed by the EPA. In January 1993, the Missoula Board of County Commissioners and the Missoula City Council passed a resolution creating the Missoula Valley Water Quality District (MVWQD), providing for more direct control for the protection of water resources with the Missoula Valley. The MVWQD has since undertaken numerous projects to protect and improve water quality. These projects include removal of auto shop floor drains that discharge through subsurface injection, public education on issues pertaining to water quality, household hazardous waste collection, establishment of a permitting system for facilities that store regulated substances, and regulation of deicer products. In August 1998, the Clark Fork River Voluntary Nutrient Reduction Program was finalized and put into place as an agreement among major parties in the Montana portion of the watershed to significantly reduce nutrient pollution along a 200-mile stretch of the Clark Fork River. The City of Missoula has chosen to build its storm water program on this framework of successful, established programs that are already making significant strides to protect our water resources.

## **Montana Pollutant Discharge Elimination System**

The State of Montana has established a permit system which is similar to the federal permit system, called the Montana Pollutant Discharge Elimination System (MPDES). This system is administered by the Montana Department of Environmental Quality (MDEQ). The Administrative Rules of Montana (ARM), section 17.30.1105 require that any entity discharging storm water from a point source must obtain coverage under an MPDES general permit. MPDES general permits cover discharges 1) associated with construction activity; 2) associated with industrial activity; 3) associated with mining, oil, and gas activity; 4) from small municipal separate storm sewer systems (small MS4s); 5) for which the department determines that storm water controls are needed based on wasteload allocations that are part

of Total Maximum Daily Loads (TMDLs) that address the pollutants of concern; and 6) that the department determines are contributing to a violation of a water quality standard or are significant contributors of pollutants to surface waters.

## **Montana Designated Small MS4s**

The EPA established guidelines for designating small MS4s, which MDEQ used to create the list of Montana small MS4s named in ARM 17.30.1102(23) – the Urban Areas (as determined by the 2010 decennial census by the United States census bureau) of the City of Billings and Yellowstone County; the City of Missoula and Missoula County; and the City of Great Falls and Cascade County. In addition, MS4s located within the cities of Bozeman, Butte, Helena, and Kalispell were also named because their discharge “results in, or has the potential to result in, exceedances of water quality standards, including impairment of designated uses, or has other significant water quality impacts, including habitat and biological impacts”.

## **General Permit**

The General Permit for Storm Water Discharge Associated with Small Municipal Separate Storm Sewer Systems provides authorization to discharge storm water to waters of the United States under the Montana Pollutant Discharge Elimination System. The General Permit, under the authority of the Administrative Rules of Montana, defines effluent limitations; establishes monitoring, recording, and reporting requirements; establishes requirements for a Storm Water Management Program; and sets standard permit conditions.

The City of Missoula is working with a goal of achieving the cleanest storm water possible, utilizing knowledge, ideas, and resources from internal staff, the Missoula Valley Water Quality District (MVWQD), area professionals and local citizens.

Entities within the Missoula Urban area which own and operate separate storm sewer systems are the City of Missoula, Missoula County, Montana Department of Transportation – Missoula Office, and the University of Montana.

The permit area for Missoula has been defined by the MDEQ as the Urban Area delineated following the most recent decennial census, and responsibility has been divided among area MS4 permittees as follows:

- 1) The City of Missoula – areas within the City Limits and Urban Area which are not owned by either the Department of Transportation or the University of Montana, excluding state traffic routes.
- 2) Missoula County – areas outside the City Limits, but within the Urban Area which are not owned by either the Department of Transportation or the University of Montana, excluding state traffic routes.
- 3) The Montana Department of Transportation – parcels owned by the department and the numerous state traffic routes within the Urban Area.
- 4) The University of Montana - parcels owned by the University within the Urban Areas.

## **Storm Water Management Program Requirements**

As required by the General Permit for Storm Water Discharge Associated with Small Municipal Separate Storm Sewer System (MS4), permittees must develop a Storm Water Management Program designed to reduce the discharge of pollutants from the permitted Small MS4 to the maximum extent practicable to protect water quality, and to satisfy the appropriate water quality requirements of the Montana Water Quality Act. The SWMP must include management practices, control techniques, systems, designs, good standard engineering practices, and such other provisions necessary for the control of such pollutants. Each Minimum Control Measure (MCM) has requirements to identify how the success of the Best Management Practice (BMP) will be evaluated, including how the measurable goals for each of the BMPs were selected. In addition to these requirements, permittees are required to maintain documentation describing how and why each of the BMPs and measurable goals for the SWMP was selected. These items have been addressed in the Minimum Control Measure sections of this document.

The SWMP must include a section describing how the SWMP will control discharges of pollutants of concern (POC) and ensure storm water discharges will not cause or contribute to instream exceedances of water quality standards. The Montana Department of Environmental Quality's 2010 303(d) list is being used as the basis for the list of (POC) and the specifics of addressing these can be found on pages 5 – 7.

Finally, each Minimum Control Measure has requirements to identify the responsible party for overall management and implementation of the programs and Best Management Practices. A Storm Water Program Staff Organizational Chart with responsibilities assigned for each BMP has been included in this section on page 8. Since some agencies involved in the storm water program are funded by both City and County taxes, these agencies have been shown on the chart to illustrate the relationship. Responsibilities are also noted in the Minimum Control Measure sections.

This program documents the efforts of the City of Missoula to meet the requirements of the MDEQ Storm Water General Permit.

# Pollutants of Concern

Water Body	Pollutant	Probable Source(s)	Associated Uses	TMDL	MCM – BMP(s)
Clark Fork River, Fish Creek to Rattlesnake Creek	Arsenic	Mill Tailings	Aquatic Life Cold Water Fishery Drinking Water	No	N/A
	Cadmium	Mill Tailings	Aquatic Life Cold Water Fishery Drinking Water	No	N/A
	Chlorophyll-a	Industrial Point Source Discharge Municipal Point Source Discharges On-Site Treatment Systems	Aquatic Life Cold Water Fishery Primary Contact Recreation	Yes	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 3a(i), 3b(i), 3b(ii), 3c(i), 3d(i), 3d(iii), 3d(iv), 3d(v), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)
	Copper	Mill Tailings	Aquatic Life Cold Water Fishery	No	N/A
	Nitrogen (Total)	Industrial Point Source Discharge Municipal Point Source Discharges On-Site Treatment Systems	Aquatic Life Cold Water Fishery	Yes	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 3a(i), 3b(i), 3b(ii), 3c(i), 3d(i), 3d(iii), 3d(iv), 3d(v), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)
	Organic Enrichment (Sewage) Biological Indicators	Industrial Point Source Discharge Municipal Point Source Discharges On-Site Treatment Systems	Aquatic Life Cold Water Fishery	Yes	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 3a(i), 3b(i), 3b(ii), 3c(i), 3d(i), 3d(iii), 3d(iv), 3d(v), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)
	Phosphorus (Total)	Industrial Point Source Discharge Municipal Point Source Discharges On-Site Treatment Systems	Aquatic Life Cold Water Fishery	Yes	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 3a(i), 3b(i), 3b(ii), 3c(i), 3d(i), 3d(iii), 3d(iv), 3d(v), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)

Continued on following page

Water Body	Pollutant	Probable Source(s)	Associated Uses	TMDL	BMPs
Bitterroot River, Eightmile to the mouth	Alteration in stream-side or littoral vegetative covers	Rangeland Grazing Wet Weather Discharges	Aquatic Life Cold Water Fishery	No	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 4a(i), 4a(iii), 4a(iv), 4b(i), 4b(ii), 4c(i), 4c(iii), 4c(iv), 4c(v), 5a(i), 5a(iii), 5a(iv), 5b(i), 5b(iii), 5c(i), 5c(iii), 5c(iv), 5c(vi), 5c(vii), 5c(viii), 5c(ix), 5d(i), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)
	Copper	Sediment Resuspension (Contaminated Sediment)	Aquatic Life Cold Water Fishery	No	N/A
	Lead	Sediment Resuspension (Contaminated Sediment)	Aquatic Life Cold Water Fishery	No	N/A
	Nitrogen, Nitrate	On-Site Treatment Systems Rangeland Grazing Wet Weather Discharges	Aquatic Life Cold Water Fishery	No	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 3a(i), 3b(i), 3b(ii), 3c(i), 3d(i), 3d(iii), 3d(iv), 3d(v), 5a(i), 5a(iii), 5a(iv), 5b(i), 5b(iii), 5c(i), 5c(iii), 5c(iv), 5c(vi), 5c(vii), 5c(viii), 5c(ix), 5d(i), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)
	Sedimentation/Siltation	Sediment Resuspension Streambank Modifications Wet Weather Discharges	Aquatic Life Cold Water Fishery	No	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 3a(i), 3b(i), 3b(ii), 3c(i), 3d(i), 3d(iii), 3d(iv), 3d(v), 4a(i), 4a(iii), 4a(iv), 4b(i), 4b(ii), 4c(i), 4c(iii), 4c(iv), 4c(v), 5a(i), 5a(iii), 5a(iv), 5b(i), 5b(iii), 5c(i), 5c(iii), 5c(iv), 5c(vi), 5c(vii), 5c(viii), 5c(ix), 5d(i), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)
Grant Creek, headwaters to the mouth	Alteration in stream-side or littoral vegetative covers	Irrigated Crop Production Site Clearance	Aquatic Life Cold Water Fishery	No	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 4a(i), 4a(iii), 4a(iv), 4b(i), 4b(ii), 4c(i), 4c(iii), 4c(iv), 4c(v), 5a(i), 5a(iii), 5a(iv), 5b(i), 5b(iii), 5c(i), 5c(iii), 5c(iv), 5c(vi), 5c(vii), 5c(viii), 5c(ix), 5d(i), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)
	Excess Algal Growth	Irrigated Crop Production Site Clearance	Aquatic Life Cold Water Fishery Primary Contact Recreation	No	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 6a(ii), 6a(iii), 6a(iv), 6a(v)
	Low flow alterations	Flow Alterations Irrigated Crop Production Site Clearance	Aquatic Life Cold Water Fishery Industrial Primary Contact Recreation	No	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 4a(i), 4a(iii), 4a(iv), 4b(i), 4b(ii), 4c(i), 4c(iii), 4c(iv), 4c(v), 5a(i), 5a(iii), 5a(iv), 5b(i), 5b(iii), 5c(i), 5c(iii), 5c(iv), 5c(vi), 5c(vii), 5c(viii), 5c(ix), 5d(i), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)
	Nitrate/Nitrite (Nitrite + Nitrate as N)	Irrigated Crop Production Site Clearance	Aquatic Life Cold Water Fishery	No	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 6a(ii), 6a(iii), 6a(iv), 6a(v)
	Sedimentation/Siltation	Site Clearance Streambank Modifications	Aquatic Life Cold Water Fishery	No	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 4a(i), 4a(iii), 4a(iv), 4b(i), 4b(ii), 4c(i), 4c(iii), 4c(iv), 4c(v), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)
	Temperature, water	Flow Alterations Loss of Riparian Habitat	Aquatic Life Cold Water Fishery	No	MCM 1a(i), 1a(ii), 1b(i), 1c(i), 1c(ii), 4a(i), 4a(iii), 4a(iv), 4b(i), 4b(ii), 4c(i), 4c(iii), 4c(iv), 4c(v), 5a(i), 5a(iii), 5a(iv), 5b(i), 5b(iii), 5c(i), 5c(iii), 5c(iv), 5c(vi), 5c(vii), 5c(viii), 5c(ix), 5d(i), 6a(i), 6a(ii), 6a(iii), 6a(iv), 6a(v)

Continued on following page

Water Body	Pollutant	Probable Source(s)	Associated Uses	TMDL	BMPs
Rattlesnake Creek	Other flow regime alterations	Dam Construction Water Diversions	Cold Water Fishery	No	5a(i), 5a(iii), 5a(iv), 5b(i), 5b(iii), 5c(i), 5c(iii), 5c(iv), 5c(vi), 5c(vii), 5c(viii), 5c(ix), 5d(i)

Information based on 2010 303(d) List from Montana Department of Environmental Quality Clean Water Act Information Center.

## **MCM 1 – Public Education and Outreach**

### Regulatory Requirement(s):

*MCM 1 – The permittee shall implement a storm water public education program to develop or adapt, distribute, and evaluate educational materials and outreach activities to key target audiences in the MS4 that raise awareness about the impacts of storm water discharges on waterbodies, educate audiences about the behaviors and activities that have the potential to pollute storm water discharges, and motivate action to change behaviors to reduce pollutants in storm water runoff.*

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### **Determine Key Target Audiences — MCM / BMP 1 - a (i)**

The City of Missoula has a storm water public education program targeted at providing information and support to the citizens of Missoula focused on raising awareness about the impacts of reducing pollutants in storm water and motivating a change in behaviors toward storm water. The City will continue to utilize Illicit Discharge Detection and Elimination (IDDE) data to determine key business types and residential behaviors to target with the public education and outreach program. This program will continue to grow and be modified as public behavior changes and warrants.

Common household activities such as car washing, lawn care and automobile maintenance can affect water quality through non-point source water pollution. Non-point source pollution is the largest contributor to water quality degradation in the United States. By educating citizens about how these activities affect water quality, aquatic life, and recreational opportunities, and identifying ways citizens can reduce their impact, the City of Missoula hopes to decrease impacts to water quality associated with storm water in the Missoula valley. The public education and outreach program targets three main audiences: the general public, contractors, and municipal employees. Each group has specific activities that have different contributions to storm water quality degradation. Primary pollutants of concern which the general public may reduce are nitrogen, phosphorus, and organic enrichment. These pollutants can largely be attributed to septic systems, lawn care, and pet waste. Contractor education, in conjunction with both construction programs, will target sediment and other pollutants associated with construction activity. Finally, in conjunction with the Pollution Prevention / Good Housekeeping for Municipal Operations Program, municipal employees are educated about pollutants common to their everyday operations. The following items target non-point source education for the general public. Website(s), educational pamphlets, utility stuffers, TV, Public Service Announcements (PSA), and printed advertising are used to educate the general public about non-point source pollution. Contractors receive information about storm water pollution prevention through the contractor education program as well as SWPPP Training and Certification, and municipal employees receive training in coordination with MCM 6 of this permit.

### **Storm Water Website — MCM / BMP 1 - a (ii), 1 - b (i)**

The City's website provides information about common impacts people have to storm water quality and offers ways residents can decrease their contributions. The City's webpage also has a link to the Missoula Valley Water Quality District's webpage which has more information about alternatives to common household hazardous substances. In addition, the Water Quality District's website includes information about the impacts of excess nutrients on surface water and offers ways the public can reduce its impact. The web pages also list the Water Quality hotline number and describe how to report suspected cases of water pollution.

## **Tailored Outreach Strategy — MCM / BMP 1 - c (i)**

### **Educational Pamphlets, Utility Stuffers, Media Advertising, Community Watershed Education, Contractor Education Program, Municipal Employee Training and Education Programs**

The City's website provides information about common impacts people have to storm water quality and offers ways residents can decrease their contributions. The City's webpage also has a link to the Missoula Valley Water Quality District's webpage which has more information about alternatives to common household hazardous substances. In addition, the Water Quality District's website includes information about the impacts of excess nutrients on surface water and offers ways the public can reduce its impact. The web pages also list the Water Quality hotline number and describe how to report suspected cases of water pollution.

Missoula Valley Water Quality District prints and distributes brochures to participants in the Annual Household Hazardous Waste Collection Event. Members of the public received the following brochures: Alternatives to Household Toxics, Managing Leftover Paint, and A Residential Guide to the Missoula Valley Aquifer. This material includes information on recycling and proper disposal of household toxics. It also informs readers of the hazards associated with improper waste disposal.

Media advertising; Television (TV), Public Service Announcements (PSA), and newspaper / print advertising are also being used to inform individuals and households about the steps they can take to reduce storm water pollution. Television advertising is primarily centered on the Annual Household Hazardous Waste Collection. These ads focus on non-point source pollution and effects on surface water quality with regard to leaking vehicles and over-application of lawn chemicals. During the weeks preceding Household Hazardous Waste Days, the ads focus on the importance of proper waste disposal while advertising the collection event. Example of one advertisement, portrays various residents using a storm drain for disposal of paints, antifreeze and lawn clippings and explains that these contaminants find their way into surface water and drinking water supplies. Another advertisement shows a man fertilizing a lake and reminds watchers that too much fertilizer or fertilizer applied at the wrong time can end up in our water bodies. Other public education advertising periodically conducted by the Water Quality District targets riparian habitat protection.

Periodically, PSAs are placed with local radio stations. The Water Quality District also runs ads during Hazardous Waste Days over local radio stations and in local newspapers to publicize the collection event.

The Parks & Recreation Department frequently publishes PSAs to all City employees, the *Missoulian* daily newspaper the *Independent* weekly newspaper and other media sources. These PSAs announce projects being done within City limits such as tree work, plantings, park restrictions / closures, construction projects, detours, dog regulations, trail work, wildlife habitat notices, riparian habitat closures / re-vegetation projects, public education events and programs sponsored by the department. Through these PSAs, the public receives the knowledge they need to respect and help the department to maintain our parks and open spaces, and keep them in good condition.

The MVWQD supports the Annual Watershed Festival organized by The Montana Natural History Center. Through this program, approximately 500-700 sixth-grade students learn about conditions within our watershed and factors that affect water quality. They discuss the different types of pollutants that make up non-point source pollution and the cumulative impacts of residents' activities. This is done through a combination of classroom visits and time spent at the various stations at the festival.

Students collect water quality and quantity data from stream reaches within the Clark Fork River Basin. Water Quality District staff often present the Enviroscope Watershed Model, which explains point and non-point source pollution and their effects on surface water quality. Students also learn how Best Management Practices can treat storm water runoff and help protect surface water.

The Water Quality District and City of Missoula Wastewater Treatment Plant provide financial support to the Watershed Education Network to provide classroom and field education to students throughout the Clark Fork Watershed about surface and groundwater issues. Students learn how to assess surface water quality through macro-invertebrate identification and stream assessments of physical and chemical conditions. This work demonstrates the connection of manmade conditions in watersheds directly to water quality. Students get the opportunity to monitor streams with different levels of impact and are taught methods of determining a water body's health through correlating factors such as dissolved oxygen, ratios of pollutant-tolerant invertebrates, temperature, etc.

The Water Quality District also promotes a Riparian Area Awareness campaign. Fliers have been distributed throughout the county focusing on owners of property adjacent to rivers. Print, television and radio ads have been placed. One major contribution of healthy riparian areas is their ability to treat and reduce the effects of contaminated surface runoff. Riparian vegetation also stabilizes soil and helps prevent erosion. Several of these ads focus on the stabilization and filtering capabilities of riparian areas. A television ad was developed that depicts a healthy riparian area contrasting with a raw, eroding bank. The ad highlights the benefits provided by healthy native riparian areas and the importance of leaving these areas intact.

The City of Missoula's Engineering Department works closely with the design community to develop rules and methods that work effectively and efficiently. Contractors receive information regarding runoff control, proper storm drain inlet protection, and management of potential pollutants. A subdivision toolbox (which actually applies to all construction projects, not just subdivisions) was created in 2007. This portion of the city web page contains links to related information such as applicable codes, checklists, standard drawings, as-built drawings, and storm and sanitary infrastructure maps. Requirements for the acquisition of City SWPPP permit are included in this information and design professionals are required to include completed checklists with their design submittals.

Since excavation contractors are often the first ones on a job site, and often require a SWPPP permit, a packet of information has been assembled for them. This packet includes information about permits, inspections, and ordinances. A copy of the Grading, Drainage, Erosion Control, and Storm Water Pollution Prevention Plan is included along with Montana Department of Environmental Quality's "Storm Water Requirements for Construction Activity" brochure.

In addition to these items, administrative rules clarifying ordinances and gathering related information into one place have been created to inform contractors of all requirements on a particular subject (Materials Storage on Public Rights-of-Way along with Construction Site Cleanup and Right-of-Way Protection are two examples). Standard drawings have also been created to give contractors some guidance in areas such as inlet protection and erosion control on construction sites.

All of these methods have been used successfully by the City of Missoula to direct contractor efforts in the past. With the advent of the MS4 program, City staff has added to these mediums to clarify and update requirements related to storm water pollution prevention. The success of this BMP will be measured by the items created or updated annually.

Municipal employees receive annual training related to proper maintenance and disposal techniques with respect to storm water pollution prevention. Field employees also receive training on how to identify illicit discharge and what to do about it. The Municipal Employee Training Program will be coordinated

with Minimum Control Measure Six – Pollution Prevention / Good Housekeeping for Municipal Operations. Additional information regarding this BMP is located in MCM 6.

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>PUBLIC EDUCATION AND OUTREACH</b>		<b>1 - a (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
<input checked="" type="checkbox"/> GENERAL PUBLIC	The City of Missoula continually reviews IDDE data to help determine key target audiences and potential pollutant(s) associated with each. Education of the public through the use of informational and educational programs targeted to each audience regarding stormwater pollution identification and prevention.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES	Contractor/construction education is achieved through providing SWPPP training opportunities. Additional education through partnerships with the Missoula Water Quality District, local land steward organizations and others. The Public Education and Outreach Program includes materials such as; classroom teaching, direct mailing, multi-media advertising, websites, utility billing messages, etc.	
<input checked="" type="checkbox"/> COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula Public Education and Outreach Program narrative outlines target audiences, partnerships and examples of materials utilized for the dissemination of stormwater information within the MS4. Selected activities are to target children and schools as well as adults and construction work, through various venues and media forms. Records will be maintained of the activities outlined and audiences reached to evaluate the program effectiveness.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	continue with existing programs, enhancing opportunities as necessary and annually review previous year IDDE data to determine potential pollutant(s) and a related target audience	COMPLETE 1st PERMIT YEAR -- monitor public activities to determine effectiveness of program, provide summary in SWMP Annual Report
2018	continue with existing programs, enhancing opportunities as necessary and annually review previous year IDDE data to determine potential pollutant(s) and a related target audience	monitor public activities to determine effectiveness of program and messages provided, provide summary in SWMP Annual Report
2019	continue with existing programs, enhancing opportunities as necessary and annually review previous year IDDE data to determine potential pollutant(s) and a related target audience	monitor public activities to determine effectiveness of program and messages provided, provide summary in SWMP Annual Report
2020	continue with existing programs, enhancing opportunities as necessary and annually review previous year IDDE data to determine potential pollutant(s) and a related target audience	monitor public activities to determine effectiveness of program and messages provided, provide summary in SWMP Annual Report
2021	continue with existing programs, enhancing opportunities as necessary and annually review previous year IDDE data to determine potential pollutant(s) and a related target audience	monitor public activities to determine effectiveness of program and messages provided, provide summary in SWMP Annual Report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>PUBLIC EDUCATION AND OUTREACH</b>		<b>1 - a (ii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
<input checked="" type="checkbox"/> GENERAL PUBLIC	The City of Missoula and the Missoula Valley Water Quality District maintain websites with dedicated pages for stormwater information. Continued maintenance (updates) to this information will occur as well as opportunities for additional web opportunities (social media); Facebook, etc. Available information will include, at a minimum, those items required in the current MS4 permit.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
<input checked="" type="checkbox"/> COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula has positive experience with its internet presence and will continue to build on that platform. The website and information provided is ADA compliant and available to all citizens. Website presence and information is also available through partners like the Missoula Valley Water Quality District.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	advertise, maintain and update web information as necessary - seasonal messages, requests for input and survey opportunities	COMPLETE 1st PERMIT YEAR -- monitor public activities to determine effectiveness of content, furnish summary in SWMP Annual Report
2018	advertise, maintain and update web information as necessary - seasonal messages, requests for input and survey opportunities	monitor public activities to determine effectiveness of program and web content provided, furnish summary in SWMP Annual Report
2019	advertise, maintain and update web information as necessary - seasonal messages, requests for input and survey opportunities	monitor public activities to determine effectiveness of program and web content provided, furnish summary in SWMP Annual Report
2020	advertise, maintain and update web information as necessary - seasonal messages, requests for input and survey opportunities	monitor public activities to determine effectiveness of program and web content provided, furnish summary in SWMP Annual Report
2021	advertise, maintain and update web information as necessary - seasonal messages, requests for input and survey opportunities	monitor public activities to determine effectiveness of program and web content provided, furnish summary in SWMP Annual Report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>PUBLIC EDUCATION AND OUTREACH</b>		<b>1 - b (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
<input checked="" type="checkbox"/> GENERAL PUBLIC	The City of Missoula will use the stormwater website to provide outreach messages promoting the reasons for non-polluting stormwater behaviors and the benefits to stormwater discharges.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
<input checked="" type="checkbox"/> COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula stormwater website is the perfect tool for distributing information to all citizens regarding the benefits of proper stormwater management as well as the positive reasons behind ensuring stormwater discharge is pollutant free.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	start to develop strategy and messages regarding non-polluting behaviors and benefits for stormwater discharges	work on development of strategy and messages regarding non-polluting behaviors and benefits for stormwater discharges
2018	implement strategy and messages regarding non-polluting behaviors and benefits for stormwater discharges	COMPLETE 2nd PERMIT YEAR -- implement strategy and messages regarding non-polluting behaviors & benefits for stormwater discharges
2019	annually review previous twelve (12) months activities and update as necessary	monitor public activities to determine effectiveness of program and messages provided, summarize in SWMP Annual Report
2020	annually review previous twelve (12) months activities and update as necessary	monitor public activities to determine effectiveness of program and messages provided, summarize in SWMP Annual Report
2021	annually review previous twelve (12) months activities and update as necessary	monitor public activities to determine effectiveness of program and messages provided, summarize in SWMP Annual Report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>PUBLIC EDUCATION AND OUTREACH</b>		<b>1 - c (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
	The City of Missoula will work to develop and utilize a tailored outreach strategy for each identified target audience and specific stormwater polluting behavior.	
<input checked="" type="checkbox"/> GENERAL PUBLIC		
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
<input checked="" type="checkbox"/> COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will identify target audience(s) and specific relevant stormwater polluting behaviors and then as needed, create a tailored outreach for each identified target audience and specific relevant stormwater polluting behaviors. Outreach formats and distribution channels for disseminating information, will be tailored to the audience being addressed.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	research and begin development of a tailored outreach strategy for identified key target audiences and their specific stormwater polluting behaviors	work on development of outreach strategy, identifying audience and their stormwater polluting behavior
2018	implement strategy and messages regarding non-polluting behaviors and benefits for stormwater discharges	COMPLETE 2nd PERMIT YEAR -- implement outreach strategy and monitor results, submit in SWMP Annual Report
2019	annually review previous twelve (12) months activities and update as necessary	monitor identified audience activities to determine effectiveness of program and messages provided, submit in SWMP Annual Report
2020	annually review previous twelve (12) months activities and update as necessary	monitor identified audience activities to determine effectiveness of program and messages provided, submit in SWMP Annual Report
2021	annually review previous twelve (12) months activities and update as necessary	monitor identified audience activities to determine effectiveness of program and messages provided, submit in SWMP Annual Report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>PUBLIC EDUCATION AND OUTREACH</b>		<b>1 - c (ii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
<input checked="" type="checkbox"/> GENERAL PUBLIC	The City of Missoula will work to develop and utilize a tailored outreach strategy for each identified target audience and specific stormwater polluting behavior and distribute outreach materials to the identified target audience.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
<input checked="" type="checkbox"/> COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula will identify target audience(s) and specific relevant stormwater polluting behaviors and then as needed, create a tailored outreach for each identified target audience and specific relevant stormwater polluting behaviors. Outreach formats and distribution channels for disseminating information, will be tailored to the audience being addressed. Distribution of outreach materials to target audiences to occur in Permit Years 3 - 5 (2019 - 2021).	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	research and begin development of a tailored outreach strategy for identified key target audiences and their specific stormwater polluting behaviors	work on development of outreach strategy, identifying audience and their stormwater polluting behavior
2018	implement strategy and messages regarding non-polluting behaviors and benefits for stormwater discharges	implement outreach strategy and monitor results, submit in SWMP Annual Report
2019	Distribute outreach materials permit years 3-5, annually review previous twelve (12) months activities and update as necessary	monitor identified audience activities to determine effectiveness of program and messages provided, describing in SWMP Annual Report
2020	Distribute outreach materials permit years 3-5, annually review previous twelve (12) months activities and update as necessary	monitor identified audience activities to determine effectiveness of program and messages provided, describing in SWMP Annual Report
2021	Distribute outreach materials permit years 3-5, annually review previous twelve (12) months activities and update as necessary	monitor identified audience activities to determine effectiveness of program and messages provided, describing in SWMP Annual Report

## **MCM 2 – Public Involvement and Participation**

### **Regulatory Requirement(s):**

*MCM 2 – The permittee shall develop a strategy to involve key target audiences in the development and implementation of the SWMP that complies with state and local public notice requirements.*

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The City of Missoula has many volunteer groups that are essential to our successful non-point source management program as the sources of issues are often the very things that the general population can affect. Volunteers provide much needed assistance with labor and become more educated and engaged. The City of Missoula uses volunteers to help with three water pollution-related projects: the Annual Household Hazardous Waste Collection Event, Storm Drain Stenciling, and Riparian / Wetland Plantings.

### **Identify Approaches Involving Key Target Audiences in SWMP Development and Implementation — MCM / BMP 2 - a (i), 2 - a (ii)**

The City of Missoula already works closely with local construction organizations, developers and their representative engineering firms and will engage those groups to participate in the development and implementation of the Missoula MS4 SWMP. The City will ask for volunteers and / or nominations of other interested parties as well as solicit input for additional organizations participation.

### **Develop and Utilize Permittee's Website for Public Involvement — MCM / BMP 2 - b (i)**

The City of Missoula has an existing storm water website which will be utilized to advertise and facilitate public involvement in the development and implementation of the SWMP. Website content soliciting input from key target audiences and other interested stakeholders as well as the general public will be posted along with outreach materials, any planning documents, annual reports, illicit discharge information and reporting as well as construction project / work site complaints.

Each year since 1993 the Missoula Valley Water Quality District with the City of Missoula Wastewater Division has conducted a household hazardous waste collection event. Unwanted hazardous and toxic materials are accepted from Missoula County residents for no charge, including oil-based paints and stains, paint thinner, degreasers, gasoline, other flammable liquids, aerosol paints, fertilizer, and non-alkaline household batteries.

In 2004, a mercury thermometer collection and exchange campaign was started. Each household that brings one or more mercury thermometers to the Household Hazardous Waste Collection Day is given a coupon for one free digital thermometer to be picked up at a participating pharmacy.

The Water Quality District coordinates volunteer efforts for the annual Household Hazardous Waste Collection. Volunteers are recruited from the University of Montana, local environmental consultants, interested citizens, and other local businesses.

Periodically, storm drains have been stenciled or re-stenciled to remind residents never to dispose of waste through storm drains. Past events have taken place at the University of Montana, downtown Missoula and in Lolo. Historically, this work has been performed by university students, Boy Scouts and community members.

Working with local homeowners' associations, service groups, students, and community volunteers, the Water Quality District and the Parks and Recreation Department's Partners in Parks Volunteer Program,

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Conservation Lands Management Division, Urban Forestry Division, and annual sponsorship of National Public Lands Day has been conducting riparian and wetland planting events, re-vegetation and overall maintenance projects throughout the growing season since 2005. These projects and events take place in various locations throughout the roughly 350 acres of riparian habitat managed by the Missoula Conservation Lands program. Projects range from re-vegetation, rock dam removal, trash removal, tree planting and seeding of riparian and wetland areas in need. Native plants are obtained from the Montana Department of Natural Resources and Conservation and a portion are grown from seed in the Parks and Recreation greenhouse specifically for these types of projects. These plants help reduce runoff, stabilize channel banks, enhance and rejuvenate wildlife habitat, cleanse lands of waste and illicit discharges, create new riparian habitats, preserve existing wetlands, help keep water temperatures cool in summer, and educate the community about our precious natural resources and how to keep them thriving. Involving citizens in community work helps to build awareness about the Missoula Valley Habitat, it also builds a strong sense of pride in people who are currently or will become environmental stewards of our region.

The Public Works Department makes an annual presentation to the Missoula County Water Quality Advisory Council and solicits comments. The Water Quality Advisory Council is comprised of 20 volunteers appointed by the Chair of the City-County Board of Health, representing technical advisors, large water users, conservation groups, and interested citizens.

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>PUBLIC INVOLVEMENT AND PARTICIPATION</b>		<b>2 - a (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
<input checked="" type="checkbox"/> GENERAL PUBLIC	The City of Missoula will work to identify approaches to involve key target audiences in the development and implementation of the SWMP, so as to comply with state and local notice requirements. Will work with existing and new partners representing organizations with key target audiences and document collaboration.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
<input checked="" type="checkbox"/> COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula will identify key target audiences to be involved in the development and implementation of the SWMP. Records will be maintained of the target audience, collaboration, activities outlined and audiences reached to evaluate the program effectiveness.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	identify key target audiences and approach for involvement of development of the SWMP, including dates and purpose of involvement	COMPLETE 1st PERMIT YEAR -- submit description of public involvement approach and schedule summary in SWMP Annual Report
2018	annually review and update identified key target audiences and approach for involvement of development of the SWMP, including dates and purpose of involvement	continue to monitor, review and update as necessary
2019	annually review and update identified key target audiences and approach for involvement of development of the SWMP, including dates and purpose of involvement	continue to monitor, review and update as necessary
2020	annually review and update identified key target audiences and approach for involvement of development of the SWMP, including dates and purpose of involvement	continue to monitor, review and update as necessary
2021	annually review and update identified key target audiences and approach for involvement of development of the SWMP, including dates and purpose of involvement	continue to monitor, review and update as necessary

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>PUBLIC INVOLVEMENT AND PARTICIPATION</b>		<b>2 - a (ii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
<input checked="" type="checkbox"/> GENERAL PUBLIC	The City of Missoula will implement identified approaches to involve key target audiences in the development and implementation of the SWMP, so as to comply with state and local notice requirements. Additionally, will document audience participation and audience feedback on the approach in the development of the SWMP and annual report.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
<input checked="" type="checkbox"/> COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula will identify key target audiences to be involved in the development and implementation of the SWMP. Records will be maintained of the target audience, collaboration, activities outlined and audiences reached to evaluate the program effectiveness.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	prepare for the involvement of key target audiences in the development and implementation of the SWMP	begin preparing for the involvement of key audiences in the development and implementation of the SWMP
2018	implement identified involvement approaches for key target audiences in the development and implementation of the SWMP	COMPLETE 2nd PERMIT YEAR -- document participation and feedback on the approach in the development and implementation of the SWMP
2019	annually review and update identified involvement approaches for key target audiences in the development and implementation of the SWMP	continue to monitor, review and update as necessary
2020	annually review and update identified involvement approaches for key target audiences in the development and implementation of the SWMP	continue to monitor, review and update as necessary
2021	annually review and update identified involvement approaches for key target audiences in the development and implementation of the SWMP	continue to monitor, review and update as necessary

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>PUBLIC INVOLVEMENT AND PARTICIPATION</b>		<b>2 - b (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
<input checked="" type="checkbox"/> GENERAL PUBLIC	The City of Missoula will develop and advertise, or utilize existing, stormwater website to solicit input from key target audiences, stakeholders and general public. Website will include, at minimum, all requirements for permit compliance and be available to the public on the internet as well as public employees intranet.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
<input checked="" type="checkbox"/> COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
<input checked="" type="checkbox"/> CONSTRUCTION	The City of Missoula will utilize existing stormwater website to solicit input from target audiences, stakeholders and general public via the internet as well as public employees via intranet. Specific information regarding public involvement and participation will be offered to solicit the input.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	provide information on the stormwater website soliciting public involvement and participation	COMPLETE 1st PERMIT YEAR -- begin preparing for the involvement of key audiences in the development and implementation of the SWMP
2018	annually review and update website for soliciting public involvement and participation	continue to monitor, review and update as necessary
2019	annually review and update website for soliciting public involvement and participation	continue to monitor, review and update as necessary
2020	annually review and update website for soliciting public involvement and participation	continue to monitor, review and update as necessary
2021	annually review and update website for soliciting public involvement and participation	continue to monitor, review and update as necessary

## **MCM 3 – Illicit Discharge Detection and Elimination (IDDE)**

### Regulatory Requirement(s):

*MCM 3 – The permittee shall develop, implement and enforce a program to detect and eliminate illicit discharges ( as defined in ARM 17.30.1102(7) ) into the permitted Small MS4.*

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Illicit discharge is defined as any discharge not comprised entirely of rainfall or snowmelt. In order to effectively control illicit discharges to the storm water sewer system, the City of Missoula has created an Illicit Discharge Detection and Elimination Program consisting of the following components: a storm water sewer system geographic database, ordinances prohibiting illicit discharges, an illicit discharge monitoring program, and an education program. Each of these component pieces serve a critical function in reducing illicit discharge to surface water. Particular attention is paid to the pollutants of concern, but all potential pollutants will be targeted under this program, including cross connection of sanitary sewer, perchloroethylene, motor vehicle fluids, deicer, and regulated substances as defined by the Superfund Amendments and Reauthorization Act.

### **Frequent Non-Storm Water Illicit Discharges — MCM / BMP 3 - a (i)**

The City of Missoula has an established geographic information database of the storm water sewer system and it is used to identify, track and monitor frequent non-storm water discharges within the MS4. This is accomplished by utilizing a geographic information database of storm water sewer system components and the tracking of reported and confirmed instances of illicit discharges within the MS4. As per the Permit, this system maintains data about the location, the contributor and the pollutant discharge. The City of Missoula has various ordinances, administrative rules and other existing mechanisms in place prohibiting these illicit discharges and will augment or modify as necessary to maintain permit compliance.

### **Occasional / Incidental Non-Storm Water Discharges — MCM / BMP 3 - b (i), 3 - b (ii)**

The City of Missoula's geographic information database of the storm water sewer system monitors and tracks all non-storm water discharges, including occasional incidental discharges, the pollutants associated with the discharge and the identified contributor. As per the permit, these discharges will not be addressed as illicit discharges, however they will still be documented and the City will work to establish necessary regulations prohibiting these discharges as well.

### **Inventory Storm Water Sewer Infrastructure to Track Illicit Discharges and Determine High Priority Areas — MCM / BMP 3 - c (i)**

The City of Missoula geographic information database of storm water sewer system components, allows the creation of maps in order to better visualize possible sources of contamination or detail the area of a water body that an accidental spill may affect. A City map of storm water sewer system piping, sumps, inlets, outfalls, etc. has been placed on the City's website in order to educate citizens about the effects of illegal dumping by illustrating the direct connection between storm water inlets and the outfalls located at rivers and streams. In addition, the City has created maintenance schedules and associated maps for the storm water components so they may be properly and regularly cleaned and maintained.

The City's storm water sewer system geographic database was developed using a georeferenced aerial photo taken in 2006 as the basemap. GIS data for closed conduits, open channels, manholes, inlets, catch

basins, outfalls, drywells, separators, etc. was gathered from engineers' project drawings, historic maps, an inventory study completed in 1966, and field verification. During the summers of 2008 and 2009, all permitted river and stream banks within the Urbanized Area and Missoula City Limits were walked in order to locate outfalls. New outfalls were added to the storm water sewer system GIS database, existing outfalls were confirmed, and outfalls which were not found were removed from the GIS database. Other storm water components are updated when field personnel inspect or maintain them. Field personnel report map discrepancies to GIS section staff so that corrections to the data can be made.

Realizing the importance of keeping the storm water sewer system database current, the City of Missoula created an administrative rule which requires storm water sewer system as-built drawings to be submitted prior to project close-out for any infrastructure project constructed within the City Limits. Upon receipt of the as-built drawings, the data is updated to reflect the changes made during the construction project.

In addition to storm water sewer system infrastructure information, the database also contains information relevant to the drainage area characterization. This data includes such things as land use, zoning, MPDES storm water permittees, age of development, historical industrial uses, known locations of illicit discharges, pollution complaints, etc. This information helps characterize the data collected and understand the effects of drainage area characteristics on storm water quality in Missoula's particular environment.

### **Ordinances Prohibiting Illicit Discharges — MCM / BMP 3 - d (i), 3 - d (iii)**

In 2000, the Missoula City Council and the Board of County Commissioners amended the Missoula Aquifer Protection Ordinance, originally adopted in 1993, which is intended to protect the public health, safety, and general welfare of those who depend upon the Missoula Valley Aquifer and surface waters in the Missoula Valley for drinking water, recreation, and other beneficial uses. The provisions of the ordinance were deemed to be a health ordinance and as such are to be applied to an area within five (5) miles outside of the city limits.

The ordinance establishes prohibitions and / or restrictions on regulated substances and activities which have the potential of causing surface or groundwater contamination. Facilities that store Regulated Substances above the specific quantities are required to obtain a permit from the Water Quality District. This requires facilities to report chemical quantities and steps taken to reduce the likelihood of spills to the District every two (2) years. Regulated Substances are those found in 40 CFR Part 261; regulated substances listed in Superfund Amendments and Reauthorization Act (SARA) Title III; any petroleum product; any hazardous waste; deicers; or any other substances that may threaten contamination of surface water or the Missoula Valley Aquifer, excluding substances used for personal household use. Further, it is unlawful for any person to "cause contamination or to place, cause to be placed, or allow to remain in place any substance in a location where it is likely to cause contamination".

The Missoula Valley Water Quality Ordinance also gives Water Quality District staff the authority to perform inspections and enforce the provisions of the ordinance. A Notice of Violation may be written, after which corrective action must be taken within five (5) working days, unless the alleged violator requests an administrative review. Any person who violates any of the provisions of the ordinance is guilty of a misdemeanor and can be fined up to five hundred (\$500.00) dollars and / or imprisoned in the county jail for up to sixty (60) days.

In addition to the Missoula Valley Water Quality Ordinance, Title 13.04 of the Missoula Municipal Code, entitled "Sewer Regulations", makes it "unlawful for any person to discharge or cause to be discharged into the storm sewage system any waste other than surface storm water drainage or clear water except when other connections are specifically allowed by the Director of Public Works." This allows for

connects listed in parts II.B.3.a.vi and II.B.3.a.vii to be allowed if they are not found to be significant contributors of pollutants to the Small MS4.

The Montana Water Quality Act, Missoula City-County Health Code, Missoula Municipal Code, and Uniform Plumbing Code all prohibit on-site sewage disposal systems that flow into the storm water sewer system. The majority of Missoula's storm water is handled by sumps (dry wells), rather than piped systems. In nearly every location that there is storm water sewer in Missoula, there is also sanitary sewer. The City of Missoula maintains connection records on buildings and if records are missing, a dye test is required to verify connection to the sanitary sewer before a building can legally be sold.

### **Develop and Implement a Formal ERP for Illicit Discharges — MCM / BMP 3 - d (iv), 3 - d (v)**

The City of Missoula's Illicit Discharge Monitoring Program was developed using the Center for Watershed Protection's Illicit Discharge Detection and Elimination manual for guidance. The Program includes a dry weather screening program; a citizen reporting hotline, where citizens may report suspected illegal dumping; and hazardous spill response. Hazardous spill response is accomplished by Water Quality District staff along with the City of Missoula Fire Department. Both agencies possess the equipment, tools and supplies and are trained in proper hazardous spill mitigation techniques.

### **Inspect, During Dry Weather, Outfalls for Illicit Discharges and Determine High Priority Outfalls — MCM / BMP 3 - e (i), 3 - e (ii), 3 - e (iii)**

Dry-weather screening is typically conducted during July when surface water levels and rainfall rates are low. During the first permit cycle, all rivers and streams were walked and existing outfall inventories verified or edited. During the first cycle, priority was given to older areas of town where illicit discharge was more likely to be found. During subsequent permit cycles, twenty (20%) percent of outfalls will be inspected annually, and outfalls having dry weather flows sampled. Samples are tested for total suspended solids, chemical oxygen demand, total phosphorus, total nitrogen, pH, ammonia, E. Coli, total coliform, chloride, surfactants, and potassium. Many areas within Missoula have high ground water or seasonal springs which integrate with the MS4. This testing helps to differentiate between ground water and illicit discharge.

### **Consistently and Effectively Investigate Suspected Illicit Discharges and Track Compliance — MCM / BMP 3 - f (i), 3 - f (ii), 3 - f (iii)**

Using the Center for Watershed Protection's Indicator Parameters Used to Detect Illicit Discharges table in the Illicit Discharge Detection and Elimination manual, the list of possible contaminants can be narrowed. Once a problem area is located, the upstream system is evaluated and various areas chosen to perform additional sampling. These locations are chosen so as to sample each branch of the system and various places along stretches with no branches in order to isolate the area of discharge. After the area has been narrowed, if the illicit discharge cannot easily be detected, a video inspection is performed in the pipe. Once the source is identified, the process of removing the discharge will begin using the procedures outlined in Title 13.26 - Missoula Valley Water Quality Ordinance. All actions taken during the process will be documented in the asset management software.

The citizen reporting hotline is coordinated with the Construction Site Storm Water Runoff Control program. Potential storm water pollution can be reported to this number twenty-four (24) hours a day. Office hours are 8:00 AM to 5:00 PM, Monday through Friday and messages can be left after hours. The messages are checked daily. Calls can be made anonymously. The hotline number can be found on the

City's webpage, Missoula Valley Water Quality District's webpage, and Missoula Valley Water Quality District's education publications.

The Missoula Valley Water Quality District administers a permitting program for facilities that store regulated substances above certain threshold quantities listed in the Missoula Valley Water Quality Ordinance. Water Quality District staff performs periodic inspections to ensure proper materials handling. When deficiencies are found, the inspector uses the opportunity to educate staff on proper procedures.

Restaurants and food service businesses located within the Missoula sanitary sewer service area are required to discharge wastewater to grease collection devices. Collection device locations are tracked in the City's asset maintenance software and an inspector makes regular visits to agencies with collection devices. Inspections are performed and the visit is used to educate users about the importance of the device for preventing sanitary sewer overflows and storm sewer contamination. The Health Department plans to conduct an education program for downtown businesses, including restaurants and bars, which store solid wastes and may conduct activities such as cleaning in alleys that drain to the City storm water system. This educational program would inform businesses of the connection of storm drains to the river, and potential alternatives to activities that may cause pollution.

In addition to these activities, area businesses and the general public are educated via the Water Quality District's educational pamphlets, utility stuffers, TV advertising, PSAs, and printed advertising. The City's and Water Quality District's web pages also serve as sources of education. This part of the Program is coordinated with Minimum Control Measure I – Public Education and Outreach.

Informing public employees of hazards associated with illegal discharges and improper disposal of waste will be accomplished in conjunction with the Pollution Prevention and Good Housekeeping for Municipal Operations program along with the Public Education and Outreach. At least once a year, field employees in Parks and Recreation and Public Works receive training geared toward their respective maintenance responsibilities and the City's required good housekeeping techniques. In addition, the training discusses the importance of proper handling, storage, and disposal of potential contaminants. Employees are educated about various forms of illicit discharge and asked to look for them during the course of their work days. This part of the program is coordinated with Minimum Control Measure Six – Pollution Prevention / Good Housekeeping for Permittee Operations.

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - a (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
<input checked="" type="checkbox"/> GENERAL PUBLIC	The City of Missoula will review IDDE data to determine more frequent non-stormwater discharges that may be significant contributors of pollutants, what the pollutants are and the contributor of the pollutant. Additionally the City will maintain documentation of all local controls and conditions related to the discharge(s).	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
<input checked="" type="checkbox"/> COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula has regulations, ordinances and administrative rules, in place to address non-stormwater discharges and will continue to enforce the regulations, working toward reducing non-stormwater discharges.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	continue with existing IDDE program, utilize Public Education and Outreach program to modify behaviors causing non-stormwater illicit discharges to water bodies	review IDDE data and modify Public Education and Outreach program to modify behaviors resulting in illicit discharges
2018	continue with existing IDDE program, utilize Public Education and Outreach program to modify behaviors causing non-stormwater illicit discharges to water bodies	review IDDE data and modify Public Education and Outreach program to modify behaviors resulting in illicit discharges
2019	continue with existing IDDE program, utilize Public Education and Outreach program to modify behaviors causing non-stormwater illicit discharges to water bodies	review IDDE data and modify Public Education and Outreach program to modify behaviors resulting in illicit discharges
2020	continue with existing IDDE program, utilize Public Education and Outreach program to modify behaviors causing non-stormwater illicit discharges to water bodies	review IDDE data and modify Public Education and Outreach program to modify behaviors resulting in illicit discharges
2021	continue with existing IDDE program, utilize Public Education and Outreach program to modify behaviors causing non-stormwater illicit discharges to water bodies	review IDDE data and modify Public Education and Outreach program to modify behaviors resulting in illicit discharges

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - b (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
<input checked="" type="checkbox"/> GENERAL PUBLIC	The City of Missoula will review IDDE data to determine non-stormwater discharges that may be non-significant contributors of pollutants, and that will not be addressed as illicit discharges. Will identify the pollutants associated with each discharge and the contributor. Additionally the City will maintain documentation of all local controls and conditions related to the discharge(s).	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
<input checked="" type="checkbox"/> COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula has regulations, ordinances and administrative rules, in place to address non-stormwater discharges and will continue to enforce the regulations, working toward reducing non-stormwater discharges.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	continue with existing IDDE program, utilize Public Education and Outreach program to modify behaviors causing non-stormwater illicit discharges to water bodies	review IDDE data and modify Public Education and Outreach program to modify behaviors resulting in illicit discharges
2018	continue with existing IDDE program, utilize Public Education and Outreach program to modify behaviors causing non-stormwater illicit discharges to water bodies	review IDDE data and modify Public Education and Outreach program to modify behaviors resulting in illicit discharges
2019	continue with existing IDDE program, utilize Public Education and Outreach program to modify behaviors causing non-stormwater illicit discharges to water bodies	review IDDE data and modify Public Education and Outreach program to modify behaviors resulting in illicit discharges
2020	continue with existing IDDE program, utilize Public Education and Outreach program to modify behaviors causing non-stormwater illicit discharges to water bodies	review IDDE data and modify Public Education and Outreach program to modify behaviors resulting in illicit discharges
2021	continue with existing IDDE program, utilize Public Education and Outreach program to modify behaviors causing non-stormwater illicit discharges to water bodies	review IDDE data and modify Public Education and Outreach program to modify behaviors resulting in illicit discharges

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - b (ii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will review IDDE work to augment existing regulations, ordinances and administrative rules,	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula has existing regulations, ordinances and administrative rules, in place to address non-stormwater discharges and will continue to enforce the regulations, working toward reducing non-stormwater discharges. Will also review and ensure inclusion of a provision prohibiting occasional incidental non-stormwater discharges that may be contributing significant amounts of pollutants.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review existing regulations, ordinances and administrative rules, regarding illicit discharge detection and elimination, including provision prohibiting occasional incidental discharges	review existing regulations
2018	ensure regulations, ordinances and administrative rules, are in place prohibiting occasional incidental non-stormwater discharges	COMPLETE 2nd PERMIT YEAR -- modify as necessary regulations, ordinances and administrative rules, to ensure permit compliance
2019	monitor regulations, ordinances and administrative rules, regarding illicit discharge detection and elimination to ensure compliance with permit	monitor and maintain regulations
2020	monitor regulations, ordinances and administrative rules, regarding illicit discharge detection and elimination to ensure compliance with permit	monitor and maintain regulations
2021	monitor regulations, ordinances and administrative rules, regarding illicit discharge detection and elimination to ensure compliance with permit	monitor and maintain regulations

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - c (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will review IDDE data and compare to existing stormwater database and map to determine high priority areas, paying special attention to known illegal dumping areas, older areas of the City, areas with on-site sewage disposal systems and areas that discharge to impaired water bodies -- including names and locations of all surface waters that receive discharges from MS4 outfalls.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
CONSTRUCTION	The City of Missoula has an existing GIS database and map, and will continue to add new data as well as verify and validate information on existing stormwater infrastructure. Map includes features such as inlets, open channels, pipes, dry wells and other stormwater infrastructure. Will ensure identification of high priority areas and will work to maintain the GIS database and map.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review IDDE data, update database and map as necessary, ensuring all stormwater components (inlets, outfalls, open channels, pipes, dry wells, etc.) are labeled incl high priority areas	COMPLETE 1st PERMIT YEAR -- current and accurate database and map of stormwater system components
2018	maintain database and map of stormwater system	current and accurate database and map of stormwater system components
2019	maintain database and map of stormwater system	current and accurate database and map of stormwater system components
2020	maintain database and map of stormwater system	current and accurate database and map of stormwater system components
2021	maintain database and map of stormwater system	current and accurate database and map of stormwater system components

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - d (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
X GENERAL PUBLIC	The City of Missoula has existing regulations, ordinances and administrative rules, in place to prohibit non-stormwater discharges, as well as enforcement procedures and actions. Will review and ensure they are in compliance with this permit.	
X PUBLIC EMPLOYEES		
X COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula has existing regulations, ordinances and administrative rules, in place to address non-stormwater discharges and will continue to enforce the regulations, working toward eliminating non-stormwater discharges. Will also review and ensure existing regulations meet permit requirements.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review existing IDDE regulations and enforcement procedures and actions for permit compliance.	complete review of existing IDDE regulations and procedures and actions for permit compliance
2018	modify existing IDDE regulations and enforcement procedures and actions as necessary for permit compliance.	COMPLETE 2nd PERMIT YEAR -- ensure IDDE regulations and enforcement procedures and actions adopted for permit compliance
2019	execute and maintain IDDE regulations and enforcement procedures and actions as necessary for permit compliance.	minimize increase of IDDE complaints, reports and investigations
2020	execute and maintain IDDE regulations and enforcement procedures and actions as necessary for permit compliance.	minimize increase of IDDE complaints, reports and investigations
2021	execute and maintain IDDE regulations and enforcement procedures and actions as necessary for permit compliance.	minimize increase of IDDE complaints, reports and investigations

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - d (iii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula has existing regulations, ordinances and administrative rules, in place to prohibit non-stormwater discharges, as well as enforcement procedures and actions -- will review and solicit assistance from neighboring MS4s, as necessary and feasible, to cooperatively execute IDDE investigation and enforcement.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
CONSTRUCTION	The City of Missoula has existing regulations, ordinances and administrative rules, in place to address non-stormwater discharges and will continue to enforce the regulations, working toward eliminating non-stormwater discharges. Will also review and ensure existing regulations meet permit requirements.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review existing IDDE regulations and enforcement procedures and actions for permit compliance and need for cooperative agreements with other MS4	complete review of existing IDDE regulations and procedures and actions for permit compliance
2018	modify existing IDDE regulations and enforcement procedures and actions as necessary for permit compliance and establish cooperative agreements with other MS4 as necessary	COMPLETE 2nd PERMIT YEAR -- ensure IDDE regulations and enforcement procedures and actions adopted for permit compliance
2019	review and maintain cooperative agreements with other MS4 regarding IDDE regulations and enforcement procedures and actions as necessary for permit compliance.	no increase of IDDE complaints, reports and investigations
2020	execute and maintain IDDE regulations and enforcement procedures and actions as necessary for permit compliance.	no increase of IDDE complaints, reports and investigations
2021	execute and maintain IDDE regulations and enforcement procedures and actions as necessary for permit compliance.	no increase of IDDE complaints, reports and investigations

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - d (iv)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula has existing ERP for IDDE with the Missoula Valley Water Quality District (MVWQD), will review and make necessary changes so as to be in compliance with the permit and to include informal, formal and judicial responses. Will also review agreement(s) and memoranda of understanding (MOU) to also ensure permit compliance.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
CONSTRUCTION	The City of Missoula in cooperation with the Missoula Valley Water Quality District (MVWQD) has an ERP for IDDE, staff will cooperatively review and make necessary changes to get the ERP in compliance with the permit and will submit required summary with the 2nd year annual report.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review existing cooperative IDDE ERP between City of Missoula and Missoula Valley Water Quality District (MVWQD)	complete review of existing IDDE ERP and identify necessary changes
2018	modify existing IDDE ERP between City of Missoula and MVWQD to ensure permit compliance	COMPLETE 2nd PERMIT YEAR -- have an IDDE ERP in place and executed as per permit requirements
2019	review and maintain IDDE ERP and cooperative agreements between City of Missoula and other entities, ensuring compliance with permit requirements.	minimize increase of IDDE complaints, reports and investigations
2020	execute and maintain IDDE regulations and enforcement procedures and actions as necessary for permit compliance.	minimize increase of IDDE complaints, reports and investigations
2021	execute and maintain IDDE regulations and enforcement procedures and actions as necessary for permit compliance.	minimize increase of IDDE complaints, reports and investigations

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - d (v)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula has existing ERP for IDDE with the Missoula Valley Water Quality District (MVWQD), will review and make necessary changes so as to be in compliance with the permit. Will also review agreement(s) and memoranda of understanding (MOU) to also ensure permit compliance. Will implement necessary changes 2nd permit year.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
CONSTRUCTION	The City of Missoula in cooperation with the Missoula Valley Water Quality District (MVWQD) has an ERP for IDDE, staff will cooperatively review and make necessary changes to get the ERP in compliance with the permit and will implement necessary changes and submit required summary with the 2nd year annual report.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review existing cooperative IDDE ERP between City of Missoula and Missoula Valley Water Quality District (MVWQD)	complete review of existing IDDE ERP and identify necessary changes
2018	modify existing IDDE ERP between City of Missoula and MVWQD to ensure permit compliance, implement changes for compliance with permit	COMPLETE 2nd PERMIT YEAR -- have an IDDE ERP in place and executed as per permit requirements, implement IDDE ERP
2019	monitor and modify making necessary changes to IDDE ERP, regulations and enforcement procedures and actions as necessary for permit compliance.	minimize increase of IDDE complaints, reports and investigations
2020	monitor and modify making necessary changes to IDDE ERP, regulations and enforcement procedures and actions as necessary for permit compliance.	minimize increase of IDDE complaints, reports and investigations
2021	monitor and modify making necessary changes to IDDE ERP, regulations and enforcement procedures and actions as necessary for permit compliance.	minimize increase of IDDE complaints, reports and investigations

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - e (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
	The City of Missoula currently inspects and screens all outfalls for IDDE during dry weather and will continue to do so under the new permit.	
GENERAL PUBLIC		
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will continue to inspect and screen all outfalls for IDDE during dry weather as per permit criteria.	
CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	inspect and screen outfalls during dry weather to detect illicit discharges and connections	compile and report data on inspection and screen of outfalls during dry weather
2018	inspect and screen outfalls during dry weather to detect illicit discharges and connections	compile and report data on inspection and screen of outfalls during dry weather
2019	inspect and screen outfalls during dry weather to detect illicit discharges and connections	compile and report data on inspection and screen of outfalls during dry weather
2020	inspect and screen outfalls during dry weather to detect illicit discharges and connections	compile and report data on inspection and screen of outfalls during dry weather
2021	inspect and screen outfalls during dry weather to detect illicit discharges and connections	compile and report data on inspection and screen of outfalls during dry weather

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - e (ii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will identify high priority outfalls using inspection and screening data, maps and other information based on potential water quality impact, and other minimum considerations as per the permit.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will continue to follow permit criteria for maintaining data on high priority outfalls and submit an annual report.	
CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review available data, as per permit requirements, to generate report identifying high priority outfalls	prepare and review data for identifying high priority outfalls
2018	review available data, as per permit requirements, to generate report identifying high priority outfalls	identify high priority outfalls, based on screening results as per permit and provide data with annual report
2019	review available data, as per permit requirements, to generate report identifying high priority outfalls	identify high priority outfalls, based on screening results as per permit and provide data with annual report
2020	review available data, as per permit requirements, to generate report identifying high priority outfalls	identify high priority outfalls, based on screening results as per permit and provide data with annual report
2021	review available data, as per permit requirements, to generate report identifying high priority outfalls	identify high priority outfalls, based on screening results as per permit and provide data with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - e (iii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will inspect and screen identified high priority outfalls as per permit requirements.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will continue to inspect and screen identified high priority outfalls as required by the permit.	
CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review available data, as per permit requirements, to generate report identifying high priority outfalls	prepare and review data for identifying high priority outfalls
2018	review available data, as per permit requirements, to generate report identifying high priority outfalls	identify high priority outfalls, based on screening results as per permit and provide data with annual report
2019	review available data, as per permit requirements, to generate report identifying high priority outfalls	COMPLETE 3rd PERMIT YEAR -- submit summary of screening results of high priority outfalls
2020	review available data, as per permit requirements, to generate report identifying high priority outfalls	submit summary of screening results of high priority outfalls
2021	review available data, as per permit requirements, to generate report identifying high priority outfalls	submit summary of screening results of high priority outfalls

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - f (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop an Illicit Discharge Investigation and Corrective Action Plan as per permit requirements, and use it to locate illicit discharges, select corrective action and identify the process investigate, notify, document and resolve illicit discharges.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula will review existing ordinances and policies and re-work, as needed, to develop the required illicit discharge investigation and action plan.	
CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	develop Illicit Discharge Investigation and Corrective Action Plan as per permit requirements.	COMPLETE 1st PERMIT YEAR -- prepare and review data for identifying high priority outfalls
2018	monitor and modify Illicit Discharge and Investigation and Corrective Action Plan making necessary changes for permit compliance.	maintain an effective plan
2019	monitor and modify Illicit Discharge and Investigation and Corrective Action Plan making necessary changes for permit compliance.	maintain an effective plan
2020	monitor and modify Illicit Discharge and Investigation and Corrective Action Plan making necessary changes for permit compliance.	maintain an effective plan
2021	monitor and modify Illicit Discharge and Investigation and Corrective Action Plan making necessary changes for permit compliance.	maintain an effective plan

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - f (ii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop an Illicit Discharge Investigation and Corrective Action Plan as per permit requirements, and use it to locate illicit discharges, select corrective action and identify the process investigate, notify, document and resolve illicit discharges.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will review existing ordinances and policies and re-work, as needed, to develop the required illicit discharge investigation and action plan.	
CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	develop Illicit Discharge Investigation and Corrective Action Plan as per permit requirements.	prepare and review data for identifying high priority outfalls
2018	implement Illicit Discharge and Investigation and Corrective Action Plan making necessary changes for permit compliance.	COMPLETE 2nd PERMIT YEAR -- implement Illicit Discharge and Corrective Action Plan
2019	monitor and modify Illicit Discharge and Investigation and Corrective Action Plan making necessary changes for permit compliance.	maintain an effective plan
2020	monitor and modify Illicit Discharge and Investigation and Corrective Action Plan making necessary changes for permit compliance.	maintain an effective plan
2021	monitor and modify Illicit Discharge and Investigation and Corrective Action Plan making necessary changes for permit compliance.	maintain an effective plan

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>ILLICIT DISCHARGE DETECTION &amp; ELIMINATION</b>		<b>3 - f (iii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will document and maintain data regarding the Illicit Discharge Investigation and Corrective Action Plan activities as per permit requirements.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula will continue to maintain documents and data gathered under the required illicit discharge investigation and action plan using database applications and produce necessary reporting as required.	
CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	develop Illicit Discharge Investigation and Corrective Action Plan as per permit requirements.	prepare and review data for identifying high priority outfalls
2018	implement Illicit Discharge and Investigation and Corrective Action Plan making necessary changes for permit compliance.	COMPLETE 2nd PERMIT YEAR -- implement Illicit Discharge and Corrective Action Plan
2019	while executing plan, gather data and maintain documentation regarding investigations and corrective action taken under the plan	COMPLETE 3rd PERMIT YEAR -- maintain documentation on plan activities and submit summary with Annual report
2020	while executing plan, gather data and maintain documentation regarding investigations and corrective action taken under the plan	maintain documentation on plan activities and submit summary with Annual report
2021	while executing plan, gather data and maintain documentation regarding investigations and corrective action taken under the plan	maintain documentation on plan activities and submit summary with Annual report

## **MCM 4 – Construction Site Storm Water Management**

### Regulatory Requirement(s):

*MCM 4 – The permittee shall develop, implement, and enforce a program to reduce pollutants in storm water runoff to the permitted Small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. If the Department waives its permitting requirements for storm water discharges associated with construction activity that disturbs less than five acres total land area in accordance with ARM 17.30.1105(5), the Small MS4 permittee is not required to develop, implement, and / or enforce a program to reduce pollutant discharges from such sites.*

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Polluted storm water runoff from construction sites can enter storm drain systems and be discharged into local rivers and streams. Sediment is the main construction pollutant of concern in the Missoula Valley. Sedimentation / siltation is one pollutant for which the Bitterroot River is listed as impaired. Sediment in rivers reduces the amount of sunlight reaching aquatic plants, clogs fish gills, smothers aquatic habitat, covers riffles which oxygenate the water, impedes navigation and contributes to flooding by reducing the size of channels. Sediment runoff rates from construction sites are typically ten (10) to twenty (20) times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. In addition to sediment, construction sites can contribute solid and sanitary wastes, phosphorus, nitrogen, pesticides, oil and grease, concrete truck washout, construction chemicals, and construction debris to our local water bodies.

In order to reduce the discharge of these pollutants to our local rivers and streams, the City of Missoula has developed a Construction Site Storm Water Management Program. This program consists of five (5) parts: a construction Storm Water Pollution Prevention Plan (SWPPP) ordinance, construction site standard drawings, site plan review procedures, a dedicated water pollution complaint phone number, and a site inspection checklist.

### **Construction Site Storm Water Management — MCM / BMP 4 - a (i), 4 - a (iii), 4 - a (iv), 4 - b (i), 4 - b (ii), 4 - c (i), 4 - c (iii), 4 - c (iv), 4 - c (v)**

On November 23, 2009, the City Council of Missoula unanimously passed Ordinance 3414, repealing Chapter 15.64 of the Missoula Municipal Code and establishing Chapter 15.65 entitled "Grading, Drainage, Erosion Control and Storm Water Pollution Prevention Plan (SWPPP)". This newly adopted chapter establishes the requirement for acquiring Grading and Storm Water Pollution Prevention Plan Permits before commencing grading associated with a subdivision / development project, building permit, or zoning compliance permit on public or private property. The purpose of the chapter is to provide minimum standards for site grading and the control of storm water runoff, both quantity and quality. It creates permitting, submittal and development design standards for erosion control and sediment control, preservation of natural drainage systems, flood mitigation, site grading, and protection of property. Requirements for multifamily, commercial, and industrial parcels to retain all storm water on site are addressed. This chapter also establishes a fee structure, penalties for commencing work without a permit, and penalties for violation of the code.

This ordinance, Chapter 15.65, was created because contractors were already familiar with the previous Chapter 15.64, and were accustomed to acquiring Grading, Drainage, and Erosion Control Permits. By

adding another similar permit to this chapter, the SWPPP permit, contractors were easily able to assimilate this into their routines. Another convenience for contractors of this permit is that it requires the State MT DEQ SWPPP Permit application packet as the application for the local permit as well, so contractors don't need to fill out multiple applications. One hundred (100%) percent of applications will be reviewed for compliance with City and State requirements.

Additionally, seven (7) new construction site Storm Water Pollution Prevention Plan (SWPPP) BMP standard drawings were created in 2005 and 2006. The drawings are required to be part of applicable projects constructed within City Limits by Section 15.65.130 of the Missoula Municipal Code. These standard drawings include Temporary Access to Construction Sites, Silt Fence Installation, Post-Paving Gravel Curb Intake Filter, Pre-Paving Gravel Intake Filter, Straw Bale Check Dams, and Sediment Control at Field Catch Basins. All projects within Missoula city limits disturbing one (1) acre or more are required to have all necessary Storm Water Pollution Prevention Plan (SWPPP) Best Management Practices (BMPs) installed and maintained.

The City and County have cooperatively developed standard drawings for post-construction structural BMPs which include means to retain storm water on site. Standard drawings include storage practices, filtration practices, and infiltration practices. Designers can use any of the standard drawings which meet the needs for the specified project, create their own BMPs, or use approved commercially available BMPs.

In 2006, the City began requiring the installation of special / custom covers for drywells and storm water manholes. Standard drawings detail the requirements which must be followed on all new construction projects. Storm water manhole covers must have a trout logo and contain the phrases "Dump No Waste" and "Drains to Streams". These new storm water manhole covers will serve as permanent reminders to citizens that only storm water should enter the storm water sewer drainage system.

The City of Missoula has created a "Subdivision Toolbox" for engineering consultants performing subdivision and other construction work. In 2007, City staff held a conference for all design professionals and the new toolbox was introduced. The toolbox is located on the City's website and has links to related information such as applicable codes, checklists, standard drawings, as-built drawings, and storm and sanitary sewer maps. Requirements for the acquisition of a City of Missoula SWPPP permit are included in this information and design professionals are required to include completed checklists with their design submittals. Filling out the checklists helps ensure that submittals are accurate and complete. Site plan reviewers use the completed checklists to review the plans and ensure that required elements are present. If designers omit any applicable SWPPP component, the plans can be amended or rejected. All site plans are reviewed for compliance with the Grading, Drainage, Erosion Control, and Storm Water Pollution Prevention Plan. Site plans and storm water management controls for major projects, including City road construction projects, are also reviewed by Health Department, Water Quality District staff for potential storm water pollution issues.

Two employees of the Water Quality District serve in an on-call position for the Environmental Health Division Hazardous Materials Response Program. An employee of the division is on-call at all times. When dispatched by 9-1-1, employees work to minimize the threat to the public and the environment that may be present. Vehicle accidents and hazardous material spills are managed to reduce the potential ground water, surface water, soil, and air contamination. Storm drains are of particular concern and every effort is made to prevent spills from reaching an inlet. If the spill does reach the storm drain, Fire Department, Health Department, and Hazardous Material Team Members are trained in the use of booms and are equipped with sorbent pads to capture as much material as possible.

This hotline has been in use for a number of years and is already printed on a number of brochures and appears on the City and the Water Quality District's website. The number and the associated investigation and tracking system have been effectively used to address citizens' concerns about illicit discharge. All complaints will be responded to and all illicit discharges will be removed.

A checklist has been developed for use by inspectors when checking pollution prevention controls at construction sites. The format follows the state SWPPP which the City of Missoula requires for all construction projects of one acre or more. In addition to standard information being required, the inspector is prompted to evaluate each BMP type on the construction site. Weather conditions and the most recent weather event are also required to be recorded. Finally, the inspector must record if punitive action is being taken. Completed forms are filed in project files and can also be scanned and attached to the electronic permit for online viewing. The checklist is used to help ensure complete and consistent inspections. The inspection checklist will be used for all SWPPP site inspections.

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>CONSTRUCTION SITE STORMWATER MANAGEMENT</b>		<b>4 - a (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will document and maintain data regarding the Illicit Discharge Investigation and Corrective Action Plan activities as per permit requirements.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will continue to maintain documents and data gathered under the required illicit discharge investigation and action plan using database applications and produce necessary reporting as required.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	develop Illicit Discharge Investigation and Corrective Action Plan as per permit requirements.	prepare and review data for identifying high priority outfalls
2018	implement Illicit Discharge and Investigation and Corrective Action Plan making necessary changes for permit compliance.	COMPLETE 2nd PERMIT YEAR -- implement Illicit Discharge and Corrective Action Plan
2019	while executing plan, gather data and maintain documentation regarding investigations and corrective action taken under the plan	COMPLETE 3rd PERMIT YEAR -- maintain documentation on plan activities and submit summary with Annual report
2020	while executing plan, gather data and maintain documentation regarding investigations and corrective action taken under the plan	maintain documentation on plan activities and submit summary with Annual report
2021	while executing plan, gather data and maintain documentation regarding investigations and corrective action taken under the plan	maintain documentation on plan activities and submit summary with Annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>CONSTRUCTION SITE STORMWATER MANAGEMENT</b>		<b>4 - a (iii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop a formal ERP in compliance with the permit for construction stormwater management regulatory mechanisms on regulated projects - both public and private. The ERP will include information on eliminating and abating illegal construction discharges, identify staff with enforcement authority, enforcement actions available, enforcement escalation process and schedule for enforcement actions, abatement of damages and prevention of recurrence. To the extent feasible, the ERP will include informal, formal and judicial responses; including non-monetary construction project specific penalties.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
X CONSTRUCTION	The City of Missoula will refine existing ordinances and policies and develop a formal ERP and necessary Ordinances, Administrative Rules and other regulations required to implement the ERP as per the permit. Work on this will begin in the first permit year and progress until implemented within the 3rd permit year.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	Begin work on developing Formal ERP for permit compliance	develop Formal ERP and begin Ordinance and Administrative Rule creation and / or edits
2018	continue work on ERP - begin work on relevant Ordinances, Administrative Rules and other regulations to implement and execute permit requirement	ensure Ordinance(s) and Administrative Rule(s) for the Formal ERP are established by year end
2019	while executing Formal ERP, gather data and maintain documentation regarding investigations and corrective action taken under the Formal ERP	COMPLETE 3rd PERMIT YEAR -- maintain documentation on Formal ERP activities and submit summary with Annual report
2020	while executing Formal ERP, gather data and maintain documentation regarding investigations and corrective action taken under the Formal ERP	maintain documentation on Formal ERP activities and submit summary with Annual report
2021	while executing Formal ERP, gather data and maintain documentation regarding investigations and corrective action taken under the Formal ERP	maintain documentation on Formal ERP activities and submit summary with Annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>CONSTRUCTION SITE STORMWATER MANAGEMENT</b>		<b>4 - a (iv)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop a formal ERP in compliance with the permit for construction stormwater management regulatory mechanisms on regulated projects - both public and private. The ERP will include information on eliminating and abating illegal construction discharges, identify staff with enforcement authority, enforcement actions available, enforcement escalation process and schedule for enforcement actions, abatement of damages and prevention of recurrence. To the extent feasible, the ERP will include informal, formal and judicial responses; including non-monetary construction project specific penalties.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
X CONSTRUCTION	The City of Missoula will refine existing ordinances and policies and develop a formal ERP and necessary Ordinances, Administrative Rules and other regulations required to implement the ERP as per the permit. Work on this will begin in the first permit year and progress until implemented within the 3rd permit year.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	Begin work on developing Formal ERP for permit compliance	develop Formal ERP and begin Ordinance and Administrative Rule creation and / or edits
2018	continue work on ERP - begin work on relevant Ordinances, Administrative Rules and other regulations to implement and execute permit requirement	ensure Ordinance(s) and Administrative Rule(s) for the Formal ERP are established by year end
2019	begin to gather data and maintain documentation regarding investigations and corrective action taken under the Formal ERP	COMPLETE 3rd PERMIT YEAR -- begin to gather documentation on Formal ERP activities and submit summary with Annual report
2020	while executing Formal ERP, gather data and maintain documentation regarding investigations and corrective action taken under the Formal ERP	IMPLEMENT 4th PERMIT YEAR -- maintain documentation on Formal ERP activities and submit summary with Annual report
2021	while executing Formal ERP, gather data and maintain documentation regarding investigations and corrective action taken under the Formal ERP	maintain documentation on Formal ERP activities and submit summary with Annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>CONSTRUCTION SITE STORMWATER MANAGEMENT</b>		<b>4 - b (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop a construction stormwater management plan review checklist that documents non-numeric technology-based effluent limits of the most current Montana DEQ General Permit for stormwater discharges associated with construction activity on all regulated project construction stormwater management plans and use the checklist to ensure consistent review of submitted plans as per this permit.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
X CONSTRUCTION	The City of Missoula will review and modify as necessary, the existing construction stormwater management plan review process, ensuring compliance with the requirements of this permit. Work on this will be completed in the first permit year.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	work on the review and modification of the existing construction stormwater management plan review process and adjust accordingly for permit compliance	IMPLEMENT 1st PERMIT YEAR -- review and modify existing regulations, implement changes and submit with annual report
2018	execute plan review per implemented construction stormwater management plan review process in compliance with permit requirements	continue reviewing construction stormwater management plans per implemented process, document permit review work in annual report
2019	execute plan review per implemented construction stormwater management plan review process in compliance with permit requirements	continue reviewing construction stormwater management plans per implemented process, document permit review work in annual report
2020	execute plan review per implemented construction stormwater management plan review process in compliance with permit requirements	continue reviewing construction stormwater management plans per implemented process, document permit review work in annual report
2021	execute plan review per implemented construction stormwater management plan review process in compliance with permit requirements	continue reviewing construction stormwater management plans per implemented process, document permit review work in annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>CONSTRUCTION SITE STORMWATER MANAGEMENT</b>		<b>4 - b (ii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop a construction stormwater management plan review checklist that documents non-numeric technology-based effluent limits of the most current Montana DEQ General Permit for stormwater discharges associated with construction activity on all regulated project construction stormwater management plans and use the checklist to ensure consistent review of submitted plans as per this permit.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will review and modify as necessary, the existing construction stormwater management plan review process, ensuring compliance with the requirements of this permit. Work on this will be completed in the first permit year.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	implement the construction stormwater management plan review process as modified for permit compliance	IMPLEMENT 1st PERMIT YEAR -- review and modify existing regulations, implement changes and submit with annual report
2018	execute plan review per implemented construction stormwater management plan review process in compliance with permit requirements	continue reviewing construction stormwater management plans per implemented process, document permit review work in annual report
2019	execute plan review per implemented construction stormwater management plan review process in compliance with permit requirements	continue reviewing construction stormwater management plans per implemented process, document permit review work in annual report
2020	execute plan review per implemented construction stormwater management plan review process in compliance with permit requirements	continue reviewing construction stormwater management plans per implemented process, document permit review work in annual report
2021	execute plan review per implemented construction stormwater management plan review process in compliance with permit requirements	continue reviewing construction stormwater management plans per implemented process, document permit review work in annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>CONSTRUCTION SITE STORMWATER MANAGEMENT</b>		<b>4 - c (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
	The City of Missoula will ensure that all construction stormwater management controls are installed, operated and maintained in order to function as designed. Will also perform inspections and document via an inspection form, ensuring that all construction stormwater management controls are installed, operated and maintained in order to function as designed.	
GENERAL PUBLIC		
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will review existing inspection form (checklist) and modify as needed to ensure thorough and consistent regulated project inspections occur. Inspection form (checklist) shall include requirements of the non-numeric technology-based effluent limits of the current Montana DEQ General Permit for Stormwater Discharge Associate with Construction Activity and will be submitted with the first year and subsequent annual report.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	ensure development / modification of the existing inspection form (checklist) and modify as necessary for permit compliance	DEVELOP 1st PERMIT YEAR -- review and modify existing inspection form, implement changes and submit with annual report
2018	utilize inspection form (checklist) for thorough and consistent on-site project inspections, in compliance with permit requirements	perform project inspections utilizing form for consistency and document inspection work in annual report
2019	utilize inspection form (checklist) for thorough and consistent on-site project inspections, in compliance with permit requirements	perform project inspections utilizing form for consistency and document inspection work in annual report
2020	utilize inspection form (checklist) for thorough and consistent on-site project inspections, in compliance with permit requirements	perform project inspections utilizing form for consistency and document inspection work in annual report
2021	utilize inspection form (checklist) for thorough and consistent on-site project inspections, in compliance with permit requirements	perform project inspections utilizing form for consistency and document inspection work in annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>CONSTRUCTION SITE STORMWATER MANAGEMENT</b>		<b>4 - c (iii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
	The City of Missoula will ensure that all construction stormwater management controls are installed, operated and maintained in order to function as designed. Will also perform inspections and document via an inspection form, ensuring that all construction stormwater management controls are installed, operated and maintained in order to function as designed.	
GENERAL PUBLIC		
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will review existing inspection form (checklist) and modify as needed to ensure thorough and consistent regulated project inspections occur. Inspection form (checklist) shall include requirements of the non-numeric technology-based effluent limits of the current Montana DEQ General Permit for Stormwater Discharge Associate with Construction Activity and will be submitted with the first year and subsequent annual report.	
<input checked="" type="checkbox"/> CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	implement the redeveloped / modified existing inspection form (checklist), document inspections as necessary for permit compliance and submit with annual report	IMPLEMENT 1st PERMIT YEAR -- review and modify existing inspection form, implement changes and submit with annual report
2018	utilize inspection form (checklist) for thorough and consistent on-site project inspections, in compliance with permit requirements	perform project inspections utilizing form for consistency and document inspection work in annual report
2019	utilize inspection form (checklist) for thorough and consistent on-site project inspections, in compliance with permit requirements	perform project inspections utilizing form for consistency and document inspection work in annual report
2020	utilize inspection form (checklist) for thorough and consistent on-site project inspections, in compliance with permit requirements	perform project inspections utilizing form for consistency and document inspection work in annual report
2021	utilize inspection form (checklist) for thorough and consistent on-site project inspections, in compliance with permit requirements	perform project inspections utilizing form for consistency and document inspection work in annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>CONSTRUCTION SITE STORMWATER MANAGEMENT</b>		<b>4 - c (iv)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will ensure that all construction stormwater management controls are installed, operated and maintained in order to function as designed. Will also perform inspections and document via an inspection form, ensuring that all construction stormwater management controls are installed, operated and maintained in order to function as designed.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
X CONSTRUCTION	The City of Missoula will review the existing regulated project inventory and modify as necessary to ensure compliance, at a minimum including if the project is covered by the Montana DEQ General Permit for Stormwater Discharges Associated with Construction Activity, associated authorization number, location, size, topography of site and proximity waterbodies for each project and submit with annual report.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review and modify as necessary the existing regulated project inventory database ensuring compliance with permit and submit with annual report	COMPLETE 1st PERMIT YEAR -- monitor, review and document regulated project inventory and submit with annual report
2018	review and modify as necessary the existing regulated project inventory database ensuring compliance with permit and submit with annual report	perform project inspections utilizing form for consistency and document inspection work in annual report
2019	review and modify as necessary the existing regulated project inventory database ensuring compliance with permit and submit with annual report	perform project inspections utilizing form for consistency and document inspection work in annual report
2020	review and modify as necessary the existing regulated project inventory database ensuring compliance with permit and submit with annual report	perform project inspections utilizing form for consistency and document inspection work in annual report
2021	review and modify as necessary the existing regulated project inventory database ensuring compliance with permit and submit with annual report	perform project inspections utilizing form for consistency and document inspection work in annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>CONSTRUCTION SITE STORMWATER MANAGEMENT</b>		<b>4 - c (v)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will ensure that all construction stormwater management controls are installed, operated and maintained in order to function as designed. Will also develop and inspection frequency protocol due to priority of the project - based on project size, proximity to water body, steepness of project site slopes, discharge to waterbodies impaired from pollutants expected for the active construction project and past record of non-compliance by the construction site operator. Protocols shall establish frequency and minimally include requirements as established in the permit.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will review the existing regulated project inspection schedule (frequency) and protocols used, making modifications as necessary for compliance with permit.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review and modify as necessary the existing inspection frequency and protocols ensuring compliance with permit and submit with annual report	COMPLETE 1st PERMIT YEAR -- review inspection frequency and protocols, modify as necessary and submit with annual report
2018	review and modify as necessary the existing inspection frequency and protocols ensuring compliance with permit and submit with annual report	perform project inspections utilizing frequency and protocols as required and document inspection work in annual report
2019	review and modify as necessary the existing inspection frequency and protocols ensuring compliance with permit and submit with annual report	perform project inspections utilizing frequency and protocols as required and document inspection work in annual report
2020	review and modify as necessary the existing inspection frequency and protocols ensuring compliance with permit and submit with annual report	perform project inspections utilizing frequency and protocols as required and document inspection work in annual report
2021	review and modify as necessary the existing inspection frequency and protocols ensuring compliance with permit and submit with annual report	perform project inspections utilizing frequency and protocols as required and document inspection work in annual report

## **MCM 5 – Post-Construction Site Storm Water Management in New and Re-development**

### **Regulatory Requirement(s):**

*MCM 5 – The permittee shall develop, implement, and enforce a program to address storm water 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 of sale that discharge into the permitted Small MS4. This program must ensure that controls are in place that would prevent or minimize water quality impacts.*

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There are generally two (2) forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in storm water runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e. g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to waterbodies during storms. Increased impervious surfaces (e. g., parking lots, driveways, and rooftops) interrupt the natural cycle of gradual infiltration of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include stream bank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property. The City's zoning ordinances and asset management software are BMPs implemented to address these impacts.

### **Ordinances — MCM / BMP 5 - a (i)**

Various portions of Missoula's Zoning Ordinance address growth, and the protection of sensitive areas, riparian resources, and open space in order to provide watershed protection. Chapter 20.20 Open Space and Public Districts defines two types of open space which offer watershed protection. The ordinance defines uses and development options, and references other regulations that apply. Zoning district OP1 is primarily intended to preserve open space and sensitive natural resource areas, including environmentally sensitive and agricultural areas. Zoning district OP2 is primarily intended to preserve open space and sensitive natural resource areas, while also allowing very low-density residential use, ideally in the form of cluster development.

Chapter 20.25 Overlay Districts defines a Planned Unit Development Overlay which is intended to accommodate development that may be difficult if not impossible to carry out under otherwise applicable zoning district standards. One such example would be developments that offer enhanced protection of natural resources and sensitive environmental features, including streams, water bodies, floodplains, wetlands, steep slopes, woodlands, wildlife habitats, and native plant communities. The developer must provide a written explanation describing the community benefits of the proposed development and how the proposed development provides greater benefits to the City than would a development carried out in accordance with otherwise applicable zoning ordinance standards.

Chapter 20.50 Natural Resource Protection sets requirements for developments and disturbances on average slopes greater than fifteen percent and in areas of riparian resource. The purpose of this chapter, among other things, is to preserve drainage channels and streams, encourage innovative pollution

prevention techniques in environmentally sensitive areas, and mitigate adverse impacts including erosion and the degradation of air and water quality. This chapter is part of the zoning compliance permit process and must be completed before a zoning compliance permit is issued.

Section 20.50.030: Riparian Resource Protection of the Missoula City Zoning Ordinance defines areas of riparian resource and restricts development within those areas. A map of known Missoula riparian areas is maintained in the Office of Planning and Grants, but additional areas may be determined by stipulations outlined in the ordinance. Construction is permitted in areas of riparian resource only when a detailed management plan provides for restoration and/or replacement of the riparian area so that there is no net loss of area of riparian resource. All development within the city limits of Missoula must comply with this ordinance and compliance is determined by the Director of the Office of Planning and Grants. The success of this BMP will be measured by how many plans are reviewed and percentage that comply with these regulations.

### **Ordinances — MCM / BMP 5 - a (iii), 5 - a (iv)**

Two employees of the Water Quality District serve in an on-call position for the Environmental Health Division Hazardous Materials Response Program. An employee of the division is on-call at all times. When dispatched by 9-1-1, employees work to minimize the threat to the public and the environment that may be present. Vehicle accidents and hazardous material spills are managed to reduce the potential ground water, surface water, soil, and air contamination. Storm drains are of particular concern and every effort is made to prevent spills from reaching an inlet. If the spill does reach the storm drain, Fire Department, Health Department, and Hazardous Material Team Members are trained in the use of booms and are equipped with sorbent pads to capture as much material as possible.

This hotline has been in use for a number of years and is already printed on a number of brochures and appears on the City and the Water Quality District's website. The number and the associated investigation and tracking system have been effectively used to address citizens' concerns about illicit discharge. All complaints will be responded to and all illicit discharges will be removed.

### **Regulated Development — MCM / BMP 5 - b (i), 5 - b (iii), 5 - c (i), 5 - c (iii), 5 - c (iv) 5 - c (vi), 5 - c (vii), 5 - c (viii), 5 - c (ix)**

The City of Missoula has created a "Subdivision Toolbox" for engineering consultants performing subdivision and other construction work. In 2007, City staff held a conference for all design professionals and the new toolbox was introduced. The toolbox is located on the City's website and has links to related information such as applicable codes, checklists, standard drawings, as-built drawings, and storm and sanitary sewer maps. Requirements for the acquisition of a City of Missoula SWPPP permit are included in this information and design professionals are required to include completed checklists with their design submittals. Filling out the checklists helps ensure that submittals are accurate and complete. Site plan reviewers use the completed checklists to review the plans and ensure that required elements are present. If designers omit any applicable SWPPP component, the plans can be amended or rejected. All site plans are reviewed for compliance with the Grading, Drainage, Erosion Control, and Storm Water Pollution Prevention Plan. Site plans and storm water management controls for major projects, including City road construction projects, are also reviewed by Health Department, Water Quality District staff for potential storm water pollution issues.

In conjunction with the storm sewer system geographic database, the long-term operation and maintenance of storm water BMPs will be ensured using the City's asset management software. BMPs are entered into the systems upon receipt of as-built drawings. BMPs located on public property or within

public rights-of-way are added to a regular City maintenance schedule. The success of this BMP will be measured by the number of public assets inspected or maintained annually.

#### **LID Construction and Infrastructure — MCM / BMP 5 - d (i)**

The City of Missoula has historically supported Low Impact Development (LID) construction and will continue to do so. As per permit requirements, the City of Missoula bring together staff to evaluate modification of codes, ordinances and other regulations to not only support but also to encourage LID and modify policies to do so. This workgroup will be comprised of staff from all departments involved with the design, review, construction and inspection on both public and private property within the MS4.

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - a (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will review and ensure regulations are in place requiring post-construction stormwater management controls on regulated projects include the performance standard as outlined in part II.A.5.b.iv, to be completed by permit year #4.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula will review existing and establish / adopt / amend local Ordinances and Administrative Rules to ensure enforceable requirements to satisfy this BMP.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review, modify and / or develop as necessary existing ordinances to require post-construction stormwater management controls, amend as necessary to comply with permit requirements	review, write and establish local codes to satisfy permit requirements
2018	review, modify and / or develop as necessary existing ordinances to require post-construction stormwater management controls, amend as necessary to comply with permit requirements	review, write and establish local codes to satisfy permit requirements
2019	review, modify and / or develop as necessary existing ordinances to require post-construction stormwater management controls, amend as necessary to comply with permit requirements	review, write and establish local codes to satisfy permit requirements
2020	review, modify and / or develop as necessary existing ordinances to require post-construction stormwater management controls, amend as necessary to comply with permit requirements	COMPLETE 4th PERMIT YEAR -- review, write and establish local codes to satisfy permit requirements and submit with annual report
2021	implement regulations for enforcement procedures and actions for post-construction site stormwater management controls on regulated projects	COMPLETE 5th PERMIT YEAR -- implement regulations and submit inspection and enforcement results with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - a (iii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will establish a formal ERP, ensuring compliance with the installation, operation and maintenance requirements for post-construction stormwater management controls on regulated projects, to include those on private property. The ERP will include escalating responses; informal, formal and judicial. The ERP will describe the legal authority, identify staff with authority, enforcement actions, escalation process and schedule for ensuring expedient and consistent compliance, to be completed by permit year #4.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula will review existing and establish / adopt / amend local Ordinances and Administrative Rules to ensure enforceable requirements to satisfy this BMP.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review, modify and / or develop as necessary existing ordinances and procedures to establish a formal ERP with authority and escalating responses as per requirements of the permit	review, write and establish local codes to satisfy permit requirements
2018	review, modify and / or develop as necessary existing ordinances and procedures to establish a formal ERP with authority and escalating responses as per requirements of the permit	review, write and establish local codes to satisfy permit requirements
2019	review, modify and / or develop as necessary existing ordinances and procedures to establish a formal ERP with authority and escalating responses as per requirements of the permit	review, write and establish local codes to satisfy permit requirements
2020	review, modify and / or develop as necessary existing ordinances and procedures to establish a formal ERP with authority and escalating responses as per requirements of the permit	COMPLETE 4th PERMIT YEAR -- review, write and establish local codes to satisfy permit requirements
2021	implement regulations for enforcement procedures and actions for post-construction site stormwater management controls on regulated projects	COMPLETE 5th PERMIT YEAR -- implement regulations and submit inspection and enforcement results with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - a (iv)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will establish a formal ERP, ensuring compliance with the installation, operation and maintenance requirements for post-construction stormwater management controls on regulated projects, to include those on private property. The ERP will include escalating responses; informal, formal and judicial. The ERP will describe the legal authority, identify staff with authority, enforcement actions, escalation process and schedule for ensuring expedient and consistent compliance, to be completed by permit year #5.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will implement local Ordinances and Administrative Rules to ensure enforceable requirements to satisfy this BMP.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review, modify and / or develop as necessary existing ordinances and procedures to establish a formal ERP with authority and escalating responses as per requirements of the permit	review, write and establish local codes to satisfy permit requirements
2018	review, modify and / or develop as necessary existing ordinances and procedures to establish a formal ERP with authority and escalating responses as per requirements of the permit	review, write and establish local codes to satisfy permit requirements
2019	review, modify and / or develop as necessary existing ordinances and procedures to establish a formal ERP with authority and escalating responses as per requirements of the permit	review, write and establish local codes to satisfy permit requirements
2020	review, modify and / or develop as necessary existing ordinances and procedures to establish a formal ERP with authority and escalating responses as per requirements of the permit	COMPLETE 4th PERMIT YEAR -- review, write and establish local codes to satisfy permit requirements
2021	implement regulations for enforcement procedures and actions for post-construction site stormwater management controls on regulated projects	COMPLETE 5th PERMIT YEAR -- implement regulations and submit inspection and enforcement results with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - b (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will review and refine the existing plan review checklist for post-construction requirements on regulated projects, to ensure consistent review of submitted plans as well as to determine and document compliance with state and local requirements and the permit, to be completed by permit year #1.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
CONSTRUCTION	The City of Missoula will continue to require regulated projects to submit a site plan in compliance with permit requirements to satisfy this BMP.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review, modify and / or develop as necessary existing ordinances and procedures and amend as necessary to comply with permit requirements	COMPLETE 1st PERMIT YEAR -- review, write and establish local codes to satisfy permit requirements and submit with annual report
2018	use developed plan review checklist to ensure consistent review of submitted plans	utilize checklist to ensure consistent review of submitted plans and document compliance, submit with annual report
2019	use developed plan review checklist to ensure consistent review of submitted plans	utilize checklist to ensure consistent review of submitted plans and document compliance, submit with annual report
2020	use developed plan review checklist to ensure consistent review of submitted plans	utilize checklist to ensure consistent review of submitted plans and document compliance, submit with annual report
2021	use developed plan review checklist to ensure consistent review of submitted plans	utilize checklist to ensure consistent review of submitted plans and document compliance, submit with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - b (iii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will require all regulated projects to implement post-construction stormwater management controls as per the permit (infiltrate, evapotranspire, and / or capture for re-use the 1st 1/2" of rainfall preceded by 48-hours of no measureable precipitation - remainder of precipitation to be treated or managed, on-site and / or off-site, as per the permit), to be completed by permit year #1.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
CONSTRUCTION	The City of Missoula will continue to enforce regulated projects to implement post-construction stormwater management controls in compliance with permit requirements to satisfy this BMP.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review, modify and / or develop as necessary existing ordinances and procedures and amend as necessary to comply with permit requirements	COMPLETE 1st PERMIT YEAR -- review, write and establish local codes to satisfy permit requirements and submit with annual report
2018	use developed plan review checklist to ensure consistent review of submitted plans	utilize checklist to ensure consistent review of submitted plans and document compliance, submit with annual report
2019	use developed plan review checklist to ensure consistent review of submitted plans	utilize checklist to ensure consistent review of submitted plans and document compliance, submit with annual report
2020	use developed plan review checklist to ensure consistent review of submitted plans	utilize checklist to ensure consistent review of submitted plans and document compliance, submit with annual report
2021	use developed plan review checklist to ensure consistent review of submitted plans	utilize checklist to ensure consistent review of submitted plans and document compliance, submit with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - c (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will review and refine the existing inspection form (checklist) for post-construction stormwater management controls requirements on regulated projects, to ensure consistent and thorough inspections, to be completed by permit year #2.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will continue to enforce regulated projects to implement post-construction stormwater management controls in compliance with permit requirements to satisfy this BMP.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review, modify and / or develop as necessary existing ordinances and procedures to ensure existing inspection form complies with requirements of the permit	review, write and establish local codes to satisfy permit requirements and submit with annual report
2018	use developed inspection form (checklist) to ensure consistent and through inspections of post-construction stormwater management controls	COMPLETE 2nd PERMIT YEAR -- utilize inspection form to ensure consistent and through inspections and submit with annual report
2019	use developed inspection form (checklist) to ensure consistent and through inspections of post-construction stormwater management controls	utilize inspection form to ensure consistent and through inspections and submit inspection results with annual report
2020	use developed inspection form (checklist) to ensure consistent and through inspections of post-construction stormwater management controls	utilize inspection form to ensure consistent and through inspections and submit inspection results with annual report
2021	use developed inspection form (checklist) to ensure consistent and through inspections of post-construction stormwater management controls	utilize inspection form to ensure consistent and through inspections and submit inspection results with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - c (iii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop and maintain an inventory (database) of all <b>new</b> permittee-owned and private-owned post-construction stormwater management controls, including at minimum - a description and location, to be completed by permit year #2.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will continue to inventory all permittee-owned and private-owned post-construction stormwater management controls in compliance with permit requirements to satisfy this BMP.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review or modify existing and / or develop as necessary an inventory of all post-construction stormwater management controls to comply with requirements of the permit	review and acquire inventory data of post-construction stormwater management controls and submit with annual report
2018	use developed inventory (database) to track installation, operation and maintenance of post-construction stormwater management controls ensuring function as designed	COMPLETE 2nd PERMIT YEAR -- utilize inventory of post-const. stormwater management controls and submit with annual report
2019	use developed inventory (database) to track installation, operation and maintenance of post-construction stormwater management controls ensuring function as designed	utilize inventory of post-construction stormwater management controls, log data and submit with annual report
2020	use developed inventory (database) to track installation, operation and maintenance of post-construction stormwater management controls ensuring function as designed	utilize inventory of post-construction stormwater management controls, log data and submit with annual report
2021	use developed inventory (database) to track installation, operation and maintenance of post-construction stormwater management controls ensuring function as designed	utilize inventory of post-construction stormwater management controls, log data and submit with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - c (iv)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop and maintain an inventory (database) of all <b>existing</b> permittee-owned and private-owned post-construction stormwater management controls, including at minimum - a description and location, and will determine priority based on potential water quality impact using specific criteria, to be completed by permit year #3.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will continue to inventory all permittee-owned and private-owned post-construction stormwater management controls in compliance with permit requirements to satisfy this BMP.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	review or modify existing and / or develop as necessary an inventory of all post-construction stormwater management controls to comply with requirements of the permit	review and acquire inventory data of post-construction stormwater management controls and submit with annual report
2018	review or modify existing and / or develop as necessary an inventory of all post-construction stormwater management controls to comply with requirements of the permit	review and acquire inventory data of post-construction stormwater management controls and submit with annual report
2019	use developed inventory (database) to track installation, operation and maintenance of post-construction stormwater management controls ensuring function as designed	COMPLETE 3rd PERMIT YEAR -- utilize inventory of post-const. stormwater management controls, log data and submit w/annual report
2020	use developed inventory (database) to track installation, operation and maintenance of post-construction stormwater management controls ensuring function as designed	utilize inventory of post-construction stormwater management controls, log data and submit with annual report
2021	use developed inventory (database) to track installation, operation and maintenance of post-construction stormwater management controls ensuring function as designed	utilize inventory of post-construction stormwater management controls, log data and submit with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - c (vi)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop, implement and maintain an inspection frequency protocol for all stormwater management controls, based upon priority, to be determined by potential for water quality impact using specific criteria as outlined in the permit and submitted with the annual report, to be completed by permit year #2.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula will continue to inspect post-construction stormwater management controls, based on priority, as per requirements of the permit to satisfy this BMP.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	develop, an inspection frequency protocol for stormwater management controls based on priority as determined by potential for water quality impact using criteria outlined in the permit	develop inspection frequency protocol for post-construction stormwater management controls and submit with annual report
2018	implement developed inspection frequency protocol for stormwater management controls based on priority determine by potential for water quality impact using criteria outlined in the permit	COMPLETE 2nd PERMIT YEAR -- implement insp protocol for post-const stormwater mgmt controls and submit with annual report
2019	use developed inspection frequency protocol for stormwater management controls based on priority as determined by potential for water quality impact using criteria outlined in the permit	utilize developed inspection protocol for post-construction stormwater management controls & submit results with annual report
2020	use developed inspection frequency protocol for stormwater management controls based on priority as determined by potential for water quality impact using criteria outlined in the permit	utilize developed inspection protocol for post-construction stormwater management controls & submit results with annual report
2021	use developed inspection frequency protocol for stormwater management controls based on priority as determined by potential for water quality impact using criteria outlined in the permit	utilize developed inspection protocol for post-construction stormwater management controls & submit results with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - c (vii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop and implement a program to inspect or to cause to be inspected high-priority post-construction stormwater management controls, at least annually and submit program description with the annual report, to be completed by permit year #2.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will continue inspection activities and / or cause to be inspected, post-construction stormwater management controls, identified as high-priority, at least annually as per requirements of the permit to satisfy this BMP.	
X CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	develop, a program to inspect or cause to be inspected, high-priority, post-construction stormwater management controls as per the permit	develop inspection program for high-priority post-construction stormwater management controls and submit with annual report
2018	implement developed inspection program for high-priority post-construction stormwater management controls using criteria as outlined in the permit	COMPLETE 2nd PERMIT YEAR -- implement inspection pgm for high-priority post-const stormwater mgmt controls, submit with annual report
2019	use developed inspection program for high-priority post-construction stormwater management controls using criteria as outlined in the permit	utilize developed inspection program for high-priority post-const stormwater management controls & submit results with annual report
2020	use developed inspection program for high-priority post-construction stormwater management controls using criteria as outlined in the permit	utilize developed inspection program for high-priority post-const stormwater management controls & submit results with annual report
2021	use developed inspection program for high-priority post-construction stormwater management controls using criteria as outlined in the permit	utilize developed inspection program for high-priority post-const stormwater management controls & submit results with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - c (viii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will inspect or cause to be inspected high-priority, permittee-owned, post-construction stormwater management controls, annually and submit inspection results and any compliance actions with the annual report, to be completed permit years #3, 4 and 5.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
X CONSTRUCTION	The City of Missoula will continue inspection activities and / or cause to be inspected, high-priority, permittee-owned, post-construction stormwater management controls, at least annually as per requirements of the permit to satisfy this BMP.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	develop, a program to inspect or cause to be inspected, high-priority, permittee-owned, post-construction stormwater management controls, at least annually, as per the permit	develop inspection program for high-priority permittee-owned post-const stormwater management controls and submit with annual report
2018	develop, a program to inspect or cause to be inspected, high-priority, permittee-owned, post-construction stormwater management controls, at least annually, as per the permit	develop inspection program for high-priority permittee-owned post-const stormwater management controls and submit with annual report
2019	implement developed inspection program for high-priority, permittee-owned, post-construction stormwater management controls using criteria as outlined in the permit	COMPLETE 3rd PERMIT YEAR -- implement inspection prgm for high-priority post-const stormwater mgmt controls, submit with annual report
2020	implement developed inspection program for high-priority, permittee-owned, post-construction stormwater management controls using criteria as outlined in the permit	utilize inspection program for high-priority permittee-owned post-const stormwater management controls and submit with annual report
2021	implement developed inspection program for high-priority, permittee-owned, post-construction stormwater management controls using criteria as outlined in the permit	utilize inspection program for high-priority permittee-owned post-const stormwater management controls and submit with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - c (vix)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will inspect or cause to be inspected high-priority, privately-owned, post-construction stormwater management controls, annually and submit inspection results and any compliance actions with the annual report, to be completed permit years #3, 4 and 5.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
X CONSTRUCTION	The City of Missoula will continue inspection activities and / or cause to be inspected, high-priority, privately-owned, post-construction stormwater management controls, at least annually as per requirements of the permit to satisfy this BMP.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	develop, a program to inspect or cause to be inspected, high-priority, privately-owned, post-construction stormwater management controls, at least annually, as per the permit	develop inspection program for high-priority privately-owned post-const stormwater management controls and submit with annual report
2018	develop, a program to inspect or cause to be inspected, high-priority, privately-owned, post-construction stormwater management controls, at least annually, as per the permit	develop inspection program for high-priority privately-owned post-const stormwater management controls and submit with annual report
2019	implement developed inspection program for privately-owned, high-priority post-construction stormwater management controls using criteria as outlined in the permit	COMPLETE 3rd PERMIT YEAR -- implement inspection pgrm for high-priority post-const stormwater mgmt controls, submit with annual report
2020	use developed inspection program for privately-owned, high-priority post-construction stormwater management controls using criteria as outlined in the permit	utilize inspection program for high-priority privately-owned post-const stormwater management controls and submit with annual report
2021	use developed inspection program for privately-owned, high-priority post-construction stormwater management controls using criteria as outlined in the permit	utilize developed inspection program for high-priority post-const stormwater management controls & submit results with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POST-CONSTRUCTION SITE STORMWATER MANAGEMENT IN NEW AND REDEVELOPMENT</b>		<b>5 - d (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will convene City staff from various departments and hold meetings to evaluate existing barriers implementing LID infrastructure in codes, ordinances and policies - identify opportunities for change and potential inconsistencies between policies, include staff from various departments, submit summary of discussion with the 4th annual report.	
PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
X CONSTRUCTION	The City of Missoula will assemble staff from various departments to review and evaluate barriers to implementing LID infrastructure in codes, ordinances and policies, identifying opportunities for change, including staff from various departments, submit summary of discussion with the 4th annual report. Will work toward incorporating recommendations into plans, policies and ordinances to allow and support the utilization of LID on public and private property.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	convene staff and begin discussing evaluating existing barriers to implementing LID infrastructure in permittee code, ordinances and policies - identify opportunities for change	work toward reducing barriers to LID infrastructure and construction in codes and policies
2018	convene staff and begin discussing evaluating existing barriers to implementing LID infrastructure in permittee code, ordinances and policies - identify opportunities for change	work toward reducing barriers to LID infrastructure and construction in codes and policies
2019	convene staff and begin discussing evaluating existing barriers to implementing LID infrastructure in permittee code, ordinances and policies - identify opportunities for change	work toward reducing barriers to LID infrastructure and construction in codes and policies
2020	convene staff and discuss evaluating existing barriers to implementing LID infrastructure in permittee code, ordinances and policies - identify opportunities for change and submit summary	COMPLETE 4th PERMIT YEAR -- staff will convene and discuss barriers to implementing LID infrastructure in codes and policies
2021	continue to review and evaluate existing barriers to implementing LID infrastructure in permittee code, ordinances and policies, working toward incorporating recommendations	staff will review and evaluate changes to implementing LID infrastructure in code and policies, submit summary in annual report

## **MCM 6 – Pollution Prevention / Good Housekeeping for Permittee Operations**

### Regulatory Requirement(s):

*MCM 6 – The permittee shall develop, implement, and enforce a program to reduce pollutants in storm water runoff to the permitted Small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. If the Department waives its permitting requirements for storm water discharges associated with construction activity that disturbs less than five acres total land area in accordance with ARM 17.30.1105(5), the Small MS4 permittee is not required to develop, implement, and / or enforce a program to reduce pollutant discharges from such sites.*

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Montana DEQ's 2010 303(d) list of impaired water bodies lists the Clark Fork River and Bitterroot River and attributes some of the pollutants to the MS4. Listed pollutants of concern attributed to the MS4 are: Chlorophyll-a, Nitrogen (Total), Organic Enrichment (Sewage), Biological Indicators, and Phosphorus (Total) for the Clark Fork River; Alteration in stream-side or littoral vegetative covers, Nitrogen/Nitrate, and Sedimentation / Siltation for the Bitterroot River. The City of Missoula addresses these pollutants in its Pollution Prevention / Good Housekeeping for Municipal Operations Program. Departments and divisions that are involved are: Parks & Recreation, Street Maintenance, Traffic Services, Vehicle Maintenance, Wastewater, and Engineering. The City of Missoula's Pollution Prevention / Good Housekeeping for Permittee Operations consists of two parts: Department and Division Pollution Prevention Plans as well as Department and Division Training and Education.

In addition to the City of Missoula's MS4 MPDES Permit, it also has a discharge permit for the municipally-owned waste water treatment plant. That permit number is MT0022594.

### **Permittee owned / operated Facilities and Field Activities — MCM / BMP 6 - a (i), 6 - a (ii), 6 - a (iii), 6 - a (iv), 6 - a (v)**

Pollution Prevention Plans for municipal divisions are created on a division-by-division basis. Each department and / or division creates its own plan based on activities and pollutants common to the particular department and / or division. Input is gathered from both managers and field personnel within a department or division to determine the most appropriate and effective BMPs for each activity and / or pollutant. Pollution Prevention Plans are reviewed periodically to ensure they are up to date and contain the most effective BMPs.

Training and education of employees in Public Works and Parks and Recreation Departments is accomplished on a department-by-department or division-by division basis. Each department/division creates its own training program which includes standard operating procedures that incorporate storm water BMPs for activities common to the individual department/division. Input is gathered from both managers and field personnel within each department/division to determine the most appropriate and effective BMPs for each activity and/or pollutant. At least once a year, field employees receive training geared toward their respective maintenance responsibilities and the City's required good housekeeping techniques. In addition, training discusses the importance of proper handling, storage, and disposal of potential contaminants. Employees are educated about various forms of illicit discharge and asked to look for them during the course of their work days.

Employees responsible for reviewing construction projects attend annual training in order to improve their skills, update their knowledge, and remain current on the latest technology.

The Water Quality District has a permitting program for certain municipal departments. Periodic inspections are made at these facilities to ensure proper materials handling. When deficiencies are found, the inspector uses the opportunity to educate staff on proper procedures.

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS</b>		<b>6 - a (i)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will create an inventory of permittee owned / operated facilities and activities that have the potential to release contaminants to the MS4. Inventory will include both facilities and activities as outlined in the permit and identify possible contaminants for each - updating the inventory annually.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula will inventory permittee owned / operated facilities and activities that could potentially release contaminants to the MS4. This inventory will include both facilities and activities as outlined in the permit and identify the possible contaminants for each. The inventory will be updated annually and submitted with the annual report.	
CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	inventory permittee owned / operated facilities and activities for potential to release contaminants as outlined in the permit to the MS4, update annually	COMPLETE 1st PERMIT YEAR -- inventory permittee facilities and activities as per permit, update and submit with annual report
2018	inventory permittee owned / operated facilities and activities for potential to release contaminants as outlined in the permit to the MS4, update annually	inventory permittee facilities and activities for potential to release contaminants, as per permit, update and submit with annual report
2019	inventory permittee owned / operated facilities and activities for potential to release contaminants as outlined in the permit to the MS4, update annually	inventory permittee facilities and activities for potential to release contaminants, as per permit, update and submit with annual report
2020	inventory permittee owned / operated facilities and activities for potential to release contaminants as outlined in the permit to the MS4, update annually	inventory permittee facilities and activities for potential to release contaminants, as per permit, update and submit with annual report
2021	inventory permittee owned / operated facilities and activities for potential to release contaminants as outlined in the permit to the MS4, update annually	inventory permittee facilities and activities for potential to release contaminants, as per permit, update and submit with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS</b>		<b>6 - a (ii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
	The City of Missoula will develop a map of permittee owned / operated facilities and activities that have the potential to release contaminants to the MS4 (6.a.i). Inventory and map will include both facilities and activities as outlined in the permit and identify possible contaminants for each - updating the map and inventory annually.	
GENERAL PUBLIC		
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
<b>COMMERCIAL BUSINESS</b>	<b>BMP SELECTION RATIONALE</b>	
	The City of Missoula will map permittee owned / operated facilities and activities that could potentially release contaminants to the MS4 (6.a.i). This inventory and map will include both facilities and activities as outlined in the permit and identify the possible contaminants for each. The inventory will be updated annually and submitted with the annual report.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	inventory permittee owned / operated facilities and activities for potential to release contaminants as outlined in the permit to the MS4, update annually	(see 6.a.i)
2018	inventory and map permittee owned / operated facilities and activities for potential to release contaminants as outlined in the permit to the MS4, update annually	COMPLETE 2nd PERMIT YEAR -- inventory & map permittee facilities and activities as per permit, update and submit with annual report
2019	inventory and map permittee owned / operated facilities and activities for potential to release contaminants as outlined in the permit to the MS4, update annually	inventory & map permittee facilities and activities for potential to release contaminants, as per permit, update and submit with annual report
2020	inventory and map permittee owned / operated facilities and activities for potential to release contaminants as outlined in the permit to the MS4, update annually	inventory & map permittee facilities and activities for potential to release contaminants, as per permit, update and submit with annual report
2021	inventory and map permittee owned / operated facilities and activities for potential to release contaminants as outlined in the permit to the MS4, update annually	inventory & map permittee facilities and activities for potential to release contaminants, as per permit, update and submit with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS</b>		<b>6 - a (iii)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will categorize similar facilities and activities then develop Standard Operating Procedures (SOPs) for all categories of permittee owned / operated facilities and activities that have the potential to release contaminants to the MS4 (6.a.i). The SOPs will include inspections and communication with department personnel of 2 facility activities per category. SOPs will also identify storm water pollution controls to be installed, implemented and maintained. SOPs will be completed as per schedule in the permit - updating the map and inventory annually, starting with the 2nd annual report.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
CONSTRUCTION	The City of Missoula will categorize facilities and activities, develop SOPs of facilities and activities, including inspections and communication with department personnel, controls to be installed, implemented and maintained on schedule with the permit.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	organize facilities and activities into categories, develop SOPs, document inspections and communications with department persons, identify controls and complete on schedule	(see 6.a.i)
2018	organize facilities and activities into categories, develop SOPs, document inspections and communications with department persons, identify controls and complete on schedule	COMPLETE 2nd PERMIT YEAR -- complete 25% of BMP as per permit and submit results with annual report
2019	organize facilities and activities into categories, develop SOPs, document inspections and communications with department persons, identify controls and complete on schedule	COMPLETE 3rd PERMIT YEAR -- complete 50% of BMP as per permit and submit results with annual report
2020	organize facilities and activities into categories, develop SOPs, document inspections and communications with department persons, identify controls and complete on schedule	COMPLETE 4th PERMIT YEAR -- complete 75% of BMP as per permit and submit results with annual report
2021	organize facilities and activities into categories, develop SOPs, document inspections and communications with department persons, identify controls and complete on schedule	COMPLETE 5th PERMIT YEAR -- complete 100% of BMP as per permit and submit results with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS</b>		<b>6 - a (iv)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will develop and internally document storm water pollution prevention training in conjunction with the development of the SOPs for each category and submit with the annual report.	
<input checked="" type="checkbox"/> PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b>	
CONSTRUCTION	The City of Missoula will develop and internally document storm water pollution prevention training in conjunction with the development of SOPs for each identified category and submit with the annual report.	
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	develop and internally document storm water pollution prevention training program in conjunction with development of SOPs for each facility / activity category	(see 6.a.i)
2018	develop and internally document storm water pollution prevention training program in conjunction with development of SOPs for each facility / activity category	COMPLETE 2nd PERMIT YEAR -- complete 25% of BMP as per permit and submit results with annual report
2019	develop and internally document storm water pollution prevention training program in conjunction with development of SOPs for each facility / activity category	COMPLETE 3rd PERMIT YEAR -- complete 50% of BMP as per permit and submit results with annual report
2020	develop and internally document storm water pollution prevention training program in conjunction with development of SOPs for each facility / activity category	COMPLETE 4th PERMIT YEAR -- complete 75% of BMP as per permit and submit results with annual report
2021	develop and internally document storm water pollution prevention training program in conjunction with development of SOPs for each facility / activity category	COMPLETE 5th PERMIT YEAR -- complete 100% of BMP as per permit and submit results with annual report

<b>MINIMUM MEASURE</b>		<b>MCM - BMP</b>
<b>POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS</b>		<b>6 - a (v)</b>
<b>TARGET GROUP</b>	<b>BMP REQUIREMENT AND OBJECTIVE</b>	
GENERAL PUBLIC	The City of Missoula will conduct annual storm water pollution prevention training for all staff directly involved with implementing SOPs, trainings will be conducted during the next permit year after development of each SOP and retain records of completed trainings and attendance.	
X PUBLIC EMPLOYEES		
COMMERCIAL BUSINESS	<b>BMP SELECTION RATIONALE</b> The City of Missoula will conduct annual training of City employees directly involved with implementing SOPs, during the next permit year after development of the SOP and retain records of training and attendees.	
CONSTRUCTION		
<b>YEAR</b>	<b>IMPLEMENTATION ACTIVITY</b>	<b>MEASUREABLE GOAL</b>
2017	conduct annual training of employees involved with implementing SOPs one year following SOP development	(see 6.a.i)
2018	conduct annual training of employees involved with implementing SOPs one year following SOP development	(see 6.a.i)
2019	conduct annual training of employees involved with implementing SOPs one year following SOP development	COMPLETE 3rd PERMIT YEAR -- complete 25% of BMP as per permit and retain records of training
2020	conduct annual training of employees involved with implementing SOPs one year following SOP development	COMPLETE 4th PERMIT YEAR -- complete 50% of BMP as per permit and retain records of training
2021	conduct annual training of employees involved with implementing SOPs one year following SOP development	COMPLETE 5th PERMIT YEAR -- complete 75% of BMP as per permit and retain records of training