

City of Helena



MS4 Stormwater Management Program Documentation

**Prepared for:
2010-2014 Permit Cycle**

**Prepared By:
HDR**

City of Helena

Phase 2 NPDES General Permit Compliance
2010 Through 2014 Permit Cycle Planning Memorandum



Date: February 19, 2010
To: Kevin Hart, City of Helena
cc:
From: Sean Everett, HDR

Executive Summary

In an effort to maintain compliance to the NPDES Phase 2 Stormwater General Permit (General Permit) issued by the Montana Department of Environmental Quality (DEQ), the City of Helena, in cooperation with the Lewis and Clark Water Quality Protection District (WQPD), are committed to the following plan. This plan was developed to provide written direction to maintain compliance with Minimum Control Measures (MCMs) 1 through 6 of the General Permit.

The 2010 Permit cycle involves no major changes identified in the General Permit for MCMs 1 and 2; however, the DEQ has stated that they will be conducting audits of each Small Municipal Separate Storm Sewer System (MS4) beginning in 2010. The audits will be conducted using the EPA guidance document, MS4 Program Evaluation Guidance. This plan was developed with considerations regarding the EPA audit guidance document.

Several workshops were conducted with the City of Helena and the WQPD during the fall of 2009 to evaluate the program effectiveness during the 2005 through 2009 permit cycle and determine what additional measures could be conducted to improve the public outreach during the upcoming permit cycle.

The following tables detail the plan to continue implementation of the Phase II NPDES General Permit throughout the 2010 to 2014 permit cycle. Pages 1 through 19 present the DEQ permit guidelines in the first column with the City of Helena's documented approach in the second column. Pages 20 through 27 present the measureable goals of for MCMs 1 through 6 for the 2010 permit cycle. Appendix A provides additional backup documentation for MCMs 1 and 2. Appendix B through E provide additional backup documentation for MCMs 3 through 6, respectively. The City stormwater ordinance is provide in Appendix F.

This document package, along with Helena's Engineering Standards, stormwater ordinance, permitting and infrastructure review procedures established by the City, and the stormwater operations and maintenance program define the City of Helena's stormwater management program.

City of Helena – Phase II NPDES Program Documentation

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
(Part II.B.1.) <u>Public education and outreach on storm water impacts.</u>	
(Part II.B.1.a) An MS4 shall implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff;	<p>Program was established during completion of the Stormwater Master Plan in 2004. The program developed a brochure to be distributed to homeowners at public meetings such as watershed and other community groups. The brochures are also available at the WQPD office upon request.</p> <p>Revised BMPs for this MCM are shown in Table 1.</p>
(Part II.B.1.b) An MS4 shall maintain documentation with respect to the development of a storm water public education and outreach program. This documentation must address both the overall public education program and the individual BMPs, measurable goals and responsible persons/positions for the program. This documentation must include the following information, at a minimum:	Implementation measures are discussed below.
(Part II.B.1.b.i) Identify how the MS4 plans to inform individuals and households about the steps they can take to reduce storm water pollution.	The City and the WQPD will work to revise the current brochure during 2010 and provide updated information, including information regarding the new City stormwater ordinance. The brochure will continue to be distributed at public meetings conducted primarily by the WQPD. The City will also post a copy of the brochure on the website, which will be revised beginning in 2010 (Table C-Appendix A). A new brochure/literature will be developed for distribution to contractors beginning in 2010.
(Part II.B.1.b.ii) Identify how the MS4 plans to inform individuals and groups on how to become involved with the SWMP (with activities such as local stream and beach restoration activities).	The City will inform individuals and groups of upcoming public litter cleanup activities designed to improve and protect stormwater quality through a variety of public service announcements, advertisements, and other means.
(Part II.B.1.b.iii) Identify the target audiences for the education program which are likely to have significant storm water impacts (including commercial, industrial, and institutional entities) and why those target audiences were selected.	<p>Target Audiences</p> <ol style="list-style-type: none"> 1. Homeowners – Targeted to attempt to control pesticide, herbicide, and lawn fertilizer application. Homeowners are considered the leading cause of elevated nutrients in stormwater and a smaller contributor of sediment, metals and other substances. 2. Construction contractors (Montana Contractor's Association) – Targeted due to the high sediment loads contributed to the storm sewer system by construction activities. Many, if not all, licensed contractors are members of the MCA, thus a good source to get out the word. The completion of the new stormwater ordinance in 2009 will be the primary reason to engage the MCA and its members. The ordinance places new requirements on construction activities that would best be discussed in a large setting to reach the most people at a time. Meetings with or mailings to Helena area contractors using MCA membership lists will be conducted to explain Helena's ordinance and statewide requirements beginning in 2010. 3. Policy makers – Targeted due to control of how stormwater issues are addressed. The City and WQPD will present as needed information to the City and County Commissions, the planning board, etc. with a minimum of one presentation per year to the City Commission and the Planning Board. 4. Commercial and Industrial facilities – Targeting primarily those sites with chemicals stored on site to discuss the need to contain chemicals on site (i.e. minimize spills and drips, maximize covered storage and secondary containment vessels, etc.). The new ordinance will allow a reason to engage these facilities, especially ordinance sections regarding illicit discharges. <p>The fourth column in Table 1 shows the target audience for each of the BMPs.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
<p>(Part II.B.1.b.iv) Identify the target pollutant sources the public education program is designed to address.</p>	<p>Table A (Appendix A) was developed in the 2004 Helena Stormwater Master Plan and has not changed. The three primary target pollutants are heavy metals, nutrients, and sediments. The Lake Helena TMDL (TMDL) recommends stormwater reductions of 80% TSS reduction, 50% total phosphorus, and 30% total nitrogen. The TMDL does not regulate heavy metal concentrations in stormwater.</p> <p>The fifth column in Table 1 shows the targeted pollutant for each BMP.</p>
<p>(Part II.B.1.b.v) Identify the outreach strategy, including the mechanisms (e.g., printed brochures, newspapers, media, workshops, etc.) to be used to reach the target audiences, and how many people are expected to be reached by the outreach strategy over the initial five-year permit term.</p>	<p>Table B (Appendix A) was developed in the 2004 Helena Stormwater Master Plan.</p> <p>The green highlighted rows in Table B tables depict what programs the City and WQPD will continue to pursue during the 2010-2014 permit cycle. These include two programs, stormwater information brochures and storm drain stenciling, that were effective during the previous permit cycle. As previously stated, the brochure will be reevaluated in 2010 and reprinted for distribution. The storm drain stenciling program aims to stencil 120 drains per year.</p> <p>The WQPD currently discusses water issues, including stormwater, with twenty 4th and 5th grade classrooms annually. This will be implemented as a measureable goal under MCM 1.</p> <p>The City and WQPD have had difficulty recently getting public notices picked up in the local newspaper and large advertisements are expensive. For this reason, the City and WQPD will begin inserting stormwater inserts into City Utility bills once per year, as well as provide more targeted advertising and articles in area papers and newsletters.</p> <p>Construction literature (brochure) from the EPA website will be modified, as necessary, and presented to contractors at the certification programs as well as at outreach events regarding construction stormwater permits.</p> <p>The City and WQPD will also focus outreach efforts on regulators (City and County Commissions, Planning Board, etc.) to begin influencing stormwater policy, especially in regards to the new stormwater ordinances.</p> <p>As with the initial permit cycle, the WQPD will continue to engage local watershed groups and provide stormwater information during scheduled discussions and presentations.</p> <p>The City will work to improve the stormwater website beginning in 2010 (Table C-Appendix A). The goal of this improvement is to provide easier access to stormwater information, provide a site for complaints and illicit discharge tips, and provide links to state and EPA stormwater information.</p> <p>The City will develop and construct an interpretive sign to be displayed at the waste transfer station. The transfer station receives various wastes, including recyclables. An interpretive sign will be developed and installed by December 31, 2014. A second interpretive sign will be developed and installed at a second location, to be determined by December 31, 2014.</p>
<p>(Part II.B.1.b.vi) Identify who is responsible for overall management and implementation of the storm water public education and outreach program and, if different, who is responsible for each of the BMPs identified for this program.</p>	<p>The WQPD will continue to be the primary responsible party for public outreach and education. The City will continue to work with the WQPD to provide information and support to the WQPD. The WQPD and the City will continue to evaluate the effectiveness of the program. This work will be formalized through an interlocal agreement and annual work plans.</p> <p>The City will be responsible for updating and maintaining the stormwater page of the website, inserting the utility inserts, and for items linked with the stormwater ordinance, such as contractor certification.</p> <p>The seventh column in Table 1 shows the responsible party for each BMP.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
<p>(Part II.B.1.b.vii) Identify how the success of this minimum control measure will be evaluated, including how the measurable goals for each of the BMPs were selected.</p>	<p>The WQPD currently utilizes a form that is completed at the end of each presentation, allowing the presenter to document the topics covered. The WQPD will also include the approximate attendance at each presentation. A tracking spreadsheet will be utilized by the WQPD to maintain these records in a central location. The spreadsheet will be utilized to evaluate the number of attendants and the topics covered to determine if the message should be altered to reach additional participants.</p> <p>The City will document the number of contractors receiving stormwater training or stormwater related information on the construction stormwater program. The ultimate evaluation tool to determine how effective this outreach tool is will be the sediment present on City streets. The sediment quantity may not be measurable, but the City should be able to determine whether or not the program is working just by how much sediment is present on the streets. The contractor outreach will be augmented through permit reviews and field inspections, according to the ordinance.</p> <p>Outreach to the regulators will be evaluated by meeting minutes from the regulation meetings. Regulators response to the presenters/subject material should be documented in the minutes (i.e. additional information required, passed legislation, etc.).</p> <p>Public outreach effectiveness will be evaluated biannually by the City of Helena and the WQPD. Necessary changes will be implemented following the biannual evaluation meeting, or as deemed appropriate.</p> <p>The sixth column in Table 1 shows the measurable goal for each BMP.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
(Part II.B.2.) <u>Public involvement/participation.</u>	
(Part II.B.2.a) The MS4 shall at a minimum, comply with State, Tribal, and local public notice requirements when implementing a public involvement/participation program.	The City and WQPD will continue to comply with State, Tribal, and local public notice requirements. Revised BMPs for this MCM are shown in Table 2.
(Part II.B.2.b) The MS4 shall maintain documentation with respect to the development of a stormwater public involvement/participation program. This documentation must address both the overall public involvement/participation program and the individual BMPs, measureable goals, and responsible persons/positions for this program. This documentation must include the following information, at a minimum:	Implementation measures are discussed below.
(Part II.B.2.b.i) Identify how the public was involved in the development and submittal of the permit application and the SWMP.	The WQPD and City will continue to present at City and County Commission meetings and Planning Board meetings, which are open to the public. In addition, presentations are given to public watershed groups as well as community groups which provide feedback and concerns to the presenters.
(Part II.B.2.b.ii) Identify plans to actively involve the public in the development and implementation of the SWMP.	See Part II.B.2.b.i above.
(Part II.B.2.b.iii) Identify the target audiences for the public involvement program, including a description of the types of ethnic and economic groups engaged. The MS4 is encouraged to actively involve all potentially affected stakeholder groups, including commercial and industrial businesses, trade associations, environmental groups, homeowners associations, and educational organizations, among others.	The City currently discusses stormwater related issues through its membership on the WQPD board. The WQPD and its Board address stormwater issues in the broader context of water quality and members of the public are included on the board. The Lower Tenmile Watershed group combined with the Prickly Pear Watershed group to form the Lake Helena Watershed group. This group meets four times per year, and the WQPD facilitates these meetings. In addition, the WQPD and the City meet with the Upper Tenmile Watershed group typically twice per year. Target audiences for this measure are similar to II.B.1.b.iii above. The WQPD discusses water related issues, including stormwater, with a minimum of four community groups annually. Stormwater issues will include the ordinance, brochures, illicit discharge, habit changes, etc. The fourth column in Table 2 shows the target audience for each BMP.
(Part II.B.2.b.iv) Identify the types of public involvement activities included in this program. Where appropriate, consider the following types of public involvement activities: (a) Citizen representatives on a stormwater management panel; (b) Public hearings; (c) Working with citizen volunteers willing to educate others about the program; and (d) Volunteer monitoring or stream/beach clean-up activities.	Public organizations currently assist the WQPD and the City with the stormdrain stenciling program. This effort and activity will continue. The City will develop the new transfer station interpretive sign with the assistance of the public.
(Part II.B.2.b.v) Identify who is responsible for the overall management and implementation of the stormwater public involvement/participation program and, if different, who is responsible for each of the BMPs identified for this program.	The WQPD will continue to be the primary responsible party for public outreach and education. The City will continue to work with the WQPD to provide information and support to the WQPD. The WQPD and the City will continue to evaluate the effectiveness of the program. This work will be formalized through an interlocal agreement and annual work plans. The sixth column in Table 2 shows the responsible party for each BMP.

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
<p>(Part II.B.2.b.vi) Identify how the success of this minimum control measure will be evaluated, including how the measurable goals for each of the BMPs were selected.</p>	<p>MCM 2 items have distinct measurement criteria, allowing for completeness evaluation.</p> <p>Outreach to the regulators will be evaluated by meeting minutes from the regulatory meetings. Regulators response to the presenters/subject material should be documented in the minutes (i.e. additional information required, passed legislation, etc.).</p> <p>Records will be kept to determine event attendance, discussion topics, and perceived effectiveness; the event records will be used to evaluate public involvement. Effectiveness of this MCM will be evaluated biannually by the City of Helena and the WQPD. Necessary changes will be implemented following the biannual evaluation meeting, or as deemed appropriate.</p> <p>The fifth column in Table 2 shows the measurable goal for each BMP.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
(Part II.B.3) <u>Illicit Discharge Detection and Elimination.</u>	
(Part II.B.3.a.i) The MS4 shall develop, implement and enforce a program to detect and eliminate illicit discharges (as defined in ARM 17.30.1102(7)) into the permitted MS4.	Program was established during completion of the Stormwater Master Plan in 2004. This document builds on the program established in the Master Plan. Program details are discussed below. Revised BMPs for this MCM are shown in Table 3.
(Part II.B.3.a.ii) The MS4 shall develop, and keep updated, a storm sewer system map, showing the location and number of all outfalls (as defined in ARM 17.30.1102(14) and Part VI of this General Permit), and the names and location of all surface waters that receive discharges from those outfalls. Development of this map to accommodate the provisions of a complete IDDE program would typically include mapping storm sewer system components including, open channels, and other similar discrete conveyances. The MS4 must provide a copy of the developed map(s) or any updates to the Department with the next annual report required under Part IV.I.	A stormwater sewer system map was developed during completion of the Stormwater Master Plan in 2004 and is updated annually. The surface waters receiving discharges from these outfalls will be included during the first map revision of the 2010 permit cycle. The map is included as Appendix B to this document.
(Part II.B.3.a.iii) To the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges (except those listed under Part II.B.3.a.iv below) into the permitted storm sewer system and implement appropriate enforcement procedures and actions.	Ordinance 3120 was adopted by the City Commission on December 21, 2009 and became effective on January 21, 2010. The ordinance is included in Appendix F of this plan.
(Part II.B.3.a.iv) Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the permitted system.	The detection plan is addressed in Part II.B.3.b.iv below.
(Part II.B.3.a.v) Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.	BMPs identified under MCM 1 detail how businesses and the general public will be informed about the hazards of illegal discharges and improper disposal of waste.
(Part II.B.3.a.vi) Address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if the MS4 identifies them as significant contributors of pollutants to the Small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined in ARM 17.30.1102(8)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effected prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to state waters).	City policy toward these items is presented in Table D (Appendix B). Residential and uncontaminated discharges are regulated per Ordinance 3120 in regards to illicit discharge, construction permitting, and the application of residential BMPs. Such discharges may require further regulation in the future if a particular site or general discharge category is deemed detrimental to the receiving water body by the City.

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<p>(Part II.B.3.a.vii) The MS4 may also develop a list of other similar occasional incidental non-storm water discharges (e.g. non-commercial or charity car washes, etc.) that will not be addressed as illicit discharges. These non-storm water discharges must not be reasonably expected (based on information available to the MS4) to be significant sources of pollutants to the Small MS4, because of either the nature of the discharges or conditions the MS4 established for allowing these discharges to the Small MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive waterbodies, BMPs for the wash water, etc.). The MS4 must document, as a part of the SWMP, any local controls or conditions placed on these discharges. The MS4 must include a provision prohibiting any individual non-storm water discharge that is determined to be contributing significant amounts of pollutants to the Small MS4.</p>	<p>Charity car wash waters are allowed to discharge to the City storm sewer system with application of appropriate BMPs. Discharges from water line breaks are also allowed to discharge to the City storm sewer system with application of appropriate BMPs. These items are presented in Table D. The exemption status of these items is also subject to possible future regulation, if necessary.</p>
<p>(Part II.B.3.b) The MS4 shall maintain documentation with respect to the development of a storm water IDDE program. This documentation must address both the overall IDDE program and the individual BMPs, measurable goals, and responsible persons/positions for this program. This documentation must include the following information, at a minimum:</p>	<p>Implementation measures are discussed below.</p>
<p>(Part II.B.3.b.i) Identify how a storm sewer map was developed. Describe the sources of information used for the maps, and how verifying the outfall locations and storm sewer system components with field surveys was performed. Also, describe how the map will be regularly updated.</p>	<p>As stated under Part II.B.3.a.ii, a comprehensive map of the existing storm drain system, including pipes and open channels, was developed using existing City data and new survey information during the development of the Stormwater Master Plan in 2004. The map, along with system data (i.e. diameter, pipe type, invert elevation, etc.) will be available through the City/County geographic information system (GIS).</p> <p>Outfall locations were verified through field survey with a GPS unit.</p> <p>Each year, as new pipe is added to the storm drain system or the existing infrastructure is modified, the new infrastructure is surveyed, approved, and the map is revised. In addition, 20% of the existing system, open channels and pipe systems, will be investigated per year. Pipe systems will be evaluated with TV cameras for pipes 12" diameter or larger. Open channels greater than 12" top width or greater than 1 square mile drainage area will be field surveyed with GPS.</p>
<p>(Part II.B.3.b.ii) Identify the mechanism (ordinance or other regulatory mechanism) used to effectively prohibit illicit discharges into the Small MS4 and why that mechanism was chosen.</p>	<p>An ordinance meeting EPA model regulations was adopted to best meet this requirement. Ordinance 3120 was adopted on December 21, 2009 and became effective on January 21, 2010.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
<p>(Part II.B.3.b.iii) Identify the appropriate enforcement procedures and actions which are used to ensure the illicit discharge ordinance (or other regulatory mechanism) is implemented.</p>	<p>Illicit discharges are reported to the City via website or public or City calls to Utilities Maintenance (Table C-Appendix A). The complaint is logged by Utilities Maintenance and dispatched to enforcement personnel. The enforcement personnel investigate and evaluate the complaint. Once the complaint is rectified, the enforcement personnel document the issue as complete/resolved.</p> <p>Once an illicit discharge or illegal dumping has been detected, the property owner will issued a written notification. If abatement or restoration is required, the notice will set a deadline within such remediation or restoration must be completed. If work is not completed within the established deadline, the work may be completed by the City and the expense levied against the property owner.</p> <p>Discharge of pollutants defined by City ordinance will be investigated and remediated based on the nature of the discharge. Procedures for accidental discharges or spills will be handled separately and differently than intentional discharges.</p> <p>Violations may be subject to a maximum fine of five hundred dollars and/or up to thirty (30) days imprisonment in the county jail. The City may recover all fees, costs, and expenses associated with enforcement, including sampling and monitoring expenses.</p> <p>In extremely severe conditions, the City may clean or pay to have an illicit source terminated and cleaned. Under these circumstances, the City will seek reimbursement of the cleanup costs from the source/owner.</p>
<p>(Part II.B.3.b.iv) Identify the plan to detect and address illicit discharges to the system, including discharges from illegal dumping and spills. This plan must include documented procedures for screening outfalls, including frequency. The plan must include dry weather field screening for non-storm water flows and field tests of selected chemical parameters as indicators of discharge sources. The plan must also address on-site sewage disposal systems that flow into the storm drainage system. The description must address the following, at a minimum:</p>	<p>Detection Procedure (Screening)- Stormwater basins will be screened once every 5 years or as funding allows, in conjunction with the pipe and open channel system inspections. The inspections will occur when the storm sewer system is typically dry. Screening will be documented on the appropriate inventory sheets (example in Appendix B). All discharges observed during the dry field screenings will be sampled and laboratory tested. Screening sample locations will be documented with GPS and added to the City's stormwater tracking software, InfoSWMM. The laboratory will test for the following parameters: fecal coliform, total suspended solids, total nitrogen, total phosphorus, chemical oxygen demand, and oil and grease. If the sampler or laboratory suspects additional contaminants, the City may also chose to analyze for additional parameters such as metals, ethylene glycol, total petroleum hydrocarbons, etc. Potentially hazardous discharges (characterized by odor, color, dead plants and animals) will be reported to the WQPD and the City Fire Department, if necessary. The WQPD will sample the discharge and perform a HAZCAT analysis to determine the type of substance. Screening personnel should wear appropriate protective equipment at all times, especially latex or nitrile gloves when collecting samples.</p> <p>Detection Procedure (Complaints) – The complaint procedure is similar to the screening procedure, except that illegal dumping/illicit discharges will be identified by business, public, Police Department, or non-illicit discharge screening personnel. The complaints may be submitted to the City Utilities Maintenance through the website, phone, or written communication.</p>
<p>(Part II.B.3.b.iv.(a)) Procedures for locating priority areas which include areas with higher likelihood of illicit connections (e.g., areas with older sanitary sewer lines, for example) and/or ambient sampling to locate impacted reaches.</p>	<p>Screening Area Prioritization – Prioritization was completed according to the Center for Watershed Protection's "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments". Table E (Appendix B) was developed to prioritize the watershed subbasins within the MS4 boundary. The subbasins screening priorities are as follows: Last Chance Gulch, Davis Gulch, Bull Run, West, and Airport. Field screening of the Last Chance Gulch subbasin will begin in 2010 and progress through the prioritized drainages in each subsequent year.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
<p>(Part II.B.3.b.iv.(b)) Procedures for tracing the source of an illicit discharge, including the specific techniques the MS4 will use to detect the location of the source.</p>	<p>Discharge Tracing - Upon discovery or complaint of an illicit discharge, Utilities Maintenance will be notified and the illicit discharge will be logged. Illicit discharge enforcement personnel will be notified and evaluate the discharge. If the discharge is easily characterized (color or odor), enforcement personnel will follow the discharge through the upstream collection system to locate the source. If the discharge is not easily characterized, field analysis may be required. Field analysis may consist of pH, ORP, conductance, or other such parameters capable of field sampling analysis (HACH or HAZCAT). If field analysis cannot be completed, laboratory analysis may be required. Laboratory analysis is the least preferred method due to the typical long turn-around time and analysis costs.</p> <p>The illicit discharge location will be identified by narrowing down the search area. Once a sample has identified a hazard or illicit discharge, the influent streams of the nearest upgradient connection will be analyzed. By analyzing multiple connections near a single location, the illicit discharge can be traced to a single upgradient line. If sample results yield no contaminants, the illicit discharge should be located between the connection and the outfall or previously analyzed downstream connection. Once the storm drain segment containing the illicit discharge has been identified, the channel or pipe segment must be visually inspected to determine the illicit source. In the event that the source is not detected visually, illicit discharge enforcement personnel may be required to smoke or dye test pipe systems. If a smoke or dye test is required, the City should alert the area businesses that the test will occur. Enforcement personnel should then evaluate where the smoke leaves or dye enters the pipe system (i.e. business floor drain, roof vent, etc.). Once the illicit source is identified, the City will seek reimbursement from the source owner for any testing required to locate the source, as described in the Ordinance.</p> <p>Illicit discharge, dumping and spill locations will be documented with GPS and added to the City's stormwater tracking software, InfoSWMM.</p>
<p>(Part II.B.3.b.iv.(c)) Procedures for removing the source of the illicit discharge.</p>	<p>Source Removal – Once the illicit discharge location has been identified, the source will need to be terminated. Illicit connections are subject to regulations outlined in the City Ordinance. Unutilized storm drain connections may be filled with concrete or grout at the source. The connection to the City storm system must also be permanently terminated, either by removal/demolition or by concrete or grout fill. Quick fixes such as pipe plugs will not be allowed. Drains to remain in service must be connected to the City sewer system, and the connection to the City storm system must be permanently terminated.</p> <p>Upon completion of source removal, enforcement personnel will verify that the illicit connection was terminated and place a notice in the file. If the source termination is unsatisfactory, enforcement personnel may issue citation and require proper termination.</p>
<p>(Part II.B.3.b.iv.(d)) Procedures for program evaluation and assessment.</p>	<p>Program Evaluation – Illicit discharge evaluation will primarily be through the number of located and terminated illicit connections. In addition, outfall samples will allow for evaluation upon future follow-up field surveys/inspections. A lack of located illicit connections can be due to no connections or lack of effort; therefore, the City will also track the number of hours or length of system surveyed annually. An increase of pollutants in subsequent samples will require reevaluation of the programs effectiveness and potential redevelopment.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
<p>(Part II.B.3.b.v) Identify the plan to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. Include in this description how this plan will coordinate with the public education minimum control measure and the pollution prevention/good housekeeping minimum control measure programs. This plan must identify measures to train pertinent municipal employees on the illicit discharge program.</p>	<p>Commercial and industrial businesses, regulators, construction contractors, and the general public will be informed of illicit discharges/illegal dumping through public outreach and public involvement methods outlined in MCMs 1 and 2 (Part II.B.1 above and Tables 1 and 2 attached). Public employees will be educated through methods outlined in MCM 6 (Part II.B.6 below and Table 6 attached).</p> <p>Public Outreach - In particular, a portion of all business, regulator, contractor, and public outreach discussions will be dedicated to illicit discharge. The IDDE discussion will highlight the IDDE ordinance, what constitutes an illicit discharge, and why illicit discharges are a concern to storm water.</p> <p>Employee Training (General) – Annual illicit discharge training will be conducted for City Utilities Maintenance division field employees in conjunction with other annual training events. The general training will describe what an illicit connection/discharge is, identifying illicit discharges, initial response techniques, and pollution prevention measures. The session will help staff identify signs of illicit discharges, report field observations, and educate them on the importance of preventing pollution during daily activities.</p> <p>Employee Training (Inspectors/Enforcement) –Training on outfall survey and investigation and recognizing illicit discharges will be conducted on an as-needed basis such as new employee, change in conditions procedures, etc. Course content will include: how to conduct an outfall survey, how to search for illicit connections/discharges, personnel safety, field forms, equipment requirements, sampling requirements, and recognizing suspicious discharges and natural phenomena.</p> <p>Employee training (BMPs) – Training on properly installing BMPs for use during excavation and cleanup work will be conducted on an as-needed basis such as new employees, change in procedures, etc. The focus of this training will include runoff control BMPs, especially silt fence and inlet protection.</p> <p>Employee Training (Fire Department) – The City will work with the local fire department to address spill cleanup and BMP procedures to ensure protection of the storm drain system. Trainings will be conducted on an as-needed basis such as new employees, change in procedures, etc.</p> <p>A training sign in form is included in Appendix B. The form will be utilized to document when the training was conducted and who was present.</p>
<p>(Part II.B.3.b.vi) Identify who is responsible for overall management and implementation of the storm water illicit discharge detection and elimination program and, if different, who is responsible for each of the BMPs identified for this program.</p>	<p>The Utilities Maintenance Superintendent will continue to be the primary contact for activities in this minimum control measure. The Utilities Maintenance Superintendent will coordinate with the City Engineer, Public Works Director, and the Plumbing Inspector to ensure that all proposed activities are implemented and documented for annual permit reporting.</p> <p>The fifth column in Table 3 shows the measurable goal for each BMP.</p>
<p>(Part II.B.3.b.vii) Identify how the success of this minimum control measure will be evaluated, including how the measurable goals for each of the BMPs were selected.</p>	<p>MCM 3 items have distinct measurement criteria, allowing for completeness evaluation.</p> <p>The fourth column in Table 3 shows the measurable goal for each BMP.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
(Part II.B.4) Construction Site Storm Water Runoff Control.	
<p>(Part II.B.4.a) The MS4 shall develop, implement, and enforce a program to reduce pollutants in any 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 of 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. The program must include the development and implementation of, at a minimum:</p>	<p>Program was established during the completion of the Stormwater Master Plan in 2004. This document builds on the program established in the Master Plan. Program details are discussed below.</p> <p>Revised BMPs for this MCM are shown in Table 4.</p>
<p>(Part II.B.4.a.i) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal, or local law;</p>	<p>Ordinance 3120 was adopted by the City Commission on December 21, 2009 and implemented on January 21, 2010. The ordinance is included in Appendix F of this plan.</p>
<p>(Part II.B.4.a.ii) Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;</p>	<p>Small Sites (less than 1 acre disturbed) – The City prefers that all stormwater is kept on site during construction. However, this is not practical at all sites. If a small site are found to contribute significant pollutants to the stormwater system, as determined by the City, the City may issue citations under illicit discharge elimination requirements as construction sites under 1 acre are not required to obtain a permit, but will be expected to implement BMPs for stormwater quality protection.</p> <p>Phased Development and Development Greater than 1 Acre – The City prefers that all stormwater is kept on site during construction. However, this is not practical at all sites. The City of Helena Engineering Standards detail the appropriate construction BMPs by referring to the Field Manual on Sediment and Erosion Control Best Management Practices for Contractors and Inspectors (SEC Field Manual).</p> <p>These items are also discussed in Appendix C.</p>
<p>(Part II.B.4.a.iii) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;</p>	<p>Proper construction site waste disposal is detailed in Appendix C. A brochure/handout will be developed specific to this control measure detailing proper construction waste disposal, the ordinance, sediment and erosion control requirements, inspections, violations, etc. and supplied to contractors, builders, and homeowners at the time of permit application/submittal.</p>
<p>(Part II.B.4.a.iv) Procedures for the MS4 to perform site plan review (i.e. the Storm Water Pollution Prevention Plan (SWPPP)) for consistency with state and local requirements, and which incorporates consideration of potential water quality impacts including storm water pollution prevention through appropriate erosion, sediment and waste control BMPs;</p>	<p>The 2004 Storm Water Master Plan provided plan review and inspection methods to be employed by the City. Two sets of methods were developed, one for sites less than 1 acre and one for sites larger than 1 acre. These methods, along with additional improvements, are included in Appendix C. Sites disturbing less than one acre will not require a permit but will be reviewed for BMP application or permit coverage where the impervious area exceeds 5000 square feet. However, these sites are still subject to illicit discharge requirements. A Stormwater Construction Plan Review Report form and Stormwater Construction Inspection Report form are also included in Appendix C.</p>
<p>(Part II.B.4.a.v) Procedures for receipt and consideration of information submitted by the public; and</p>	<p>Construction BMP complaints are handled similarly to illicit discharge complaints. Complaints are reported to the City via website or public or City calls to Utilities Maintenance (Table C-Appendix A). The complaint is logged by Utilities Maintenance and directed to enforcement personnel. The enforcement personnel investigate and evaluate the complaint. Once the complaint is rectified, the enforcement personnel document the issue as complete/resolved.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
(Part II.B.4.a.vi) Procedures for the MS4 to perform site inspection and enforcement, in part based upon the site plan in Part II.B.4.a.iv., of erosion, sediment, and waste control BMPs.	A Stormwater Construction Inspection Report form is included in Appendix C. Enforcement will be per the ordinance, with additional procedures presented in Part II.B.4.b.ii below.
(Part II.B.4.b) The MS4 shall maintain documentation with respect to the development of a construction site storm water control program. This documentation must address both the overall construction site storm water control program, and the individual BMPs, measurable goals, and responsible persons/positions for the program. This documentation must include the following information, at a minimum:	Implementation measures are discussed below.
(Part II.B.4.b.i) Identify the mechanism (ordinance or other regulatory mechanism) which will be used to require erosion and sediment controls at construction sites and why this mechanism was chosen.	An ordinance meeting EPA model regulations was adopted to best meet this requirement. Ordinance 3120 was adopted on December 21, 2009 and became effective on January 21, 2010.
(Part II.B.4.b.ii) Identify the plan to ensure compliance with the erosion and sediment control regulatory mechanism, including the sanctions and enforcement mechanisms to be used to ensure compliance. Describe the procedures for when certain sanctions will be used. Possible sanctions include non-monetary penalties (such as stop work orders), fines, bonding requirements, and/or permit denials for non-compliance.	<p>Upon issuance of a construction BMP violation, enforcement personnel will issue a written warning stating that a violation is occurring and require the offender to rectify the violation. The enforcement officer will return to the site within one week to verify if the violation was rectified. If the violation persists upon the return visit, the contractor will be issued a citation. Citations and enforcement actions may vary depending on the severity of the violation or discharge, as determined by enforcement personnel. Additional citations may be issued for similar violations during any return site inspection without a written warning.</p> <p>If a blatant or severe violation is discovered, enforcement personnel may require the contractor to stop work or other enforcement actions outlined in the ordinance until the violation is rectified.</p>
(Part II.B.4.b.iii) Identify the requirements for construction site operators to implement appropriate erosion and sediment control BMPs and control waste at construction sites that may cause adverse impacts to water quality. Such waste includes, but is not limited to, discarded building materials, concrete truck washouts, chemicals, litter, and sanitary waste.	Proper construction site waste disposal is detailed in Appendix C. The erosion and sediment control BMPs were adopted from the EPAs BMPs for construction sites: (http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=4)
(Part II.B.4.b.iv) Identify the procedures for site plan review, including the review of pre-construction site plans, which incorporate considerations of potential water quality impacts and appropriate storm water pollution prevention BMPs. Describe procedures and the rationale for how certain sites for site plan review will be determined, if not all plans are to be reviewed. Describe the estimated number and percentage of sites which will have pre-construction site plans reviewed.	A construction project tracking table and plan review procedures are shown in Appendix C (Audit guidance strongly encourages tracking system of some sort). The plan review procedures discuss rationale for determining which sites will be reviewed in the event that not all sites are reviewed.
(Part II.B.4.b.v) Identify the procedures for receipt and consideration of information submitted by the public. Consider coordinating this requirement with the public education program.	<p>Construction BMP complaints are handled similarly to illicit discharge complaints. These procedures are detailed in Appendix C.</p> <p>A brochure/handout will be developed specific to this control measure detailing proper construction waste disposal, the ordinance, sediment and erosion control requirements, inspections, violations, etc. and supplied to contractors, builders, and homeowners.</p>
(Part II.B.4.b.vi) Identify procedures for site inspection and enforcement of control measures, including how sites for inspection will be selected and prioritized.	<p>A Stormwater Construction Inspection Report form is included in Appendix C. Enforcement will be per the ordinance, with additional procedures presented in Part II.B.4.b.ii above.</p> <p>A construction project tracking table is shown in Appendix C.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
<p>(Part II.B.4.b.vii) Identify who is responsible for overall management and implementation of the construction site storm water control program and, if different, who is responsible for each of the BMPs identified for this program.</p>	<p>The Utilities Maintenance Superintendent will continue to be the primary contact for activities in this minimum control measure. The Utilities Maintenance Superintendent will coordinate with the City Engineer, Public Works Director, and the Plumbing Inspector to ensure that all proposed activities are implemented and documented for annual permit reporting.</p> <p>The fifth column in Table 4 shows the measurable goal for each BMP.</p>
<p>(Part II.B.4.b.viii) Identify how the success of this minimum control measure will be evaluated, including how the measurable goals for each of the BMPs were selected.</p>	<p>MCM 4 items have distinct measurement criteria, allowing for completeness evaluation.</p> <p>The fourth column in Table 4 shows the measurable goal for each BMP.</p>
<p>(Part II.B.4.b.ix) Identify measures to train pertinent municipal employees on the construction program.</p>	<p>City inspection and enforcement personnel will be trained for site inspection and enforcement initially and as needed based on staffing or process changes.</p> <p>A training sign in form is included in Appendix B. The form will be utilized to document when the training was conducted and who was present.</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
(Part II.B.5) Post-Construction Storm Water Management in New Development and Redevelopment	
(Part II.B.5.a.i) The MS4 shall develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the Small MS4. This program must ensure that controls are in place that would prevent or minimize water quality impacts.	The program was established during the completion of the Stormwater Master Plan in 2004. The program was enhanced in 2006 with the adoption of the Engineering Standards. The program details are discussed below. Revised BMPs for this MCM are shown in Table 5.
(Part II.B.5.a.ii) The MS4 shall develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community.	The City completed the Storm Water Master Plan in 2004 to address some of these issues. In addition, the City completed and adopted Engineering Standards in 2006. These two documents present the strategies for structural and non-structural BMPs within the City.
(Part II.B.5.a.iii) The MS4 shall use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law.	Ordinance 3120 was adopted by the City Commission on December 21, 2009 and implemented on January 21, 2010. The ordinance is included in Appendix F of this plan.
(Part II.5.a.iv) The MS4 shall ensure adequate long-term operation and maintenance of BMPs.	The City cleans catch basins and stormwater facilities annually, in the spring before runoff occurs. Additional cleaning is performed when sediment, trash, or other pollutant accumulation is observed. The City currently employs asset management software to track stormwater maintenance activities but is in the process of converting the model to a GIS-centric asset management software (InfoSWMM). Non City-owned BMPs are required to be properly maintained by the property owner. Inspections of such facilities will allow the City to ensure that these facilities are properly maintained.
(Part II.5.a.v) The MS4 shall develop and implement procedures for the Small MS4 permittee to perform site plan review which incorporates consideration of potential water quality impacts including appropriate post-construction BMPs	Post-construction BMP plan review procedures are presented in Appendix D. A Stormwater Post-Construction BMP Plan Review checklist is also presented in Appendix D.
(Part II.5.a.vi) The MS4 shall develop and implement procedures for the Small MS4 permittee to perform site inspections and enforcement of post-construction BMPs.	Post-construction BMP inspection procedures are presented in Appendix D. A Stormwater Post-Construction BMP Inspection Report is also presented in Appendix D.
(Part II.5.a.vii) For new developments or redevelopment projects greater than 1 acre, the program shall include a process, where such practices are practicable, to require the implementation of low impact development practices that infiltrate, evapotranspire, or capture for reuse the first 0.5 inches of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation. This process must be in place by January 1, 2012.	Infiltration systems are discussed in the Engineering Standards. However, additional low impact development was not discussed in the Master Plan and Engineering Standards, especially in regards to the requirement to hold the first 0.5 inches of rainfall. Additional measures will be implemented prior to January 1, 2012 to address the low impact development requirements issued under the 2010 General Permit requirements. Typical LID techniques are discussed briefly in Appendix D. The City will incorporate LID techniques into the Engineering Standards.
(Part II.5.b) The MS4 shall maintain documentation with respect to the decision process used for the development of a post-construction storm water program. This documentation must address both the overall post-construction storm water program and the individual BMPs, measureable goals, and responsible persons/positions for the program. This documentation must include the following information, at a minimum:	Implementation measures are discussed below.

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
(Part II.5.b.i) Identify how the program to address storm water runoff from new development and redevelopment projects was developed. Include in this description any specific priority areas for this program.	The program was developed by the City through the completion of a Stormwater Master Plan as well as City Engineering Standards. The Master Plan was completed with the assistance of HDR Engineering, Inc. in 2004. The Engineering Standards were completed with the assistance of HDR Engineering, Inc. and Morrison-Maierle, Inc. and was adopted by the City Commission in June 2006.
(Part II.5.b.ii) Identify how the program will be specifically tailored to the local community, to minimize water quality impacts, and to attempt to maintain pre-development runoff conditions and hydrology. This includes the process, where such practices are practicable, to implement low impact development practices that infiltrate, evapotranspire, or capture for reuse the first 0.5 inches of rainfall from a 24-hour storm preceded by 48 hours of no measureable precipitation.	<p>The Stormwater Master Plan and Engineering Standards were written specifically for the City of Helena. Hydrology design standards were developed using rainfall data specific to Helena. The Engineering Standards were written to incorporate City ordinances. Modifications to the Engineering Standards will be made as necessary to include additional ordinance requirements.</p> <p>The Engineering Standards reference or modify federal guidelines such as HEC-22, other state and municipal storm manuals such as the City of Boise, Eastern Washington, and King County, and state guidelines such as Montana Public Works Standard Specifications and the Montana Department of Transportation Model Drainage Manual to comply with federal and state guidelines while tailoring to the needs and situations specific to the City of Helena.</p> <p>Infiltration systems are discussed in the Engineering Standards. However, additional low impact development was not discussed in the Master Plan and Engineering Standards, especially in regards to the requirement to hold the first 0.5 inches of rainfall. Additional measures will be implemented prior to January 1, 2012 to address the low impact development requirements issued under the 2010 General Permit requirements.</p>
(Part II.5.b.iii) Identify any non-structural BMPs in the program, including as appropriate:	Policies for zoning and development are found in Helena City Code – Title 11. The City will consider additions to this policy to address stormwater measures as they are revised in the future.
(Part II.5.b.iii.(a)) Policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive waterbodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation.	The Engineering Standards address buffers, impervious area, and soil disturbance. The Community Planning Department administers the appropriate City ordinances to preserve neighborhood character and enhance the City's quality of life within the context of the Helena Growth Policy and serves as a professional planning and development resource to elected officials, advisory boards, and the community at large.
(Part II.5.b.iii.(b)) Policies or ordinances that encourage infill development in higher density urban areas and areas with existing storm sewer infrastructure.	Infill development would be directed by the Community Planning Department. Development and redevelopment projects involving 5000 square feet or more impervious area will require stormwater drainage plan and infrastructure review.
(Part II.5.b.iii.(c)) Education programs for developers and the public about project designs that minimize water quality impacts.	Education programs consist of brochures and the City website. The brochures are available from the WQPD and the City Utilities Maintenance department.
(Part II.5.b.iii.(d)) Other measures such as minimization of the percentage of impervious area after development, use of measures to minimize directly-connected impervious areas, and source control measures often thought of as good housekeeping, preventative maintenance, and spill prevention.	Development and redevelopment projects with 5000 square feet or more impervious area will require storm drainage plan and infrastructure review to minimize post-development flows to match pre-development conditions. These requirements can be achieved through impervious area reductions or connection to directly impervious areas, etc.

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
(Part II.5.b.iv) Identify any structural BMPs in the program, including, as appropriate:	Implementation measures are discussed below.
(Part II.5.b.iv.(a)) Storage practices such as wet ponds and extended-detention outlet structures.	Storage practices are addressed in the Engineering Standards on pages 48 through 55.
(Part II.5.b.iv.(b)) Filtration practices such as grassed swales, bioretention cells, sand filters and filter strips.	Filtration practices are not addressed in the Engineering Standards.
(Part II.5.b.iv.(c)) Infiltration practices such as infiltration basins and infiltration trenches.	Infiltration practices are addressed in the Engineering Standards on pages 55 through 58.
(Part II.5.b.v) Identify the mechanisms (ordinance or other regulatory mechanisms) which will be used to address post-construction runoff from new developments and redevelopments and why that mechanism was chosen. If a mechanism needs to be developed, describe the plan and a schedule to do so. If the ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with the program.	An ordinance meeting EPA model regulations was adopted to best meet this requirement. Ordinance 3120 was adopted on December 21, 2009 and became effective on January 21, 2010.
(Part II.5.b.vi) Identify how the long-term operation and maintenance (O&M) of the selected BMPs will be ensured. Options to help ensure that future O&M responsibilities are clearly identified include an agreement between the MS4 and another party such as the post-development landowners or regional authorities.	City owned and operated catch basins and stormwater facilities are monitored annually and cleaned as required. The City maintains a GIS-centric software to track maintenance activities. Under authority of the new ordinance, O&M of non-City owned BMPs will be regulated. The minimum O&M requirements are presented in Appendix D.
(Part II.5.b.vii) Identify who is responsible for the overall management and implementation of the post-construction storm water program and, if different, who is responsible for each of the BMPs identified for this program.	The Helena Utility Maintenance division is responsible for the management and implementation of the post-construction storm water program.
(Part II.5.b.viii) Identify how the success of this minimum control measure will be evaluated, including how the measurable goals for each of the BMPs were selected.	MCM 5 items have distinct measurement criteria allowing for completeness evaluation. The fourth column in Table 5 shows the measurable goal for each BMP.
(Part II.5.b.ix) Identify the procedures for site plan review of post-construction storm water management BMPs which incorporate considerations of potential water quality impacts. Describe procedures and the rationale for how certain sites for site plan review will be determined, if not all plans are to be reviewed. Describe the estimated number and percentage of site plan reviews to be performed.	Plan review procedures are shown in Appendix D. The plan review procedures discuss rationale for determining which sites will be reviewed in the event that not all sites are reviewed. In addition to the City owned and operated BMPs, the City will inspect a percentage (up to 10%) of privately owned and maintained systems annually, based on available resources. Ordinance 3120 places responsibility for private BMP maintenance on the landowner with mechanisms for City intervention where necessary.

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
<p>(Part II.5.b.x) Identify procedures for site inspection and enforcement of post-construction storm water management BMPs, including how sites for inspection will be selected and prioritized. Inspections must include an evaluation of whether BMPs were built properly and are being maintained properly.</p>	<p>Post-construction BMP inspection procedures are presented in Appendix D. A Stormwater Post-Construction BMP Inspection Report is also presented in Appendix D</p>

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
(Part II.B.6) Pollution Prevention/Good Housekeeping for Municipal Operations	
(Part II.B.6.a.i) The MS4 shall develop and implement an operation and maintenance program which includes a training component, and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations	The program was established during the completion of the Stormwater Master Plan in 2004. The program details are discussed below. Revised BMPs for this MCM are shown in Table 6.
(Part II.B.6.a.ii) Using training materials available from EPA, the State of Montana, the Tribe, or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, vehicle fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.	A training program outline is provided in Appendix E.
(Part II.B.6.b) The MS4 shall maintain documentation with respect to the decision process for the development of a pollution prevention/good housekeeping program for municipal operations. This documentation must address both the overall pollution prevention/good housekeeping program and the individual BMPs, measurable goals, and responsible persons/postions for the program. This documentation must include the following information, at a minimum:	Implementation measures are discussed below.
(Part II.B.6.b.i) Identify the operation and maintenance program to prevent or reduce pollutant runoff from municipal operations. The program must specifically list the municipal operations which are impacted by this operation and maintenance program. The MS4 shall also include a list of facilities or activities (excluding construction) which are owned or operated by the MS4 that are subject to the Department's other MPDES storm water discharge permits, and which discharge into the permitted Small MS4. Include the Department's MPDES permit number for each facility or activity.	A broad-based operations and maintenance plan is included in Appendix E to address municipal operations. No other City owned or operated MPDES storm water discharge permitted facilities are located within the MS4.
(Part II.B.6.b.ii) Identify the municipal government employee training program, including frequency, which will be used to prevent and reduce storm water pollution from activities such as park and open space maintenance, vehicle fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. Describe any existing, available materials which are planned to be used. Describe how this training program will be coordinated with the outreach programs developed for the public information minimum control measure and the illicit discharge minimum control measure.	A training program outline is provided in Appendix E.
(Part II.B.6.b.iii) The program description must specifically address the following areas:	Implementation measures are discussed below.
(Part II.B.6.b.iii.(a)) Maintenance activities, maintenance schedules, and long-term inspection procedures (including frequency) for controls to reduce floatables and other pollutants to the permitted Small MS4.	Maintenance activities and schedules are detailed in the Utilities Maintenance O&M schedule and briefly in Appendix E. Inspection procedures are detailed in Appendix D. Street sweeping requirements are detailed in Table 6. System inspections requirements are detailed in Table 3.

REQUIREMENTS/MINIMUM MEASURES	IMPLEMENTATION/JUSTIFICATION
(Part II.B.6.b.iii.(b)) Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste handling and disposal areas, vehicle fleet or maintenance shops with outdoor storage areas, salt/sand storage locations, and snow disposal areas operated by the MS4.	Controls are discussed in Appendix E.
(Part II.B.6.b.iii.(c)) Procedures for the proper disposal of waste removed from the permitted Small MS4 through the MS4's municipal operations, including dredge spoil, accumulated sediments, floatables, catch basin cleaning, and other debris.	Proper disposal procedures are presented in Appendix E. In summary, suspected materials should be tested to determine disposal method. Clean material may be disposed of at the landfill or fill area, while contaminated material must be disposed of according to proper regulations. Stockpile areas should be covered to prevent erosion and runoff. Silt fence or other appropriate BMPs should be installed around stockpiles or exposed surfaces to reduce erosion and runoff. Material should be disposed of in a manner that will not negatively affect the storm drain system in the future.
(Part II.B.6.b.iii.(d)) Procedures to ensure that new flood management projects are assessed for impacts on water quality and existing projects are assessed for incorporation of additional water quality protection devices or practices.	Floodplain planning is permitted at the County level. The City will work with the County Floodplain Coordinator to address water quality affects during such projects. The City reviews floodplain requirements during plan review and prior to final plat. The City Public Works department occasionally undertakes projects to reduce flooding of city streets and other problem areas. These projects often require installation or expansion of existing detention basins. These basins generally allow sediment to settle and reduce further transport downstream. Other City flooding mitigation projects may involve increasing pipe or ditch size which reduce flow velocities and decrease erosion. The City also conducts flood management projects following city annexations or when reviewing existing facilities for regulatory compliance. The City will review the illicit discharge, construction BMP, and post-construction BMP methods outlined in the appendices when evaluating potential future flood management projects.
(Part II.B.6.b.iv) Identify who is responsible for overall management and implementation of the pollution prevention/good housekeeping program and, if different, who is responsible for each of the BMPs identified for this program.	The Helena Public Works Department is responsible for the management and implementation of the post-construction storm water program.
(Part II.B.6.b.v) Identify how the success of this minimum control measure will be evaluated, including how the measurable goals for each of the BMPs were selected.	MCM 6 items have distinct measurement criteria allowing for completeness evaluation. The fourth column in Table 6 shows the measurable goal for each BMP.

City of Helena – Phase II NPDES Program Documentation

Minimum Control Measure BMPs (2010-2014 permit cycle)

Table 1 - Requirement #1: Public Education & Outreach						
BMP #	SWMP Element Description (II.B.1.b. v)	Justification/Permit Requirement	Target Audience (II.B.1.b. iii)	Target Pollutant (II.B.1.b. iv)	Measurable Commitments & Implementation Schedule (II.B.1.b. vii)	Responsible Party (II.B.1.b. vi)
1.1	Educational Brochure	Raise public awareness about storm water.	Homeowners	Nutrients	Revise current brochure and begin distributing in 2010.	WQPD
1.2	Classroom Education	Raise awareness in children.	Children	NA	Present to 20 classrooms per year to discuss water quality and storm water.	WQPD
1.3	Stormdrain Stenciling	Raise awareness in general public and in children.	Multiple	Multiple	Stencil 120 drains per year with area community group.	WQPD
1.4	Wetland Signage	Raise awareness	Public	NA	The City added two signs at area wetlands that handle stormwater prior to 2007 (Kmart ponds and Henderson ponds). City will continue to maintain signs and WQPD will continue discussing during public tours.	City/WQPD
1.5	Construction Brochure	Raise construction awareness about stormwater	Contractors	Sediment	Develop construction brochure in 2010 to describe the ordinance, plan review and inspections, certification, etc. Distribute throughout permit cycle.	WQPD/City
1.6	Raise Contractor Awareness	Raise construction awareness about stormwater	Contractors	Sediment	Conduct one public meeting regarding implementation of the new ordinance. This meeting will primarily focus on Helena area contractors.	WQPD/City
1.7	Raise contractor awareness	Raise construction awareness about stormwater	Contractors	Sediment	Begin informing developers, engineers, architects, contractors, etc. of upcoming rule regarding LID techniques required for all new and redevelopment beginning in 2012.	WQPD/City
1.8	Revise stormwater website	Raise awareness	Multiple	Multiple	Revise existing website in 2010. Include location for complaints.	City
1.9	Utility bill inserts	Raise awareness in general public	Homeowners	Nutrients	Develop insert and include in utility bills annually.	City
1.10	Regulator Outreach	Inform regulators of SW issues	Regulator	Multiple	Meet with City Commission annually.	WQPD

Table 1 - Requirement #1: Public Education & Outreach						
BMP #	SWMP Element Description (II.B.1.b. v)	Justification/Permit Requirement	Target Audience (II.B.1.b. iii)	Target Pollutant (II.B.1.b. iv)	Measurable Commitments & Implementation Schedule (II.B.1.b. vii)	Responsible Party (II.B.1.b. vi)
1.11	Regulator Outreach	Inform regulators of SW issues	Regulator	Multiple	Meet with County Commission, City/County Planning Board, and Helena Area Citizens Council when program opportunities require regarding stormwater information dissemination of the stormwater ordinance, best management practices, and other stormwater related information	WQPD/City
1.12	Public Group Outreach	Meet with local watershed groups	Public	Multiple	Continual membership role in the Lake Helena Watershed Planning Group.	WQPD/City
1.13	Interpretive Sign	Install interpretive signs at potential following sites: transfer station, airport pond, DNRC pond, nature park, recycling facility	Public and Children	Multiple	Develop and install 2 signs prior to 2015.	WQPD/City
1.14	Press Releases/Paid Advertisements	Raise public awareness about storm water.	Public and Contractors	Multiple	Publish up to two press releases or advertisements annually.	City/WQPD

~~Strikethrough~~ – Item removed following evaluation from previous permit cycle. Item was deemed to be completed.

Table 2 - Requirement # 2: Public Participation and Involvement					
BMP #	SWMP Element Description (II.B.2.b. i)	Justification/Permit Requirement	Target Audience (II.B.2.b. iii)	Measurable Commitments & Implementation Schedule (II.B.2.b. vi)	Responsible Party (II.B.2.b.v)
2.1	Public Meetings	Raise public awareness about stormwater.	Public	Speak to community groups 4 times per year.	WQPD
2.2	Regulator Meetings	Raise stormwater awareness among regulators and interested public.	Regulators	Meet with City Commission annually.	WQPD/City
2.3	Regulator Meetings	Raise stormwater awareness among regulators and interested public.	Regulators	Meet with County Commission and Helena Area Citizens Council when program opportunities require regarding stormwater information dissemination of the stormwater ordinance, best management practices, and other stormwater related information	WQPD/City
2.4	Public Meetings	Promote a sense of ownership in water resources.	Public	Facilitate 3 to 4 Lake Helena Watershed Group Meetings annually. City to participate in watershed group including periodic meetings dedicated to stormwater.	WQPD/City

Table 2 - Requirement # 2: Public Participation and Involvement					
BMP #	SWMP Element Description (II.B.2.b. i)	Justification/Permit Requirement	Target Audience (II.B.2.b. iii)	Measurable Commitments & Implementation Schedule (II.B.2.b. vi)	Responsible Party (II.B.2.b.v)
2.5	Stormdrain Stenciling	Raise awareness in general public and in children.	Multiple	Stencil 120 drains per year with area community group.	WQPD
2.6	Public Meeting	Raise stormwater awareness regarding City Ordinance	Public	Conduct one public meeting regarding implementation of the new ordinance. This meeting will primarily focus on Helena area contractors.	WQPD/City
2.7	Public Meeting	Inform public about stormwater ordinance	Public	Conduct one to two administrative meetings with City Commission, Helena Citizens Council, and City staff once during annual budget development and rate discussions.	WQPD/City
2.8	Regulator Meeting	Inform public through WQPD meeting	Regulators	City presents annually to the WQPD regarding City approach to stormwater.	City/WQPD
2.9	Develop Display	Raise stormwater awareness among public	Public	Develop a display in 2010 for public events such as Helena Citizens Council, Lake Helena Watershed Festival, etc.	WQPD/City
2.10	Public Awareness	Raise stormwater awareness among public	Public	Participate in or sponsor one meeting annually to raise stormwater quality awareness with groups such as Helena Citizens Council, Lake Helena Watershed Festival, contractors, etc. to focus on stormwater quality.	WQPD/City
	Public Meetings	Raise awareness in general public.	NA	Conduct one public meeting to discuss stormwater master plan by end of 2004.	City
	Public Meetings	Promote a sense of ownership in water resources.	NA	Facilitate Upper Tenmile Watershed Group Meetings, 2 meetings per year.	WQPD

~~Strikethrough~~ – Item removed following evaluation from previous permit cycle. Item was deemed to be completed.

Table 3 - Requirement # 3: Illicit Discharge Detection and Elimination				
BMP #	SWMP Element Description	Justification	Measurable Commitments & Implementation Schedule (II.B.3.b.vii)	Responsible Party (II.B.3.b.vi)
3.1	Map	Specifically required by the rule (II.B.3.a.ii).	Update map annually with newly constructed stormwater systems.	City
3.2	Implement Ordinance	Specifically required by rule (II.B.3.a.iii).	Implement ordinance to prohibit non-stormwater discharges as well as implement enforcement procedures beginning in 2010.	City
3.3	System Inspection	Meets requirement to develop a plan to detect non-storm discharges (II.B.3.a.ii).	Inspect 100% of new storm drains system before they are connected to City system each year.	City
3.4	System Inspection	Meet requirements to develop a plan to detect non-storm water discharges (II.B.3.a.ii).	Target inspection of up to 20% of existing storm sewer pipe system each year, 12" or greater. Report outfall conditions using approved written documentation.	City
3.5	System Inspection	Meet requirements to develop a plan to detect non-storm water discharges (II.B.3.a.ii).	Target inspection of up to 20% of existing storm sewer open ditches each year, 1 square mile or less drainage area or ditches 12" deep or greater. Inventory, record, and report unauthorized/illicit connections for follow up action.	City
3.6	System Inspection	Inspect sanitary system	Inspect 20% of sanitary sewer system annually to investigate whether sewage is impacting storm system.	City
3.7	Detection Plan	Specifically required by the rule (II.B.3.a.iv).	Detection Plan shown in Phase II NPDES Program Documentation with support through ordinance. Evaluate effectiveness annually.	City
3.8	Employee training	Inform public employees (II.B.3.b.v)	Provide training opportunities as warranted to ensure City inspection personnel have the tools and resources to identify illicit discharges, spills, and dumping as well as hazards, notification, and potential methods to prevent/limit spread. Additional details in MCM 6.	City

Table 3 - Requirement # 3: Illicit Discharge Detection and Elimination				
BMP #	SWMP Element Description	Justification	Measurable Commitments & Implementation Schedule (II.B.3.b.vii)	Responsible Party (II.B.3.b.vi)
3.9	Enforcement Plan	Meet requirement to develop a plan to terminate illicit discharges (II.B.3.b.iii)	Enforcement Plan shown in Phase II NPDES Program Documentation with support through ordinance. Evaluate effectiveness annually.	City
3.10	Spill Response	Meets an existing City need to ensure proper response to hazardous spills.	The documentation is detailed in Appendix B. The City will continue to respond to spills according to the documented procedure.	City
	System Inspection (added to permit)	Meets requirement to develop a plan to detect non-storm discharges.	Bought a later launch TV camera to more completely inspect the new pipes. Cost \$40,000.	City
	System Inspection	Meets requirement to develop a plan to detect non-storm discharges.	Complete TV inspection of 100% of major storm pipes (>12") by end of 2006.	City

Strikethrough – Item removed following evaluation from previous permit cycle. Item was deemed to be completed.

Table 4 - Requirement # 4: Construction Site Runoff Control				
BMP #	SWMP Element Description	Justification	Measurable Commitments & Implementation Schedule (II.B.4.b.viii)	Responsible Party (II.B.4.b.vii)
4.1	Implement Ordinance	Specifically required by rule (II.B.4.a.i).	Implement local ordinance to address and enforce construction site runoff issues as well as implement enforcement procedures beginning in 2010.	City
4.2	Tracking System	Construction permit tracking	Maintain permit status monthly according to the ordinance.	City
4.3	Plan Review	Specifically required by the rule. (II.B.4.b.iv)	Review construction plans for all construction projects with 1 acre or greater land disturbance or new or redevelopment projects that include greater than 5000 square feet of impervious area. Review all construction plans for smaller projects according to the ordinance for BMP compliance.	City
4.4	Site Inspection	Specifically required by the rule. (II.B.4.b.v)	Investigate all public complaints related to construction sites once ordinance has been adopted.	City
4.5	Site Inspection	Specifically required by the rule. (II.B.4.b.vi)	Perform minimum of 1 inspection per construction site for any construction site reviewed and approved under BMP 4.3.	City

Table 4 - Requirement # 4: Construction Site Runoff Control				
BMP #	SWMP Element Description	Justification	Measurable Commitments & Implementation Schedule (II.B.4.b.viii)	Responsible Party (II.B.4.b.vii)
4.6	Revise Stormwater Website	Provide avenue for public comment/complaints (II.B.4.b.v)	Revise existing website in 2010. Include location for complaints. To be completed in conjunction with MCM 1.	City
4.7	Construction Guidance	Distribute message (II.B.4.b.v)	Develop brochure/handout in 2010 detailing proper construction waste disposal, the ordinance, sediment and erosion control requirements, inspections, violations, etc. Supply to contractors, builders, and homeowners beginning in 2011.	WQPD/City
4.8	Contractor Awareness Meeting	Uniform contractor expectations	Conduct one public meeting regarding implementation of the new ordinance. This meeting will primarily focus on Helena area contractors.	WQPD/City
4.9	Employee Training	Inform public employees (II.B.4.b.ix)	Provide training opportunities as warranted to ensure City inspection personnel have the tools and resources to properly inspect and enforce ordinance requirements for construction site runoff control. Additional details in MCM 6.	City
	Public Comments	Specifically required by the rule.	Establish a procedure for receiving information from the public by end of 2005.	City
	Construction Guidance	Document a set of standards for stormwater design of new developments to replace current informal standards.	Complete engineering standards manual to address construction and post-construction design by end of 2003. Manual will include discussion on proper waste handling.	City

~~Strikethrough~~ – Item removed following evaluation from previous permit cycle. Item was deemed to be complete.

Table 5 - Requirement # 5: Post-Construction Stormwater Management				
BMP #	SWMP Element Description	Justification	Measurable Commitments & Implementation Schedule (II.B.5.b.viii)	Responsible Party (II.B.5.b.vii)
5.1	Planning	Adequate funding	Target master plan amendments every 5 years and complete revisions every 10 years.	City
5.2	Implement Ordinance	Specifically required by the rule (II.B.5.a.iii)	Implement local ordinance to address and enforce post-construction stormwater management issues as well as implement enforcement procedures beginning in 2010.	City
5.3	Long Term Monitoring	Specifically required by the rule. (II.B.5.a.iv)	Monitor and maintain City owned BMPs per maintenance schedule.	City

5.4	Long Term Monitoring	Specifically required by the rule. (II.B.5.a.iv)	Inspect up to 10% of privately owned and maintained BMPs annually.	City
5.5	Plan Review	Specifically required by the rule. (II.B.5.a.v)	Conduct a site plan review and evaluation for post-construction BMPs for all new stormwater facilities requiring approval under the ordinance.	City
5.6	Site Inspections	Specifically required by the rule. (II.B.5.a.vi)	Inspect and evaluate post-construction BMPs prior to final acceptance to City system, final plat, annexation, and removal of temporary construction BMPs.	City
5.7	Rate Evaluation	Adequate funding	Annually review rate changes in light of operations and maintenance obligations, capital improvement planning, and present changes for commission consideration.	City
5.8	LID Practices	Inform building community of upcoming rule	Begin informing developers, engineers, architects, contractors, etc. of upcoming rule regarding LID techniques required for all new and redevelopment beginning in 2012.	City/WQPD
5.9	LID Practices	Prepare to require LID	Develop approved LID techniques for City of Helena. Incorporate into Engineering Standards prior to 2012.	City
	Planning	Meets the requirement to develop and to implement structural and non-structural BMPs.	Complete the Master Plan by end of 2003.	City
	Raised Rates	More funds are needed to handle post-construction runoff in the City	Old rate: minimum charge is \$20 plus \$.009 per square foot of impervious area in excess of 2,222 sq ft. New rate: minimum charge is \$22.12 plus \$.00995 per square foot of impervious area in excess of 2,222 sq ft. (effective July 31, 2006).	City

~~Strikethrough~~ – Item removed following evaluation from previous permit cycle. Item was deemed to be completed.

Table 6 - Requirement # 6: Pollution Prevention/Good Housekeeping for Municipal Operations				
BMP #	SWMP Element Description	Justification	Measurable Commitments & Implementation Schedule (II.B.6.b.v)	Responsible Party (II.B.6.b.iv)
6.1	Street Sweeping	Reduce solids in runoff from City streets. (II.B.6.b.iii)	The City will sweep streets for a minimum of 2,200 hours per year.	City
6.2	Facility Maintenance	Provide City with information to track current maintenance activities. (II.B.6.b.i)	Continue monitoring catch basins and stormwater facilities minimum of annually. Clean facilities as necessary. Include all maintenance activities in GIS-centric asset management software (InfoSWMM).	City
6.3	Training	Specifically required by the rule. (II.B.6.a.ii)	Provide training opportunities as warranted to ensure City inspection personnel have the tools and resources for illicit discharge, construction BMP, and post-construction BMP inspections.	City

6.4	Training	Specifically required by the rule. (II.B.6.a.ii)	Provide initial training for all field maintenance personnel with a potential to impact stormwater quality. Provide refresher training as needed.	City
6.5	Evaluate staffing requirements	To assist in maintaining the storm system	Annually review program staffing during budget review. Recommend staff adjustments as necessary for commission consideration.	City
6.6	Henderson Pond Monitoring	Evaluate past projects to determine potential use in future	Monitor improvements with intent to reduce stormwater flows and increase retention in West Side basin to improve water quality. Evaluate effectiveness of improvements.	City
6.7	Stormwater Pollution Prevention Plan	Improve operating and maintenance plan (II.B.6.b.i)	Develop individual pollution prevention plan for minimum of one municipal facility annually. Municipal facilities will include transfer station, vehicle maintenance shop, parks department shop, utilities maintenance shop, and street department shop.	City
6.8	Tramp collection	Reduce lawn wastes in storm system	Continue operation of tramp trash collection vehicle. The tramp collector picks up residential lawn waste and other debris separate from scheduled collection.	City
	Street Sweeping	New sweeper will use less wash water and increase particle capture.	Two new sweepers were purchased in 2009. No additional street sweeping requirements are scheduled at this time.	City
	Park Street Relining	Repair 1,000 feet of failing storm pipe	Spent \$500,000 relining the pipe	City

~~Strikethrough~~ – Item removed following evaluation from previous permit cycle. Item was deemed to be completed.

Appendix A

Minimum Control Measures 1&2 Supporting Documentation

MCM 1 Supporting Table A - Primary Pollutants of Concern in Urban Runoff

Pollutant Source/ Activity	Physical Parameters	Synthetic Organics	Petroleum Hydrocarbons	Heavy Metals	Nutrients	Pathogens	Sediments	Oxygen- Demanding Substances	Floatables
Vehicle Service Facilities		X	X	X					
Gas Stations		X	X	X					
Metal Fabrication Shops		X	X	X					
Restaurants									X
Auto Wrecking Yards	X	X	X	X					
Mobile Cleaners		X							
Parking Lots	X		X	X					X
Residential Dwellings	X	X		X	X	X	X	X	
Parks/Open Spaces					X	X	X	X	X
Construction Sites	X						X	X	
City Shops	X	X	X	X					
Streets and Highways	X		X	X				X	X
Marinas									X
Golf Courses		X			X		X	X	
Sewer Overflows	X					X		X	

Information obtained from: Model Urban Runoff Program: State of California
X = Pollutant of concern in City of Helena

MCM 1 Supporting Table B - Potential Public Outreach Activities and Targeted Audiences, With Helena Activities Highlighted

ACTIVITY/TASK	AUDIENCES										
	Residents	Socioeconomic Group	Children	Business	Industry	Construction/New Development	Community Groups	Media (PSAs)	Municipal Personnel	Officials/Regulators	Allied Organizations
COMMUNITY OUTREACH											
Stormwater Information Brochures	X	X	X	X	X	X	X	X	X	X	X
Interactive Model	X	X	X				X			X	X
Fact Sheets	X	X	X			X	X	X		X	X
Tip Sheets	X	X						X			
Utility Inserts	X	X									
Door Hangers	X	X									
Direct Mail Campaign	X	X									
Newsletter	X						X				
Educational Video	X	X	X	X	X		X	X	X	X	
Interested Parties Database	X	X	X	X	X		X	X	X	X	
Computer Game/Quiz	X	X	X				X				
Community Grant Program	X	X	X				X				
Storm Drain Stenciling Program	X	X	X	X	X	X	X	X	X	X	X
VIP Breakfast and Tour				X	X			X		X	
Amateur Photo Contest	X			X			X	X			
Speakers Bureau: Community Group Focus							X				
Volunteer Program	X						X	X			
Best (No) Pest Gardening Contest	X			X			X				
Special Community Events	X	X					X	X			
Celebrity Spokespersons	X	X									
CHILDREN'S OUTREACH											
Coloring Books/Poster Contest			X								
Restaurant Table Mats			X	X							
Children's Television Club			X					X			
Teacher Training/Workshops			X								
Science Fairs/Projects		X	X								
Calendars			X								
Field Trips			X								
Adopt a Watershed/Creek			X	X							
BUSINESS OUTREACH											
COMMUNITY OUTREACH				X				X			
Business Incentives Program				X							
Public/Private Partnerships		X		X							
Speakers Bureau: Commercial Sector Focus		X		X							
Point-of-Purchase Campaigns											
b. Automotive Fluids	X	X		X				X			
c. Home Improvement Products	X			X			X	X			
Sponsorship of Program Elements				X							

ACTIVITY/TASK	AUDIENCES										
	Residents	Socioeconomic Group	Children	Business	Industry	Construction/New Development	Community Groups	Media (PSAs)	Municipal Personnel	Officials/Regulators	Allied Organizations
INDUSTRIAL SECTOR OUTREACH											
Educational Workshops for Targeted Industries					X						
Industrial Employee Education					X						
Recognition Program					X			X		X	X
Sponsorship of Program Elements					X						
CONSTRUCTION/NEW DEVELOPMENT OUTREACH						X					
Grading/Erosion Control Workshops						X					
Contractor-Focused Workshops						X					
Tailgate Training	X					X	X				
Outreach to Residents of New Developments						X					
Sponsorship of Program Elements						X					
MEDIA RELATIONS											
Media Sponsorship/Partnership								X			
Press Kits	X	X						X			
Media Interviews/Briefings	X	X						X			
Pre-Written Articles	X	X					X	X			
ADVERTISING											
Television (Cable Public Access)	X	X	X	X					X		
Radio	X	X	X	X					X		
Billboards	X	X		X					X		
Print	X	X	X	X	X	X	X	X	X	X	
OUTREACH TO POLITICAL OFFICIALS/REGULATORS											
City Council Presentations										X	
Presentations to Regulators										X	
OUTREACH TO MUNICIPAL PERSONNEL											
Educational Workshops for Municipal Personnel									X		
COORDINATION WITH ALLIED ORGANIZATIONS											
Coordinate with NPDES Permittees											X
Coordinate with Regional Organizations											X

Gray = Initial permit cycle items, not included in second permit cycle.

Green = Program items included beginning in 2010.

MCM 1 Supporting Table C - Potential Stormwater Website Layout

City of Helena – Stormwater Website			
<p>Purpose: Helena’s Utilities Maintenance Division is responsible for the maintenance, upkeep, and operation of the stormwater system throughout the City. Stormwater system maintenance includes debris removal in pipes and open ditches, culvert cleaning, wetland maintenance, and other necessary elements to keep the stormwater system operating properly.</p> <p>As part of the stormwater system maintenance, the Utilities Maintenance Division ensures compliance with the Montana Department of Environmental Quality’s Phase II NPDES Permit. The NPDES Permit includes measures in 6 different areas: Public Education and Outreach, Public Participation and Involvement, Illicit Discharge Detection and Elimination, Construction Site Runoff Control, Post-Construction Management, and Pollution Prevention/Municipal Good Housekeeping.</p>			
<p>Past Projects: <i>List past projects here with lots of photos. Photos may include KMart wetland signs, Henderson Ponds, storm drain stenciling, etc.</i></p>			
Complaints/Concerns:			
Name:			
Address:			
Phone:			
Email:			
Location of Concern:			
Nature of complaint:	Illicit Discharge (dumping, spills, odors, etc.)	Construction (dirty road, dust, garbage)	Post-construction (Flooding, debris, muddy water)
Describe complaint:			
<p>Links: http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=3 http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=4 http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=1 Brochure(s)</p>			

Appendix B

Minimum Control Measure 3 Supporting Documentation

MCM 3 Supporting Table D – Preferred Disposal of Non-Stormwater Discharges

	Type of Discharge	When is the Discharge to the Storm Sewer Permissible?	Preferred Disposal Options				Note
			Storm Drain	Sanitary Sewer	Recycle/Reuse	Hazardous Waste or Other Disposal	
1.	Residential lawn/landscape irrigation	Permissible ^(a)	X				1
2.	Dumping of oil, anti-freeze, paint, cleaning fluids	Never			X	X	2
3.	Residential/charity car washing	Permissible, but not recommended ^(a)	X				1
4.	Commercial car wash	Never		X	X		
5.	Industrial dischargers	Never		X	X	X When above pretreatment limits	3
6.	Swimming pool water/hot tub water	Never		X	X		
7.	Water line flushing	Permissible with permit ^{(a)(b)}	X	X Preferred	X		1
8.	Fire fighting flows	Emergency only	X			X When heavily contaminated	
9.	Potable water sources	Permissible ^(a)	X		X		1

	Type of Discharge	When is the Discharge to the Storm Sewer Permissible?	Preferred Disposal Options				Note
			Storm Drain	Sanitary Sewer	Recycle/Reuse	Hazardous Waste or Other Disposal	
10.	Uncontaminated foundation drains, footing drains	Permissible ^(a)	X		X		1
11.	Contaminated foundation drains, footing drains	Never		X	X	X	
12.	Uncontaminated pumped groundwater	Permissible ^(a)	X				1
13.	Pumped groundwater for cleanup operations	Only if in compliance with NPDES permit	NPDES permit required		X		
14.	Rising ground waters/springs	Permissible ^(a)	X		X		1
15.	Cooling water	Never unless no chemicals added and has NPDES permit	Permit required	X	X		4
16.	Roof drains	Permissible except when contaminated or drains from industrial property	X		X		1
17.	Air conditioner condensate	Never		X	X		

	Type of Discharge	When is the Discharge to the Storm Sewer Permissible?	Preferred Disposal Options				Note
			Storm Drain	Sanitary Sewer	Recycle/Reuse	Hazardous Waste or Other Disposal	
18.	Washwaters from commercial/industrial facilities	Never		X			5
19.	Street wash waters	Permissible if proper BMPs applied	X				
20.	Uncontaminated groundwater infiltration (See ARM 17.30.1102(8))	Permissible ^(a)	X		X		1
21.	Contaminated groundwater infiltration	Only if in compliance with NPDES permit	NPDES permit required		X		
22.	Diverted stream flows, flows from riparian habitat and wetlands	Permissible if proper BMPs applied ^(a)	X		X		
23.	Agricultural irrigation water	Permissible if proper BMPS applied ^(a)	X		X		
24.	Water line breaks	Permissible ^(a)	X				6
25.	Sump pump	Permit required		X		X	
26.	Crawl space pumps	Never		X	X		

^(a) Permissible assumes application of applicable BMPs are in place and characterization of contamination has been completed. Discharges are considered continually exempt, unless they are identified by either a permittee or the executive officer as being a significant source of pollutants to receiving waters.

1. It would be impracticable to prevent discharges of this variety and the IDDE program should not devote resources in this area. Minimize the environmental effects of such activities by discharging to permeable surfaces (gravel, lawns, etc.). Reuse is recommended where applicable.
2. The IDDE program should concentrate on eliminating the dumping of oil, anti-freeze, and other pollutants in industrial and commercial areas. The public education program will concentrate on eliminating dumping in residential areas as well as minimizing introduction of chemical fertilizers and pesticides.
3. All industrial discharges to storm drains should not be permitted. If discharge appears contaminated, then record as an illicit connection or illegal dumping.
4. Cooling water should always have a NPDES permit to discharge. Recycle is checked as a preferred disposal option. Where practicable, industries should be encouraged to either construct cooling ponds so the water is reusable or possibly find other uses on site for the water.
5. Washwaters from commercial and industrial facilities include runoff from vehicle and equipment washing, steam cleaning, and cleaning of areas used for industrial or commercial activities. Due to the wide range of washwaters from commercial facilities, disposal options should be evaluated on a facility-specific basis.
6. Water line breaks are exempt; however, the City will redirect discharges from the storm sewer system, if possible. If surface discharge and/or infiltration is not feasible, construction BMPs (i.e. storm drain inserts, silt fence, hay bales, wattles, etc.) will be utilized to limit sediment deposition into the storm sewer system.

Table F in Appendix C details acceptable disposal methods for construction related debris. The stormwater ordinance detail who is required to obtain stormwater discharge permits. Sites not required to obtain a permit are still subject to the discharge regulations outlined in Table F, though violations at small sites are handled under the illicit discharge portion of the Ordinance.

Illicit Discharge and Spill Detection and Response Procedure (Part II.B.3.a.iv, iii, & b.iv)

Spills will be detected and reported using one of two methods. The first method involves screening stormwater basins during the dry season. Spills will also be reported by the public complaint procedure and investigated by City personnel. Laboratory samples will be collected and analyzed, if necessary. Typical laboratory analysis will include the following parameters: fecal coliform, total suspended solids, total nitrogen, total phosphorus, chemical oxygen demand, and oil and grease. Potentially hazardous discharges (characterized by odor, color, dead plants and animals) will be reported to the WQPD and the City Fire Department, if necessary. The WQPD will sample the discharge and perform a HAZCAT analysis to determine the type of substance. Screening personnel should wear appropriate protective equipment at all times, especially latex or nitrile gloves when collecting samples.

The illicit discharge location will be identified by narrowing down the search area. Once a sample has identified a hazard or illicit discharge, the influent streams of the nearest upgradient connection will be analyzed. By analyzing multiple connections near a single location, the illicit discharge can be traced to a single upgradient line. If sample results yield no contaminants, the illicit discharge should be located between the connection and the outfall or previously analyzed downstream connection. Once the storm drain segment containing the illicit discharge has been identified, the channel or pipe segment must be visually inspected to determine the illicit source. In the event that the source is not detected visually, illicit discharge enforcement personnel may be required to smoke or dye test pipe systems. If a smoke or dye test is required, the City should alert the area businesses that the test will occur. Enforcement personnel should then evaluate where the smoke leaves or dye enters the pipe system (i.e. business floor drain, roof vent, etc.). Once the illicit source is identified, the City will seek reimbursement from the source owner for any testing required to locate the source, as described in the Ordinance.

Illicit discharge, dumping and spill locations will be documented with GPS and added to the City's stormwater tracking software, InfoSWMM.

Once the illicit discharge/spill and source have been identified, the source will need to be terminated. Illicit connections and spills are subject to regulations outlined in the City Ordinance. Unutilized storm drain connections may be filled with concrete or grout at the source. The connection to the City storm system must also be permanently terminated, either by removal/demolition or by concrete or grout fill. Quick fixes such as pipe plugs will not be allowed. Drains to remain in service must be connected to the City sewer system, and the connection to the City storm system must be permanently terminated.

Large spills should be cleaned up using overexcavation of the contaminated material. Small spills should be removed using sorbent pads, booms, etc. Care should be taken to prevent further contamination of the storm drain system. Measures such as protecting downstream storm inlets and drainage structures should be utilized. The spill should not be cleaned by spraying down the area and hosing the spill into the storm drain system.

Upon completion of source removal, enforcement personnel will verify that the illicit connection was terminated and place a notice in the file. If the source termination is unsatisfactory, enforcement personnel may issue citation and require proper termination.

Responses requiring immediate attention may be referred to the fire department. The fire department is trained to handle hazardous spills, etc.

Contaminated materials removed from an illicit discharge termination or spill should be properly disposed of. Materials should not be allowed to reenter the storm drain system.

MCM 3 Supporting Table E – Illicit Discharge Screening Priorities

Drainage	Past Discharge Complaints	Density of industrial NPDES	Storm water outfalls	Development Age	Sanitary Sewer Age	Raw prioritization score	Priority
Airport	5	4	5 (4)	5	5	23	5
Bull Run	4	3	22 (1)	4	4	16	3
Davis Gulch	1	1	4 (5)	2	2	11	2
LC Gulch	2	2	7 (3)	1	1	9	1
West	3	5	10 (2)	3	3	16	4

All parameters were based on ranking of five subbasins (i.e. most outfalls – top priority, least outfalls – low priority).

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET - Example

Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.):	Last 24 hours:	Last 48 hours:
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED	
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____ _____ _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____		
<input type="checkbox"/> In-Stream	(applicable when collecting samples)				
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS			
PARAMETER	RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter
	Time to fill		Sec
<input type="checkbox"/> Flow #2	Flow depth		In
	Flow width	_____ " _____ "	Ft, In
	Measured length	_____ " _____ "	Ft, In
	Time of travel		S
Temperature		°F	Thermometer
pH		pH Units	Test strip/Probe
Ammonia		mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet - Example

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? Yes No (If No, Skip to Section 5)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

Unlikely
 Potential (presence of two or more indicators)
 Suspect (one or more indicators with a severity of 3)
 Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

STORMWATER TRAINING

SUBJECT: _____

DATE: _____

TIME : *From:* _____ *To:* _____

FACILITATED BY: _____

OFFICE: _____

City of Helena employees participated in the following stormwater training pertaining to the selected Minimum Control Measure:

Minimum Control Measure:	Discussion Topics:
1) Public Education and Outreach	
2) Public Involvement/Participation	
3) Illicit Discharge	
4) Construction Site Runoff Control	
5) Post-Construction Management	
6) Municipal Operations	

The following employees attended the training:

NAME (PRINT Legibly – Typed name NOT acceptable)	Department
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

NAME (PRINT Legibly – Typed name NOT acceptable)	Department
11.	
12.	
13.	
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Appendix C

Minimum Control Measure 4 Supporting Documentation

BMP and Construction Waste Implementation (Part II.B.4.a.ii, iii, & b.iii)

Erosion and Sediment Control BMPs

Small Sites (less than 1 acre disturbed) – The City prefers that all stormwater is kept on site during construction. However, this is not practical at all sites. If a small site are found to contribute significant pollutants to the stormwater system, as determined by the City, the City may issue citations under illicit discharge elimination requirements as construction sites under 1 acre are not required to obtain a permit.

Phased Development and Development Greater than 1 Acre – The City prefers that all stormwater is kept on site during construction. However, this is not practical at all sites. The City of Helena Engineering Standards describe the appropriate construction BMPs by referring to the Field Manual on Sediment and Erosion Control Best Management Practices for Contractors and Inspectors (SEC Field Manual).

At a minimum the following items shall be addressed, included in the stormwater permit, and maintained at the site:

Waste Control

Solid Wastes:

- Designate a waste collection area on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterbody.
- Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible.
- Schedule waste collection to prevent the containers from overflowing.
 - During the demolition phase of construction, provide extra containers and schedule more frequent pickups.
 - Collect, remove, and dispose of all construction site wastes at authorized disposal areas.
- Clean up spills immediately. For hazardous materials, follow cleanup instructions on the package. Use an absorbent material such as sawdust or kitty litter to contain the spill.

Hazardous Materials and Wastes:

- Consult with local waste management authorities about the requirements for disposing of hazardous materials.
- To prevent leaks, empty and clean hazardous waste containers before disposing of them.
- Never remove the original product label from the container because it contains important safety information. Follow the manufacturer's recommended method of disposal, which should be printed on the label.
- Never mix excess products when disposing of them, unless specifically recommended by the manufacturer.

To ensure the proper disposal of contaminated soils that have been exposed to and still contain hazardous substances, consult with state or local solid waste regulatory agencies or private firms. Some landfills might accept contaminated soils, but they require laboratory tests first.

Paint and dirt are often removed from surfaces by sandblasting. Sandblasting grits are the byproducts of this procedure and consist of the sand used and the paint and dirt particles that are removed from the surface. These materials are considered hazardous if they are removed from older structures because they are more likely to contain lead-, cadmium-, or chrome-based paints. To ensure proper disposal of sandblasting grits, contract with a licensed waste management or transport and disposal firm.

Pesticides and fertilizers:

- Follow all federal, state, and local regulations that apply to the use, handling, or disposal of pesticides and fertilizers.
- Do not handle the materials any more than necessary.
- Store pesticides and fertilizers in a dry, covered area.
- Follow the recommended application rates and methods.
- Have equipment and absorbent materials available in storage and application areas to contain and clean up any spills that occur.

Petroleum Products:

- Store new and used petroleum products for vehicles in covered areas with berms or dikes in place to contain any spills.
- Immediately contain and clean up any spills with absorbent materials.
- Have equipment available in fuel storage areas and in vehicles to contain and clean up any spills that occur.

Detergents:

Phosphorous- and nitrogen-containing detergents are used in wash water for cleaning vehicles. Excesses of these nutrients can be a major source of water pollution. Use detergents only as recommended, and limit their use on the site. Do not dump wash water containing detergents into the storm drain system; direct it to a sanitary sewer or contain it so that it can be treated at a wastewater treatment plant.

For more information regarding construction site disposal, visit the following EPA website: <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=61&minmeasure=4>

Sanitary Wastes:

Sanitary wastes must be properly disposed of either through the sanitary sewer system or port-a-potty facilities. The City of Helena wastewater treatment plant has a septage receiving station to collect port-a-potty waste from septic haulers. Storm drains, open channels, fields, buildings,

etc. are not appropriate for sanitary waste disposal. Confirm the pipe function prior to connecting to sewer services to ensure that sanitary waste is not improperly disposed of.

Concrete Truck Washout:

Concrete washouts are used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solids for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life.

For best results, a 10' by 10', below grade, prefabricated drain should be employed. The drain shall be large enough to contain wash water, debris, and rain water with a minimum of 12-inches of free board prior to cleanout. Concrete chutes typically require about 7 gallons of rinse water, while a concrete pumpers hopper generally requires about 50 gallons. Above grade and self-constructed drains may be used but should have appropriate maintenance to ensure proper operation. Self-constructed drains should have a minimum of 10 mil plastic sheeting placed in the drain.

Drains should be placed a minimum of 50 feet from storm drains, open ditches, and water bodies. Drains should be located close to the pour site, but out of the way of other construction traffic. Clean drains when they become 75% full or have 12" or less of free board. Place new plastic liner in the drain after each time it is emptied. Dispose of material according to local landfill, recycler, and/or sewer system requirements.

For more information regarding concrete washing, visit the following EPA website:

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=117&minmeasure=4>

Construction Entrance:

Stabilizing construction entrances minimizes the amount of sediment leaving the area as mud and sediment attached to vehicles. Installing a pad of gravel over filter cloth where construction traffic leaves a site can help stabilize a construction entrance. As a vehicle drives over the pad, the pad removes mud and sediment from the wheels and reduces soil transport off the site. The filter cloth separates the gravel from the soil below, keeping the gravel from being ground into the soil. The fabric also reduces the amount of rutting caused by vehicle tires, by spreading the vehicle's weight over a soil area larger than the tire width.

In addition to using a gravel pad, a vehicle washing station can be established at the site entrance. Using wash stations routinely can remove a lot of sediment from vehicles before they leave the site. Diverting runoff from vehicle washing stations into a sediment trap helps to make sure the sediment from vehicles stays onsite and is handled properly.

Stabilized construction entrances are installed where construction traffic leaves or enters an existing paved road, but site entrance stabilization should be extended to any roadway or

entrance where vehicles enter or leave the site. Stabilize all entrances to a site before construction and further site disturbance begin.

Make sure the stabilized site entrances are long and wide enough to allow the largest construction vehicle(s) that will enter the site to fit through with room to spare. If a site entrance leads to a paved road, make the end of the entrance flared so that long vehicles do not leave the stabilized area when they turn onto or off the paved roadway. Make sure stone and gravel used to stabilize the construction site entrance are large enough so that they are not carried offsite by vehicles. Install stone or gravel at a depth of at least 6 inches for the entire length and width of the stabilized construction entrance.

Several examples of violations are listed in Table F below along with preferred disposal methods. For more information regarding concrete washing, visit the following EPA website: <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=35&minmeasure=4>

MCM 4 Supporting Table F – Preferred Construction/Disposal Methods

	Circumstance	Violation?	Preferred Disposal Method
1.	Uncovered, unconsolidated, overflowing garbages	Yes	Consolidate and cover garbage. Schedule regular pickup or remove when full.
2.	Oil, anti-freeze, paint, cleaning fluids, etc. spills	Yes	Clean spills promptly. Notify City, if necessary. Contain spill with absorbent material such as sawdust, kitty litter, soil. Dispose of cleanup material properly.
3.	Over application of fertilizer and pesticide	Yes	Apply appropriate amount. Store unused materials in a covered container/storage area.
4.	Sanitary waste discharged to sewer or port-a-potty	No	Discharge to field, ditch, storm sewer, etc. is unacceptable. Only discharge to appropriate facility.
5.	Concrete washout discharge to road, storm drain, field sloped to road, etc.	Yes	Concrete washout should be contained or drained to a depression that doesn't lead to a portion of the storm drain facility. Concrete washout on roadway is unacceptable.
6.	Dirt, gravel, mud, soil, sediment, etc. on roadway	Yes	Construction debris/sediment is not allowed on City roads or storm drain facilities. Appropriate BMP usage will reduce dirt and sediment on the roads.
7.	Contractor street sweeping/washing	No	Appropriate for occasional cleaning of dirt and sediment off roadways and parking lots. Not acceptable as a regular construction BMP.
8.	Discharge of pollutants, as defined in Ordinance, into the City storm drain system	Yes	Pollutants included liquid, solid, hazardous, and non-hazardous materials, other than storm water. The drain system includes natural and manmade ditches, culverts, pipes, stream channels, etc. that are or lead to the system operated by the City. Non-stormwater materials should be disposed of properly.

Develop a Plan for Site Plan Review and Inspection (Part II.B.4.a.iv & b.iv)

A drainage plan ordinance and standards manual will only be effective with adequate site plan review and inspection procedures. The Phase 2 Stormwater NPDES rule requires both plan review for water quality related issues and follow-up site inspections. The approach to plan review is shown in Figure C-1 and described in the following paragraphs.

Small Construction Site (<1 acre) Practices

Construction sites that disturb less than 1 acre will not be required to obtain a local construction stormwater permit. However, such small sites are subject to discharge requirements set forth under provisions for illicit discharge elimination. If violations are reported on small construction

sites, the City will follow the procedures outlined in the City's ordinance to investigate and, if necessary, reprimand the violation.

For small sites, the following standards apply:

The City prefers that all stormwater is kept on site during construction. However, this is not practical at all sites. Small sites shall limit erosion, litter, debris, siltation, etc. on a construction site through methods approved in the Engineering Standards such as but not limited to:

- Silt fence or other appropriate barrier (wattles, catch basin inserts, etc.) to prevent sediment in downstream receiving waters or catch basins,
- Debris/waste consolidated and protected from wind and stormwater runoff,
- Limit land disturbance to only required areas after providing principal sediment control measures and maintaining existing vegetation, and
- Stabilize all disturbed areas through either protective coverings, or temporary or permanent vegetation as quickly as possible.

These requirements must remain in place until all disturbed areas are adequately revegetated and permanent stormwater facilities are in place and established.

Due to limited funding and manpower resources, site inspections of small sites will only be conducted when a violation is reported. Follow-up site inspection at small sites will be conducted depending on the severity of the violation. Violations at sites that disturb less than one acre will be prosecuted under illicit discharge regulations and not construction permitting.

Phased Developments and Large Construction Site (>1 acre) Practices

Construction sites that disturb more than 1 acre require a general permit from the State Department of Environmental Quality along with the local City of Helena permit. In addition, new development or redevelopment projects that create 5000 square feet or more of impervious area are also required to obtain a City of Helena permit. For the State permit, the applicant will need to complete a Notice of Intent (NOI) and complete a site stormwater pollution prevention plan (SWPPP). The State rule requires the following items in their general permit application:

- Location and nature of the construction activity, including a map;
- The total area of the site and the area within the site that is expected to undergo excavation during the life of the permit;
- Proposed measures, including BMPs, to control pollutants in stormwater discharges during construction, including a brief description of applicable local erosion and sediment control requirements;
- Proposed measures to control pollutants in stormwater discharges that will occur after construction operation have been completed, including a brief description of applicable local erosion and sediment control requirements;
- For a stormwater discharge that will result in construction-related disturbance of five acres or more of total land area, an estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is

complete, the nature of fill material and existing data describing the soil or the quality of the discharge; and

- The name of the receiving surface waters.

The State will provide guidance to contractors on how a SWPPP is to be prepared. The SWPPP proposed BMPs for large construction sites will also be submitted to the City for approval and verification that proposed methods meet City standards. The State, however, will not provide construction site inspection.

A drainage plan will be required for the following types of development:

- Major subdivision plat
- Minor subdivision plat
- Building permits where the impervious development coverage within the property is 5,000 square feet or more
- Where development is in an area critical to the function of the MS4
- Planned unit development.

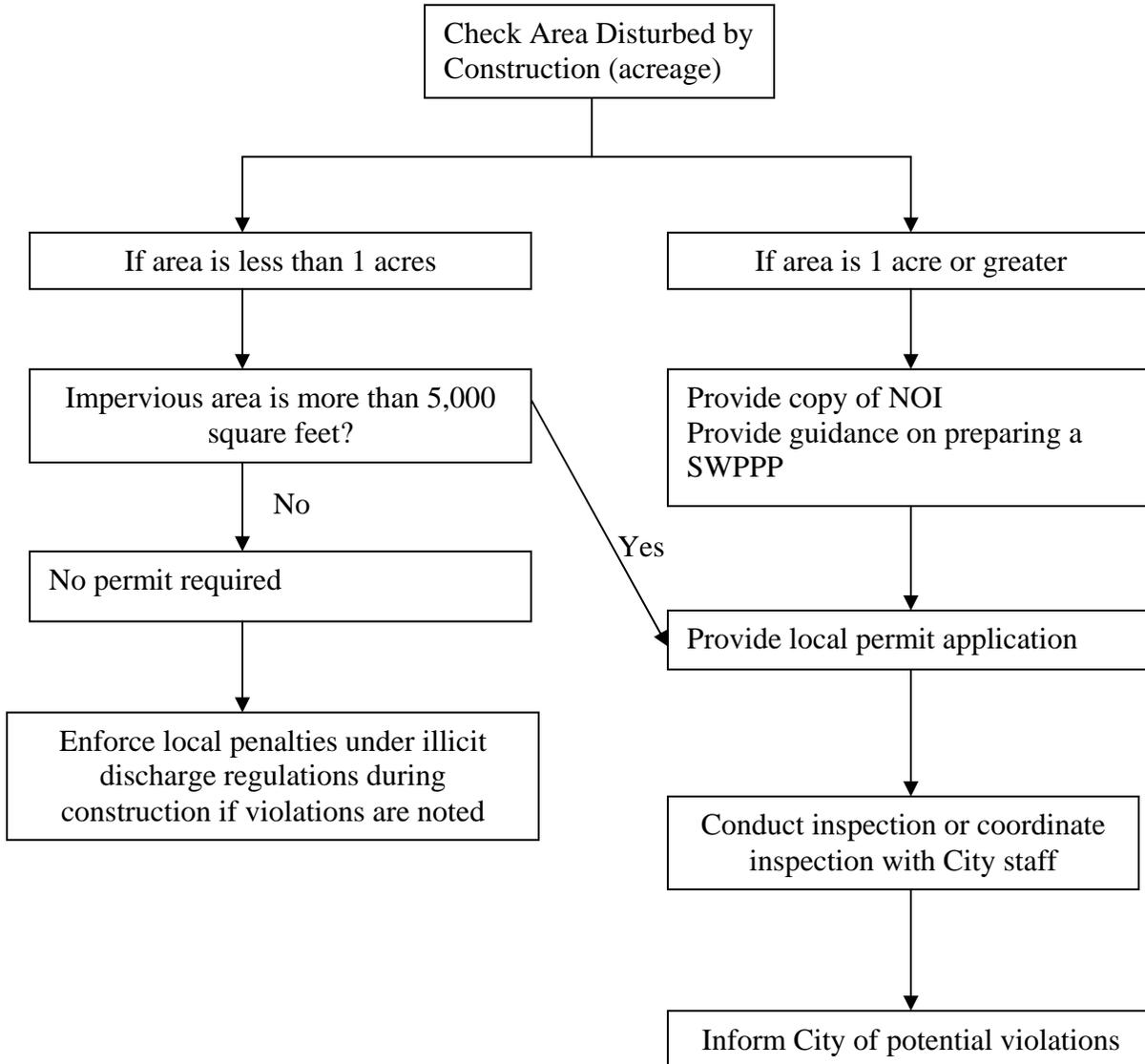
Construction site BMPs must remain in place until all disturbed areas are adequately revegetated and permanent stormwater facilities are in place and established. Construction BMPs are typically only to be removed at the time that final plat is approved and the property is annexed by the City, if applicable.

The City will inspect each permitted site at least once. Additional inspections may be conducted on an as-required basis, including but not limited to: public complaints, violation follow-up, inspector concerns/drive-bys, etc. Long standing construction sites will also likely require additional inspections to ensure that the BMPs are effective.

A sample Stormwater Construction Inspection Report is presented below.

Any violations observed during the site inspection will be handled as indicated in the ordinance.

Figure C-1 Plan Review Procedure



Stormwater Construction Plan Review

Project Name:		File No:
Review Date:		Reviewed by:
Plan Review Checklist		
Estimated land disturbance area?		
Will development be phased?		
Was a SWPPP completed per DEQ requirements?		
Is there potential to reduce clearing and grubbing limits?		
Are waterways identified and protected?		
Is construction phased to minimize disturbed area?		
How will exposed slopes be stabilized?		
How long before exposed areas are permanently stabilized?		
What measures are in place to protect exposed slopes?		
What perimeter sediment controls are proposed? Where? Adequate?		
Are sediment basins proposed? Needed?		
Are waste (solid and sanitary) storage/disposal areas identified?		
Are chemical storage areas identified?		
Are concrete washout areas identified?		
Are construction entrances and sediment control measures identified?		
Is BMP inspection plan in place? Adequate?		
Application: <input type="checkbox"/> Approved <input type="checkbox"/> Denied		
Reason/Comments: _____		

Stormwater Construction Inspection Report

Project Name:		File No:	
Inspection Date:	Time:	Inspected by:	
Construction Stage			
	Pre-Construction Conference		Rough Grading
	Clearing and Grubing	Building Construction	Finish Grading
			Final Stabilization
Inspection Checklist			
Yes	No	NA	
			Have all denuded areas requiring temporary or permanent stabilization been stabilized? Seeded? Y/N Mulched? Y/N Graveled? Y/N
			Are soil stock piles adequately stabilized with seeding and/or sediment trapping measures?
			Does permanent vegetation provide adequate stabilization?
			Are sediment basins installed where needed or shown on drawings?
			Are finished cut and fill slopes adequately stabilized?
			Are on-site channels and outlets adequately stabilized?
			Do all operation storm sewer inlets have adequate inlet protection?
			Are stormwater conveyance channels adequately stabilized with channel lining and/or outlet protection?
			Is in-stream construction conducted using measures to minimize channel damage?
			Are temporary stream crossings of non-erodible material installed where applicable?
			Is necessary restabilization of in-stream construction complete?
			Are utility trenches stabilized properly?
			Are soil and mud kept off public roadways?
			Have all temporary control structures that are no longer needed been removed?
			Are temporary control structures adequately installed and maintained?
			Are properties and waterways downstream from development adequately protected from erosion and sediment deposition due to increases in peak stormwater runoff?
			Are contractor records onsite and up to date?
			Are construction debris and waste properly contained and disposed of?
			Are pesticides, fertilizers, petroleum and other hazardous waste products properly stored?
			Are adequate sanitary services available?
			Are concrete washout facilities available and in use?
Comments: _____			

Verbal/Written notification given to:			
Report by:		Date:	

Construction Project Tracking

Project Name	File No.	Project Status (plan review, inspection, etc.)	Date/ Initials	Type of Inspection/ Review	Deficiencies Noted	Warning/Citation Issued

Establish Procedures for Receiving Information from the Public (Part II.B.4.a.v & b.v)

The rule calls for the City to establish procedures for “receipt and consideration of information submitted by the public.” The construction reporting process will be similar to the illicit discharge process in that complaints are reported to the City via website or public or City calls to Utilities Maintenance. The complaint is logged by Utilities Maintenance and emailed to enforcement personnel. The enforcement personnel investigate and evaluate the complaint. Once the complaint is rectified, the enforcement personnel document the issue as complete/resolved.

In the past, the WQPD has received between 6 and 10 calls per storm event from the public reporting flooding and debris-related problems. The WQPD and Utilities Maintenance contacts and phone numbers will be included on the revised stormwater brochure described in Minimum Control Number 1.

Appendix D

Minimum Control Measure 5 Supporting Documentation

**Establish Procedures for Operating and Maintaining Post-Construction BMPs
(Part II.B.5.a.iv & b.vi)**

BMPs are only effective as long as they are properly maintained. Table G describes the appropriate operation and maintenance (O&M) procedures and frequency for permanent BMPs. City owned and operated BMP facilities shall be maintained according to this schedule and document through the City’s GIS-centric tracking software. Privately owned and operated BMPs which connect to the MS4 shall be required to keep BMP O&M records on file and present the records to the City upon request.

For more information regarding post-construction BMP maintenance, visit the following EPA website:
http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=factsheet_results&view=specific&bmp=91

MCM 5 Supporting Table G – Stormwater Post-Construction BMP Maintenance

Management Practice	Maintenance Activity	Schedule
<i>Detention/Retention Practices</i>		
Ponds/Wetlands	Cleaning and removal of debris	Occasionally after large storms, (>2 yr event, typically biannually)
	Harvesting vegetation	When vegetation causes 50% reduction of original open water surface area (annually)
	Repairing embankment and side slopes	Annual or as needed
	Repairing control structure	Annual or as needed
	Removing accumulated sediment from the forebay	Remove when 50% of original volume has been lost (typically 5 years)
	Removing accumulated sediment from main cells of pond	Remove when 50% of original volume has been lost (typically 5 years)
<i>Infiltration Facilities</i>		
Infiltration Trench	Cleaning and removal of debris	Occasionally after large storms, (>2 yr event, typically biannually)
	Mowing and maintaining vegetated areas	Annually or as needed
	Sediment cleanout	Annual or as needed
	Repairing or replacing stone aggregate	Annual or as needed
	Maintaining inlets and outlets	Annual or as needed
	Removing accumulated sediment from forebays	Remove when 50% of original volume has been lost (typically 4 years)

Management Practice	Maintenance Activity	Schedule
Infiltration Basin	Cleaning and removal of debris	Occasionally after large storms, (>2 yr event, typically biannually)
	Mowing and maintaining vegetated areas	Annually or as needed
	Sediment cleanout	Annual or as needed
	Removing accumulated sediment from forebays	Remove when 50% of original volume has been lost (typically 3 to 5 years)
<i>Filtration Facilities</i>		
Sand Filters	Remove trash and debris from control openings	Annual or as needed
	Repair leaks from the sediment chamber	As needed (annually)
	Remove top few inches of sand and cultivate the surface when filter is clogged	As needed (annually)
	Clean out accumulated sediment from the filter bed	When depth reaches ½-inch or filter takes longer than 24 hours to drain (typically 3 to 5 years)
	Clean sediment from sediment chamber	When depth reaches 12 inches (typically 3 to 5 years)
Dry swales, grassed channels, biofilters	Mowing and removing debris/litter	Annual or as needed
	Stabilize erosion	Annual or as needed
	Manage nutrient and pesticide use	Annual or as needed
	Dethatch swale bottom	Annual or as needed
	Disc or aerate swale bottom	Annual or as needed
	Scrape swale bottom and remove sediment to restore to original condition	5 years or as needed
	Seed or sod to restore ground cover	5 years or as needed
Filter Strips	Mowing and removing litter/debris	Annual or as needed
	Manage nutrient and pesticide use	Annual or as needed
	Aerate soil	Annual or as needed
	Repair erosion or sparse cover	Annual or as needed
Bioretention	Repair erosion	Biannually or as needed
	Mulch void areas	Biannually or as needed
	Remove and replace dead vegetation	Biannually or as needed
	Water plant material	As needed
	Remove mulch and apply a new layer	Annually

Develop a Plan for Site Plan Review (Part II.B.5.a.v & b.ix)

A drainage plan ordinance and standards manual will only be effective with adequate site plan review and inspection procedures. The Phase 2 Stormwater NPDES rule requires a plan review for water quality related issues.

Plans will be reviewed for compliance with the Engineering Standards. The reviewer will review/verify the following, at a minimum:

- Drainage area,
- Post-development conditions match pre-development,
- BMPs are appropriate and are designed, sized and located properly,
- BMPs are adequate for future phases/development,
- O&M manuals are complete and adequate, and
- LID techniques are employed, as applicable.

A sample Stormwater Post-Construction BMP Plan Review is presented below.

All construction projects meeting the thresholds established in the ordinance (greater than 1 acre land disturbance or new or redevelopment projects that include greater than 5000 square feet of impervious area) will be reviewed for post-construction BMPs.

Develop a Plan for Post-Construction BMP Inspections (Part II.B.5.a.vi & b.x)

A drainage plan ordinance and standards manual will only be effective with adequate site plan review and inspection procedures.

Post-construction BMPs may only be used once appropriate vegetation has been established and construction debris/sediment has been removed. Construction site BMPs will only be removed once the permanent post-construction BMPs are approved by the City. Final plat will be approved and the property will be annexed by the City, if applicable, only after post-construction BMPs are deemed functional and properly constructed by the City.

The City will inspect each permitted site prior to final acceptance and before permanent BMPs may be utilized. In addition, the City will inspect City owned and operated facilities according to the Utility Maintenance Department's O&M schedule. The City will also inspect a minimum of 10 privately owned BMPs annually, primarily determined by complaints received by the Department. Additional inspections may be conducted on an as required basis, including but not limited to: public complaints, violation follow-up, inspector concerns/drive-bys, etc. Post-construction BMPs will be tracked using the GIS-centric software utilized by the City for mapping and maintenance requirements.

A sample Stormwater Post-Construction BMP Inspection Report is presented below.

Any violations observed during the site inspection will be handled as indicated in the ordinance.

Stormwater Post-Construction BMP Plan Review

Project/Development Name:		File No:
Review Date:		Reviewed by:
Plan Review Checklist		
Estimated drainage area?		
Does post-development runoff match pre-development conditions?		
Are post-construction BMPs required at the site?		
What BMPs are to be installed? Where?		
Are identified BMPs and locations appropriate for flows and conditions?		
Will BMPs be adequate for future development?		
Are existing drainage ways maintained and utilized?		
Are BMPs properly sized and designed per Engineering Standards?		
What LID techniques are in place for first 0.5 inches of rainfall? (Required after January 1, 2012)		
Are BMP O&M Manuals complete and appropriate?		
Is the BMP operator identified?		
Are procedures in place for maintaining BMPs after property transfers?		
Application: <input type="checkbox"/> Approved <input type="checkbox"/> Denied		
Reason/Comments: _____		

Stormwater Post-Construction BMP Inspection Report			
Development Name:			File No:
Inspection Date:		Time:	Inspected by:
BMPs Onsite			
Detention/Retention Ponds		Filtration	Infiltration
Inspection Checklist			
Yes	No	NA	
			Have the temporary construction BMPs been removed?
			Were permanent BMPs installed according to design?
			Are permanent BMPs ready to properly treat stormwater runoff? (i.e. Are sand filters free of construction debris? Is vegetation adequately established in swales, wetlands, ponds, etc.?)
			Are O&M records present and up to date?
			What LID technique is employed for first 0.5 inches of rainfall for sites constructed after January 1, 2012?
			Are embankments adequately maintained? Vegetated or armored; free of erosion, burrows, unauthorized vegetation; free of leaks.
			Is debris properly cleaned from BMP, inlet and outlet pipes, spillways, etc.?
			Are risers, spillways, and drainage pipes adequately maintained? Free of debris; free of sediment; free of rust, holes, cracks; valves operate properly.
			Is the pond adequately maintained, if present? Free of odors, debris, and unwanted vegetation; visible sheen present; desired vegetation present.
			Are sedimentation bays adequately maintained, if present? Free of odors, debris, and excess sediment.
			How deep is sediment? Should be cleaned once sediment reaches 50% of sediment design depth.
			Is the facility in good repair? Inlet and outlet pipes/structures; banks; concrete; fence; access
			Is vegetation properly maintained and appropriate?
			Does the basin dewater properly between storms?
			Is oil and grease present or previous evidence of oil and grease present?
Comments: _____			

Verbal/Written notification given to:			
Report by:			Date:

Establish Procedures for Low Impact Development for First 0.5” of Rainfall from a 24-hour Storm (Part II.B.5.a.vii)

Infiltration systems are discussed in the Engineering Standards. Appropriate low impact development techniques for this requirement and discussion about each are presented below.

- Rain gardens – Typically used on small scale projects, such as single-lot residential or commercial properties to infiltrate runoff water and use it to water gardens of native plant species
- Cisterns or rain barrels – Typically used on smaller sites by connecting the downspout to a barrel for storage. Cisterns have a valve located at the bottom of the barrel to allow gravity flow to water grass and plants during drier weather. This system could possibly be modified to contain large volumes of water from larger sites and then pump the water to the desired location.
- Green roofs – Vegetated building roofs. These roofs typically store rainwater on the roof to water plants also located on the roofs. The roofs require additional structural design considerations to ensure the weight of the water/snow, vegetation, and soils are accounted for. These roofs typically increase building insulation.
- Permeable and porous pavements – Allows runoff to infiltrate over the site instead of runoff from roads, parking lots and other typically impermeable surfaces. This technique often requires additional maintenance to ensure proper operation. This technique is also limited in cold weather climates.
- Grass buffer strips and bioinfiltration swales - Biofiltration swales and grass buffer strips both act to filter stormwater. These “biofilters” must be vegetated with fine, close-growing, water-tolerant grasses. The vegetation must be established prior to biofilter use for stormwater management.
- Infiltration swales and basins (currently included in Engineering Standards)
- Bioinfiltration basins – Similar to swales and rain gardens, just utilized on a larger scale.
- Evaporation pond – Store runoff until the weather can evaporate it. Requires large area and can cause undesired affects (mosquitos, drowning hazard, etc.)

The City should evaluate which LID techniques they feel are appropriate to the City and implement and require these items prior to January 1, 2012 to ensure permit compliance. These items should be amended to the Engineering Standards.

Appendix E

Minimum Control Measure 6 Supporting Documentation

Establish Employee Training Program (Part II.B.6.a.i and b.ii)

The City provides initial training for all field maintenance personnel with the potential to impact stormwater quality across the City. Additional training will be provided on an as-needed basis such as for new employees or change of conditions occurs. The training materials will be materials that are readily available through the US Environmental Protection Agency, state of Montana, or other municipal entity located outside of Helena or the state of Montana.

The City of Helena will work to develop good housekeeping operations and maintenance BMPs for each division of public works in relation to stormwater quality. These procedures will be discussed once they have been finalized and on an as-needed basis. Audits will be conducted by the City to determine the effectiveness of the trainings and good housekeeping measures. Follow up training may be conducted based on audit results.

An outline of typical discussion topics may include:

- What are illicit discharges?
- How are illicit discharges regulated?
- Why is it important to reduce pollutants into the stormwater system?
- What are typical work practices that contribute to stormwater pollution?
 - Park and open space maintenance
 - Vehicle fleet maintenance
 - Building maintenance
 - Street maintenance
 - Utility maintenance
 - Construction/land disturbance
 - Stormwater system maintenance
- What are typical best management practices to minimize stormwater pollution from typical work practices?
 - Material storage
 - Spill cleanup

One initial training session will also be provided for inspection personnel. Additional training will be provided on an as-needed basis such as for new employees or change of conditions occurs.

One training session will also be provided to detail appropriate construction BMPs. Additional training will be provided on an as-needed basis such as for new employees or change of conditions occurs.

Examples of training material can be found at the following locations:

- EPA website for municipal pollution prevention and good housekeeping:
http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=min_measure&min_measure_id=6

- EPA guidance documents for operation and maintenance in urban areas:
http://www.epa.gov/owow/nps/urbanmm/pdf/urban_ch11.pdf
- California Stormwater Association Manual:
<http://www.cabmphandbooks.com/municipal.asp>
- North Texas Council of Governments-stormwater pollution prevention training module series: http://www.nctcog.org/envir/SEEClean/stormwater/program-areas/pollution_prevention/CD/Version_1/P2_Training_Materials.asp

Develop an Operations and Maintenance Program for Municipal Operations (Part II.B.6.b.i and b.iii)

This operation and maintenance (O&M) program encompasses all municipal facilities for the City of Helena located within the city limit boundary, including but not limited to:

- Office buildings
- Vehicle maintenance facilities
- Parks, golf courses, open spaces, and the central park maintenance shop
- Solid waste facilities
- City streets
- City owned and operated utilities, particularly storm drain and sewer
- Municipal development projects
- Water, wastewater, and stormwater treatment facilities

Due to the widespread nature of this O&M program, the City will continue to develop localized O&M plans for each of the facilities listed above as resources allow. The City plans to complete O&M plans for at least one of the facilities listed above annually.

General

Material Handling and Storage

- Follow labels and material safety data sheet (MSDS) of all chemicals
- Store materials in original containers, if possible. If using an alternate container, properly label the contents and any other pertinent information.
- Keep containers closed or sealed except when emptying or filling.
- Inspect containers regularly for signs of corrosion, damage, or leaking. Properly discard damaged or leaking containers.
- Store materials and containers as follows:
 - Preferred – Indoors in sealed containers and on a spill containment base
 - OK – Outside under cover, in sealed containers, and in a curbed or bermed area
 - Last resort – Outside, exposed to weather, in sealed containers and in a curbed or bermed area
 - Never – Open or damaged containers indoors or outdoors
- Store materials away from high traffic areas

- Cover exposed material (i.e. soil stockpiles, deicing salt, road sand, etc.) with plastic whenever storage under permanent cover is impractical or impossible.
- Install appropriate BMPs downstream of exposed stockpile areas (i.e. soil, deicing salt, road sand, etc.) to prevent material from entering into storm drain system.

Spill Cleanup

- **Report all spills to proper personnel.**
- Respond quickly and appropriately to all spills to avoid larger future problems or spreading.
- Follow spill cleanup on label or MSDS.
- Contain the spill and prevent it from spreading. This can be accomplished by using drip pans, absorbent material, berms, covering a drain inlet, covering a dry spill to prevent rain or wind mobilizing the material, etc.
- Locate the spill source and repair.
- Reuse spilled material if possible.

Do NOT:

- Hose down a spill to a drain.
- Leave the spill or cleanup material longer than necessary.

Disposal

- Store trash bins, boxes, dumpsters, etc. under cover if possible.
- Ensure trash bins and dumpsters are covered when not in use.
- Pick up litter and debris around trash bins, dumpsters, etc.
- Recycle waste material, if possible.
- Properly dispose of hazardous wastes such as paints, pesticides, chemicals, etc.
- Clean up spills around trash bins and dumpsters without hosing to the stormwater system or surface water.
- Regularly empty trash facilities.

Fueling

- Do NOT top off fuel tank when filling to reduce spilling.
- Be aware of emergency shut-off location.
- Keep spill cleanup materials onsite and near the pumps, if possible.
- Fuel under cover if possible.
- Properly clean up and dispose of spills.
- Fuel in designated fueling areas, if possible, rather than mobile filling.
- Clean fuel areas periodically.
- Ensure a spill kit is located on fuel trucks.

First Response

Field employees are often the first responsible persons to encounter a potential problem. The following is a list of items which are cause for concern and should be reported to proper personnel:

- Oil or sheen on a water surface
- Excess trash and/or debris in a roadway, ditch, storm drain, stream, or other surface water. Debris may include:
 - Soil/dirt
 - Rock
 - Lawn clippings
 - Tree trimmings
 - Chemicals
- Odors
- Colored or cloudy water
- Dead or dying fish, vegetation, or other living organisms

Solid Waste

This section applies to City employees involved in the solid waste disposal program within the city limit boundary. These activities include transfer station operators, trash collectors, tramp truck operators, etc.

- Properly identify, handle, store, and dispose of hazardous waste. Examples of hazardous waste include:
 - Batteries
 - Waste oil
 - Antifreeze
 - Paints
 - Solvents
 - Pesticides, herbicides
 - Explosives (fireworks, ammunition)
 - Chemicals
 - Fluorescent lights
- Trash collection
 - Pick up spilled trash around cans. Identify owners of persistent problems.
 - Ensure trash is not left behind after dumping into truck.
 - Pick up material that falls out during compaction.
 - Ensure spill collection kit is provided on every truck and use them if necessary.
 - Ensure hopper drain plugs are sealed during collection.
 - Wash collection trucks only in approved areas and only where drain is connected to sanitary sewer system.
 - Do NOT allow spills or wash water to drain to stormwater system or surface waters.
- Transfer station
 - Pick up windblown litter and trash.

- Periodically sweep impervious areas to reduce sediment, especially before windy or rainy periods/events.
- Use litter screens/fence to collect windblown trash.
- Do not overfill collection bins.
- Properly clean up spills.
- Close lids on bins and receptacles when not in use.
- Ensure haulers and citizens cover loads.
- Do NOT allow spills or wash water to drain to stormwater system or surface waters.

Vehicle Maintenance Facilities

- Conduct all maintenance in designated locations.
 - Preferred – Inside with drain system connected to City sewer.
 - OK – Outside under cover with a drain connected to the City sewer.
 - Last resort – Outside without cover, but on a paved surface.
- Park damaged, leaking, or dirty vehicles under cover, if possible, until they can be serviced.
- Keep maintenance areas clean.
- Promptly dispose of trash and clean up spills.
- Promptly dispose of fluids in drip pans or other open containers.
- Properly locate, repair, clean, and dispose of leaking or spilled material.
- Properly store batteries.
 - Covered areas
 - Over spill containment
 - Leaking batteries in a spill proof container.
- Collect and store used fluids by type (i.e. antifreeze, oil, transmission, etc.)
- Do NOT mix fluids unless approved to do so.
- Properly label disposal containers.
- Recycle waste materials when possible (fluids, batteries, etc.)
- NEVER dispose of used fluids, filters, or batteries in the trash or drain.
- Part cleaning
 - Clean parts indoors
 - Properly dispose of fluids, dirt, grease, and debris
 - Reduce dripping on floor by allowing parts to drain before removing from cleaning sink.
 - Close lids to cleaning sinks or parts cleaning equipment when not in use.
- Use dry cleaning methods whenever possible to clean work areas.
- Do NOT dispose of mop or wash water down a storm drain or onto the ground. Dump into approved drain which flows to sanitary sewer system.
- Do NOT hose down outside work areas.
- Clean outside work areas regularly, especially before windy or rainy periods/events.
- Wash equipment only in designated areas where wash water drains to the sanitary sewer system.

Parks and Open Space Maintenance

- Plant native or adapted plants whenever possible to reduce required watering.
- Avoid overwatering to prevent excess runoff.
 - Adjust watering time – only water during early morning or late evening when temperatures and wind are lower.
 - Adjust sprinkler direction – Water only vegetation. Do NOT water sidewalks, driveways, roads, buildings, etc.
 - Adjust sprinkler volume – Only apply amount required.
 - Check soil moisture and only water when top 4 to 5 inches is dry.
 - Do NOT run sprinklers during rainy weather
 - Consider installing rain and freeze sensors on sprinkler systems
- Mow grass as high as possible.
- Leave grass clippings on the lawn.
- Compost lawn debris when possible.
- Sweep or blow clippings onto lawn instead of into storm drain system.
- NEVER dispose of leaves, clippings, or debris into the storm drain system.
- Remove debris and litter from storm drain inlets.
- Reduce fertilizer needs and improve drainage by aerating and adding compost.
- Test soil prior to fertilizing to determine exact nutrient requirements.
- Replant bare areas and cover with mulch or matting to reduce erosion.
- Follow pesticide and herbicide instructions.
 - Mix properly.
 - Apply only what is needed.
 - Use non-toxic substitutes if possible.
 - Only apply on problem area.
 - Do NOT spray on streets, sidewalks, storm drain inlets, buildings, driveways, etc.
 - Do NOT apply near streams, wetlands, irrigation ditches, or other surface waters.
 - Do NOT apply during windy conditions.
 - Do NOT apply within 24 hours of potential rain or immediately after rain.
- Provide pet waste disposal stations. Keep the bags filled.
- Dispose of swimming pool water in sanitary sewer system.

Land Disturbance (trenching, excavating, landscaping, etc.)

An MPDES permit is required for all projects disturbing one acre or more of land. The MPDES permit is obtained from the Montana Department of Environmental Quality.

- Manage all projects to reduce erosion or other pollutants from entering storm drain system, streams, irrigation ditches, or other surface waters.
- Follow construction BMP guidelines outlined under MCM 4 of the MS4 permit (Appendix C). Utilize construction BMPs established in City of Helena Engineering Standards. Address:
 - Solid wastes
 - Hazardous materials and wastes

- Pesticides and fertilizers
- Petroleum products
- Detergents
- Sanitary wastes
- Concrete washout
- Dirt on roadways (construction entrance)
- Minimize amount of disturbed area.
- Protect storm drain inlets from receiving sediment-laden runoff from construction site.
- Promptly clean up and dispose of spilled material.

Street Maintenance

Pavement Repair

- Vacuum slurry and cuttings during sawcutting. Properly dispose of slurry.
- Concrete trucks washout in designated areas.
- Do NOT allow concrete trucks to wash onto roadway, stream, storm drain, irrigation ditch, wetland, or other surface water.
- Stockpile asphalt patching material on concrete or paved surface and cover to prevent contact with rain.
- Mix only amount necessary to complete repairs.
- Sweep up and properly dispose of all excess material.
- Use alternative to diesel fuel for patching and cleanup activities.
- Clean equipment, trucks, and tools in approved area.
 - Do NOT allow wash water to enter storm drain, ditch, stream, wetland, or other surface water.
- If no wash facility is available, clean up on heavy absorbent material or plastic sheathing covering paved area.
- Promptly clean up spills or wash area. Prevent drainage to storm drain, ditch, stream, or other surface water.
- Do NOT apply paint when raining or windy.
- Properly dispose of paint and other wastes.

Drain and Ditch Cleaning

- Test suspected debris, sediment, or waste material as necessary to determine proper disposal method.
- Appropriately dispose of trash and debris removed from drains and ditches.
 - Landfill
 - Approved fill area
 - Hazardous waste
 - Material should not be disposed of in areas that will negatively affect storm drain system in the future.
- Report suspected dumping violations when necessary.
- Cover soil stockpiles to reduce erosion and runoff.

- Install silt fence or other appropriate BMPs to capture sediment and other potential pollutants.
- Revegetate bare and denuded areas.
- Protect channels using appropriate BMPs.

Street and Parking Lot Cleaning

- Sweep streets and parking lots according to operations and maintenance schedule.
- Do NOT hose streets or parking lots to storm drain.
- Cover storm drain inlets if streets are washed or sprayed with water.

Utility Maintenance

The Utilities Maintenance division maintains the existing storm drain infrastructure throughout the city. The City will continue doing the following items to ensure proper operation.

- Stencil a minimum of 120 storm drains annually.
- Inspect 100 percent of new storm drain systems before they are connected to existing infrastructure.
- Target inspection of up to 20 percent of the existing storm drain system annually.
- Target inspection of up to 20 percent of the existing sanitary sewer system annually.
- Investigate and eliminate suspected illicit discharge connections, as necessary.
- Inspect City owned and operated stormwater facilities according to Utility Maintenance department's operations and maintenance schedule
 - Inspect catch basins annually, clean as required.
 - Repair vegetation in stormwater BMPs as required
- Evaluate all complaints regarding storm drain system
- Inspect a minimum percentage (up to 10%) of privately owned stormwater BMPs annually.
- Utilize appropriate BMPs (see Engineering Standards) when testing and flushing water lines, testing hydrants, and maintaining underground lines.

Appendix F
Stormwater Ordinance

ORDINANCES OF THE CITY OF HELENA, MONTANA

ORDINANCE NO. 3120

AN ORDINANCE PROHIBITING ILLEGAL DISCHARGES AND CONNECTIONS TO THE MUNICIPAL SEPARATE STORM SEWER SYSTEM, AND REGULATING CONSTRUCTION AND POST CONSTRUCTION ACTIVITIES BY AMENDING CHAPTER 6 OF TITLE 6 OF THE HELENA CITY CODE

NOW, THEREFORE, BE IT ORDAINED BY THE COMMISSION OF THE CITY OF HELENA, MONTANA:

That Title 6, Public Utilities, of the Helena City Code is hereby amended by repealing Chapter 6, Storm Water Utility, in its entirety and adopting this new Chapter 6, Storm Water Control.

CHAPTER 6

STORM WATER CONTROL

SECTION:

- 6-6-1: Title
- 6-6-2: Purpose
- 6-6-3: Definitions
- 6-6-4: Applicability
- 6-6-5: Storm Water Utility Service Area
- 6-6-6: Responsibility for Administration
- 6-6-7: Cooperation with the County
- 6-6-8: Storm Drainage Master Plan
- 6-6-9: Ultimate Responsibility
- 6-6-10: Prohibition of Illegal Discharges
- 6-6-11: Drainageway Protection
- 6-6-12: Prohibition of Illegal Connections
- 6-6-13: Suspension of MS4 Access
- 6-6-14: Monitoring of Discharges
- 6-6-15: Development and Redevelopment Activity and Post Construction Storm Water Control

- 6-6-16: Credit for Construction of Storm Drainage facilities
- 6-6-17: Responsibility for Accepted Storm Water Facilities
- 6-6-18: Responsibility for Private Storm Drainage Facilities
- 6-6-19: Applicability to Governmental Entities
- 6-6-20: Requirement to Use Best Management Practices
- 6-6-21: Notification of Spills
- 6-6-22: Management of Municipal Separate Storm Water System
- 6-6-23: Violations and Civil Enforcement
- 6-6-24: Violation and Criminal Enforcement
- 6-6-25: Injunctive Relief
- 6-6-26: Remedies Not Exclusive
- 6-6-27: Severability

6-1-1: TITLE: This chapter may be cited as the Helena Storm water Control Chapter.

6-1-2: PURPOSE: The purpose of this chapter is to provide for the health, safety, and general welfare of the citizens of the City of Helena by protecting water quality through the regulation of non-storm water discharges to the storm water drainage system to the maximum extent practicable as required by federal and state law. This chapter establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the National Pollutant Discharge Elimination System (MPDES) permit process. The objectives of this chapter are:

- A.** To regulate the contribution of pollutants to the municipal separate storm sewer system from storm water discharges by any user.
- B.** To prohibit illegal connections to and discharges into the municipal separate storm sewer system.
- C.** To establish legal authority to carry out all inspection, surveillance, and monitoring procedures necessary to ensure compliance with this chapter.
- D.** To establish legal authority to develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects.

6-1-3: DEFINITIONS: For purposes of this chapter, the following definitions apply:

BEST MANAGEMENT PRACTICES ("BMPs"): Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to storm water, receiving waters, or storm water conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

CONSTRUCTION ACTIVITY: Development and redevelopment projects resulting in any land disturbance including, but not limited to, clearing and grubbing, grading, excavating, and demolition.

DEPARTMENT: City of Helena Public Works Department.

DETENTION/RETENTION BASINS: A normally dry area designed to capture and hold storm water. The storm water may be captured and released at a uniform rate after the storm peak flow has passed (detention) or the storm water may be held for evaporation or infiltration into the ground and not released at all (retention).

DISCHARGE: Any direct or indirect non-storm water discharge to the storm drain system.

HAZARDOUS MATERIALS:

Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. This includes materials defined as hazardous by the United States Environmental Protection Agency and the Montana Department of Environmental Quality.

ILLEGAL CONNECTIONS:

An illegal connection is any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including, but not limited to, any conveyances that allow any non-storm water discharge, including sewage, processed wastewater, and wash water to enter the storm drain system, and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drains or connections had been previously allowed, permitted, or approved by the Department, or any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records, and approved by the Department.

INDUSTRIAL ACTIVITY:

Activities subject to MPDES Industrial Permits as defined in

40 CFR, Section 122.26 (b) (14).

- MANMADE DRAINAGEWAY: An open channel designed to carry storm water.
- MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES) STORM WATER DISCHARGE PERMIT: A permit issued by the Montana Department of Environmental Quality that authorizes the discharge of pollutants to surface waters of the United States, whether the permit is applicable on an individual, group, or general area-wide basis. Also includes permits issued by the United States Environmental Protection Agency.
- MS4: The municipal separate storm sewer system including storm water drainage facilities and system.
- NATURAL DRAINAGEWAY: A recognizable drainage which has historically carried storm or runoff water. The drainageway may still be in its native state or may be partially or totally encroached upon. The limits of the drainageway are considered to be the outermost area of flow for the design storm or the prescribed easement for the drainageway.
- NON-STORM WATER DISCHARGE: Any discharge to the storm drain system that is not composed entirely of storm water.
- PERSON: Any individual, association, organization, partnership, firm, corporation or other entity recognized by law.
- POLLUTANT: Anything which causes or contributes to pollution. Pollutants may include, but are not limited to, paints, varnishes,

and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes; and refuse, rubbish, garbage, litter, or other discarded or abandoned objects and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous materials and wastes; sewage, fecal coliform, and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

PREMISES:

Any building, lot, parcel of land, or portion of land, whether improved or unimproved, including adjacent sidewalks and parking strips.

STORM DRAINAGE SYSTEM
OR FACILITIES:

City-owned or controlled facilities that are part of the MS4 by which storm water is collected or conveyed, including but not limited to, any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

STORM WATER:

Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

STORM WATER POLLUTION
PREVENTION PLAN:

A written document which describes the best management practices and activities to be implemented by a person to identify sources of pollution or contamination at a site, and the actions to eliminate or reduce pollutant discharges to storm water, storm water conveyance systems, or receiving waters to the maximum extent practicable.

STORM WATER UTILITY:

A funding mechanism for maintenance and operation of, as well as capital improvements to, the storm water drainage system. The utility is a user fee charged equitably to all property within the service area which benefits from the utility.

WASTEWATER:

Any water or other liquid, other than uncontaminated storm water, discharged from a facility.

6-6-4: APPLICABILITY: This chapter applies to all water entering the city's separate storm water system that is generated on any developed and undeveloped land.

6-6-5: STORM WATER UTILITY SERVICE AREA: The storm water utility service area is inclusive of all premises annexed to the city and bounded by the incorporated city limits as the same may be adjusted by the city commission.

The city reserves the right to plan for drainage improvements outside the service area. The city may also construct storm drainage improvements out of the service area when needed as an integral part of the storm drain facilities located within the service area.

6-6-6: RESPONSIBILITY FOR ADMINISTRATION: The Department shall administer, implement, and enforce the provisions of this

chapter. Any powers granted or duties imposed upon the Department may be delegated by the Department to persons or entities acting in the beneficial interest of or in the employ of the City.

6-6-7: COOPERATION WITH THE COUNTY: The city shall, in all ways and within the limits of its powers, solicit the county to cooperate in providing drainage facilities in storm water basins, or parts thereof, extending outside the city and, in general, to carry out the drainage plan developed therein.

6-6-8: STORM DRAINAGE MASTER PLAN: The storm drainage master plan prepared by Stahley and Wright-McLaughlin Engineers and dated April 9, 1980, as well as the application updates of the Davis Gulch Basin dated May 1985, prepared by Robert Peccia and Associates, and the updates of the Last Chance Gulch Basin, Bull Run Basin and West Area Basin prepared by Stahley Engineering and Associates, dated May 1989, are hereby adopted by reference and declared to be part of this chapter. The plans are on file in the office of the city engineer. The city may adopt additional master drainage plan updates by reference and declare them to be a part of this chapter, and copies of such master drainage plan updates shall be on file in the office of the city engineer. Modifications of the plans may be initiated by the Department and submitted to the city commission for approval. Approved modifications are to be filed in the office of the city engineer.

6-6-9: ULTIMATE RESPONSIBILITY: The standards set forth herein and promulgated pursuant to this chapter are minimum standards; therefore, this chapter does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, or unauthorized discharge of pollutants.

6-6-10: PROHIBITION OF ILLEGAL DISCHARGES:

A. A person may not discharge or cause to be discharged into the MS4 any materials, including but not limited to, pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality

standards or that could cause the city to be in violation of its MPDES Phase II permit, other than storm water. Any such prohibited discharge is an illegal discharge.

- B.** The commencement, conduct, or continuance of any illegal discharge to the MS4 is prohibited except as follows:
1. Water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, groundwater infiltration to storm drains, uncontaminated and pumped groundwater, foundation or footing drains (not including active groundwater dewatering systems), springs, non-commercial washing of vehicles, natural riparian habitat or wet-land flows, fire-fighting activities, routine street and utility maintenance, including chip sealing and spreading of gravel and other materials necessary to provide safe streets, and any other water source not containing pollutants;
 2. Discharges specified in writing by the Department as being necessary to protect public health and safety;
 3. Any non-storm water discharge permitted under an MPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system; and
 4. Other non-storm water discharges which are not a source of pollutants to the City's MS4 or waters of the United States and are exempted in writing by the Department.
- C.** It is unlawful to introduce hazardous materials into any drainage system. The originator of any hazardous material spill or introduction is responsible for the material, and shall pay all applicable investigation and cleanup costs, including the cost of equipment, materials, staff time with fringes, and consultant charges.
- D.** The City may use available and reasonable testing to identify the source of an illegal discharge including, but

not limited to, visual inspections, sample collection and testing, dye testing, and smoke testing.

6-6-11: DRAINAGEWAY PROTECTION:

- A.** It is unlawful to encroach upon natural or manmade drainage ways with:
 - 1. Temporary or permanent structures not approved by the City Manager; or
 - 2. Fill material or other material obstructing or restricting natural storm water flow.

- B.** Natural or manmade drainage ways may be altered under the supervision of, and upon application to, the Department under the following circumstances:
 - 1. A roadway crossing, provided drainage is considered in the design and culverts are designed to handle proper flow as specified in the master plan and updates, or bridges are designed such that the opening is adequate;
 - 2. Improvements such as detention basins; and
 - 3. Slope improvements.

All improvements or changes to drainage ways must be designed by a registered professional engineer and submitted for approval to the Department. Approval must be obtained before any on site work commences.

6-6-12: PROHIBITION OF ILLEGAL CONNECTIONS:

- A.** The construction, use, maintenance or continued existence of illegal connections to the storm drain system is prohibited.

- B.** This prohibition expressly includes, without limitation, illegal connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

- C. A person who wishes to connect to the MS4 shall obtain permission from the Department install the connection in accordance with City engineering standards.

6-6-13: SUSPENSION OF MS4 ACCESS:

- A. The Department may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or Waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the Department may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the United States, or to minimize danger to persons.
- B. A person discharging to the MS4 in violation of this chapter may have their MS4 access terminated if such termination would abate or reduce an illegal discharge. The Department will notify a violator of the proposed termination of its MS4 access. The violator may petition the Department for a reconsideration and hearing.
- C. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the Department.

6-6-14: MONITORING OF DISCHARGES:

- A. This section applies to all facilities that have storm water discharges including construction activity.
- B. The Department is permitted to enter and inspect MS4 facilities subject to regulation under this chapter as often as may be necessary to determine compliance with this chapter. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the Department.

- C.** Facility operators shall allow the Department ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an MPDES permit to discharge storm water, and the performance of any additional duties as defined by state and federal law.
- D.** The Department has the right to set up on any permitted facility such devices as are necessary in the opinion of the Department to conduct monitoring or sampling of the facility's storm water discharge.
- E.** The Department has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment must be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure storm water flow and quality must be calibrated to ensure their accuracy.
- F.** Any temporary or permanent obstruction to safe and easy access to the facility to be inspected or sampled must be promptly removed by the operator at the written or oral request of the Department and may not be replaced. The cost of clearing such access is borne by the operator.
- G.** Unreasonable delay in allowing the Department access to a permitted facility is a violation of a storm water discharge permit and of this chapter. A person who is the operator of a facility with a MPDES permit to discharge storm water associated with industrial activity commits an offense if the person denies the Department reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this chapter.
- H.** If the Department has been refused access to any part of the premises from which storm water is discharged, and it is able to demonstrate probable cause to believe that there may be a violation of this chapter, or that there is a need to inspect or sample as part of a routine inspection and sampling program designed to verify compliance with this chapter or any order issued hereunder, or to protect the overall public health, safety, and welfare of the

community, then the City may seek issuance of a court order from any court of competent jurisdiction.

6-6-15: DEVELOPMENT AND REDEVELOPMENT ACTIVITY AND POST CONSTRUCTION STORM WATER CONTROL:

- A.** A construction activity storm water permit is required for construction activity that disturb one acre (1) or more, including projects disturbing less than one (1) acre that are part of a larger common plan of development, redevelopment, or sale. A permit may only be issued subsequent to a properly submitted and reviewed permit application, pursuant to this section.
- B.** An owner or developer of land required to obtain a construction activity storm water permit must submit an executed copy of the State standard Notice of Intent ("NOI") and a Storm Water Pollution Prevention Plan prepared and stamped by a licensed professional engineer prior to performing any construction activity.
- C.** A construction activity storm water permit will require erosion and sediment controls through the design, installation, and construction of storm water management and control practices on the permitted construction site including structural BMPs and elements of site design for construction storm water management other than structural BMPs.
- D.** The permittee is required to perform regularly scheduled construction activity site inspections at least every fourteen (14) calendar days and within twenty-four (24) hours of a precipitation event to ensure that all BMPs have been constructed and are functioning properly. The permittee must document all inspections in writing and make inspection records available to the Department for review.
- E.** Commencement of construction work on development or redevelopment projects that disturb one (1) acre or more, including projects disturbing less than one (1) acre that are part of a larger common plan of development, may not begin until such time as a permit is issued and final

approval of the drainage plan if required below is obtained in accordance with this chapter.

- F.** Any person subject to a construction activity MPDES storm water discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the Department prior to the allowing of discharges to the MS4.
- G.** In order to address post-construction storm water run-off, all owners or developers of property that are required to submit a drainage plan shall provide the storm water facilities necessary for the drainage and control of flood and surface waters within storm water basins and shall provide the facilities required to convey such waters from the storm water basin to major drainageways. The cost of installing storm water facilities in the service area is charged in whole or in part against the property in the service area.
- H.** All owners or developers applying for any of the following permits or approvals shall submit a drainage plan for approval, prepared and stamped by a professional engineer, with the application or request:

 - a. Major subdivision plat approval;
 - b. Minor subdivision plat approval;
 - c. Building permits where the impervious development coverage within the property is five thousand (5,000) or more square feet, or where development is in an area critical to the functioning of the MS4 as determined by the Department; and
 - d. Planned unit development (PUD).
- I.** The same plan submitted during one permit or approval process may be subsequently submitted with other required applications. The plan must be supplemented with such additional information as may be requested by the Department.
- J.** The drainage plan requirement established in this section applies except when the owner or developer demonstrates to

the satisfaction of the Department that the proposed use of the property:

1. Will neither seriously nor adversely impact the water quality conditions of any affected receiving bodies of water;

2. Will not alter the surface discharge location, alter the drainage pattern on adjoining properties, alter drainage patterns, increase the discharge, or cause any other adverse effects in the drainage area; and

3. Will not alter the subsurface drainage patterns, flow rates and discharge points, or result in any significant adverse effects to property or residents.

K. Drainage plans shall be prepared by a certified engineer in accordance with current hydraulic hydrology practices and hydrology design standards and shall be consistent with the storm drain master plan. Drainage plans shall consist of drainage calculations and mitigation of storm water drainage and include contour lines as necessary and explicitly describe the storm water drainage system, including any required detention areas.

L. All required storm drainage plans must be submitted for review by and approval of the Department. At the time of approval of the drainage plan for the subject property, a schedule for inspection of required construction and facilities will be established by the Department.

6-6-16: CREDIT FOR CONSTRUCTION OF STORM DRAINAGE FACILITIES:

If the Department requires an owner or developer to construct storm water facilities that serve more than that development and are identified in the storm drain master plan, a portion of the actual costs incurred may be eligible for credit from the city's storm water drainage assessment. To be eligible for credit, prior to final approval of the development agreement, the owner or developer must submit a report to the storm water utility detailing the proposed improvements and obtain the city's approval of the report. The report must identify all elements of the project eligible for credit and include a detailed project description, a project bid form with estimated quantities, unit prices, engineering design and construction

management costs. The report also must provide an accurate quantity and cost delineation between the proposed storm water improvements necessary to meet the standard requirements of the development. The books and records of the owner or developer relating to the storm water facilities for which the utility is providing reimbursement must be open to the city at all reasonable times for the purpose of auditing or verifying costs. The Department will recommend inclusion of the cost of improvements eligible for credit in the next available budget submitted to the city commission. Upon approval and appropriation by the city commission, such costs will be credited from the storm drainage fund.

6-6-17: RESPONSIBILITY FOR ACCEPTED STORM DRAINAGE FACILITIES:

All storm water facilities constructed, installed, or provided hereunder, upon acceptance by the city, are the property of the city and thereafter the city is responsible for the operation and maintenance of the facilities. The city shall maintain all accepted public storm water facilities located within city-owned land, city rights of way and city easements.

6-6-18: RESPONSIBILITY FOR PRIVATE STORM DRAINAGE FACILITIES:

Property owners who install private storm drainage facilities that are not connected to the MS4 and not accepted by the City are required to perform maintenance of all private storm drainage facilities to ensure that those facilities function as designed.

6-6-19: APPLICABILITY TO GOVERNMENTAL ENTITIES:

All governmental entities are required to submit a drainage plan and comply with the terms of this chapter when developing or improving land including, but not limited to, road construction and reconstruction and other improvements that can affect storm water runoff within the city.

6-6-20: REQUIREMENT TO USE BEST MANAGEMENT PRACTICES: The

Department will adopt requirements identifying BMPs for any activity, operation, or facility which may cause or contribute to pollution or contamination of storm water, the storm drain system, or waters of the U.S. The owner or operator of a commercial or industrial establishment shall provide, at the owner's own expense, reasonable protection from the accidental

discharge of prohibited materials or other wastes into the MS4 or watercourses through the use of these structural and non-structural BMPs. Further, any person responsible for a property or premise that is or may be the source of an illegal discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid MPDES permit authorizing the discharge of storm water associated with industrial activity, to the extent practicable, is deemed compliance with the provisions of this section. Adopted BMPs shall be part of a storm water pollution prevention plan (SWPPP) as necessary for compliance with requirements of the MPDES permit.

6-6-21: NOTIFICATION OF SPILLS: Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into storm water, the storm drain system, or water of the U.S. that person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials that person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the Department in person or by phone, electronic mail, or facsimile no later than the next business day. Notification in person or by phone must be confirmed by written notice addressed and mailed to the Department within three business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records must be retained for at least three years.

6-6-22: MANAGEMENT OF MUNICIPAL SEPARATE STORM WATER SYSTEM:

- A.** The purpose of the Storm Water Utility rates and charges established by the city commission is to generate sufficient revenue to pay all costs for the operation, maintenance, administration and routine functions of the existing MS4 and the operation, maintenance and administration of such future storm drainage facilities as may be established within or without the service area and to pay for the review of drainage plans, and the design, right of way acquisition and construction or reconstruction of storm water facilities. All of the proceeds are deemed to be in payment for use of the city storm water system.
- B.** The Department shall determine the total annual cost of operation and maintenance of the storm water system. The total annual cost of operation and maintenance includes, but is not limited to, labor, repairs, equipment replacement, maintenance, necessary modifications, power, sampling, laboratory tests and a reasonable contingency fund. Capital improvement priorities are determined by the city commission, and utility rates shall be passed in the same manner as all other special assessments. All assessments are set by resolution after public hearing.
- C.** The city may assess a user fee upon all assessable property within the service area. This charge must appear on yearly property tax statements distributed by the county or by individual billing where necessary. The property owner shall pay the fee directly to the county and the county shall then pay the city the fee in the same manner as all other special fees and assessments. The city reserves the right to pursue further legal action to remedy nonpayment. Nonpayment constitutes a lien on the property, as are other taxes and assessments, in accordance with state law.
- D.** The rates, charges, and rentals are deemed prima facie fair, reasonable, and equitable. In any case where any contention is made that the rates are unfair, inequitable, or unreasonable, the party objecting thereto shall apply to the city, stating the facts and grounds of the complaint, and the city shall investigate and report with recommendations to the city commission. The city shall consider each and every such complaint and report, and communicate such findings in respect thereto to the city commission within one month after the filing of each such

complaint. The city commission has the right to order public hearings as to any such matter and, if convinced that an adjustment of storm water utility rates or charges for such lot or parcel of land is necessary to provide equality with those charged to others, it shall so provide.

6-6-23: VIOLATIONS AND CIVIL ENFORCEMENT:

- A.** Whenever the Department finds that a person has violated a prohibition or failed to meet a requirement of this Chapter, the Department may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:
1. The performance of monitoring, analyses, and reporting;
 2. The elimination of illegal connections or discharges;
 3. That violating discharges, practices, or operations shall cease and desist;
 4. The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property;
 5. Payment of restitution fore remediation costs;
 6. The implementation of source control or treatment BMPs; and
 7. The cessation of any construction or post construction work not permitted according to this chapter.
- B.** If abatement of a violation or restoration of affected property is required, the notice will set forth a deadline within which such remediation or restoration must be completed. Said notice will further advise that, should the violator fail to remediate or restore within the established deadline, the work may done by the City and the expense thereof may be levied against the real property of the violator.

- C. If the violation has not been corrected pursuant to the requirements set forth in the notice of violation, then the Department may enter upon the subject private property and is authorized to take any and all measures necessary to abate the violation or restore the property. The total cost thereof may be assessed against the real property of the violator in the same manner as a property tax. It is unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the Department or designated contractor to enter upon the premises for the purposes set forth above.

6-6-24: VIOLATIONS AND CRIMINAL ENFORCEMENT: Violations of this chapter may also subject the violator to a fine in any sum not to exceed five hundred dollars (\$500.00), or imprisonment in the county jail for a period not to exceed thirty (30) days, or both such fine and imprisonment. The Department may recover all attorney fees, court costs, and other expenses associated with enforcement of this chapter, including sampling and monitoring expenses.

6-6-25: INJUNCTIVE RELIEF: It is unlawful for any person to violate any provision or fail to comply with any of the requirements of this chapter. If a person has violated or continues to violate the provisions of this chapter, the city may petition for a preliminary or permanent injunction restraining the person from activities which would create further violations or compelling the person to perform abatement or remediation of the violation.

6-6-26: REMEDIES NOT EXCLUSIVE: The remedies listed in this chapter are not exclusive of any other remedies available under any applicable federal or state law, and it is within the discretion of the city to seek cumulative remedies.

6-6-27: SEVERABILITY: The provisions of this chapter are hereby declared to be severable. If any provision, clause, sentence, or paragraph of this chapter or the application thereof to any person, establishment, or circumstance shall be held invalid, such invalidity shall not affect the other provisions or application of this chapter.

FIRST PASSED BY THE COMMISSION OF THE CITY OF HELENA,
MONTANA, THIS 7th DAY OF December, 2009.

/S/ James E. Smith
MAYOR

ATTEST:

/S/ Debbie Havens
CLERK OF THE COMMISSION

FINALLY PASSED BY THE COMMISSION OF THE CITY OF HELENA,
MONTANA, THIS 21st DAY OF DECEMBER, 2009.

/S/ James E. Smith
MAYOR

ATTEST:

/S/ Debbie Havens
CLERK OF THE COMMISSION