Clark, Amy

From: Clark, Amy
Sent: Friday, February 01, 2013 3:11 PM
To: corwin.oldweiler@us.af.mil; laurie.fisher@us.af.mil
Cc: Rathbone, Colleen; Volk, Everett
Subject: MS4 Permit Documents for Your Reference - Follow-up to the 1/23/13 Meeting
Attachments: Preamble to Stormwater Rule_MEP section only.pdf; MS4 Permit Improvement Guide Chapter 5.pdf; MTR040000_GeneralPermit_2010[1].pdf; NDR04000 GeneralPermit_2009.pdf; 40 CFR Part 122.34.docx

Cory and Laurie - Thank you again for the opportunity to meet last week. As discussed during the meeting, I have provided below some reference materials and documents that may be of interest to the Base and/or Regional Counsel. There is a lot of information available that could be relevant (but in effort to not be overwhelming), I have tried to limit it to what I believe will be the most useful. I have also cut-and-pasted excerpts that I believe are the most relevant, but attached/linked the full documents in case you want more information.

Lastly, I have tried to break-up this information into sections so you can see what is occurring within the various EPA Regions, at Region 8, and nationally. Please let me know if you have any questions or if your legal staff has any questions for our regional counsel. I look forward to meeting with you again on February 27th to discuss this matter further. As discussed during our initial meeting, I think it would be beneficial to visit/tour the base in preparation for our Feb. 27th meeting. I will send a separate email to discuss visiting the base. Thank you again!

Examples of MS4 Permits issued by States within EPA Region 8

1. All Montana MS4 permits (including the Malmstrom Air Force Base in Great Falls, MT) require:

For new development or redevelopment projects greater than or equal to one 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 runoff generated from 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.
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 runoff generated from the first 0.5 inches of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation.

Full permit is here: *(See attached file: MTR040000_GeneralPermit_2010[1].pdf)*

2. All North Dakota MS4 permits require:

At a minimum the post-construction stormwater management program must:
a. Develop, implement, and document strategies which include the use of structural and/or non-structural BMPs appropriate for the community that address the discharge of pollutants from new development and redevelopment projects, and/or maintain or restore hydrologic conditions at sites to minimize the discharge of pollutants and prevent inchannel impacts associated with increased impervious surface. The post-construction controls should include a water quality component as outlined in Appendix 1 of the permit.

Full permit is here: *(See attached file: NDR04000 GeneralPermit_2009.pdf)*

MS4 Permits issued by other EPA Regions (Region 3 and Region 10)

1. Final DC MS4 Permit and Fact Sheet: http://www.epa.gov/reg3wapd/npdes/dcpermits.htm

2 . Proposed Joint Base Lewis-McChord (Joint Army and Air Force Base) Permit, and Fact Sheet: http://yosemite.epa.gov/r10/water.nsf/npdes+public+notices/jblm-ms4-pn-2011

Examples of MS4 Permits issued by other States that contain GI/LID Standards

1. West Virginia - Requires retention of the first 1" of stormwater on-site
2. Rhode Island - Requires the capture and treatment of first 1.2" of stormwater on-site
3. New Jersey - Requires that groundwater recharge volume be maintained or infiltrate runoff for the 2-yr storm event
4. Minnesota - Requires treatment of the first 0.5" of runoff from new impervious surfaces
5. Wisconsin - Requires infiltration to achieve 60-90% of pre-development runoff volume
6. Ohio- Requires the treatment the first 0.75" of runoff

There are several more states, but I just listed a few here.

Other Regulatory/Non regulatory Reference Materials

1. EPA Phase II Stormwater Rule and the minimum requirements for small MS4s (relevant language highlighted):

(See attached file: 40 CFR Part 122.34.docx)

2. Except from the preamble to the Phase II Stormwater Rule (from 1999) regarding MEP:

(See attached file: Preamble to Stormwater Rule_MEP section only.pdf)

and the full preamble can be found at http://www.gpo.gov/fdsys/pkg/FR-1999-12-08/pdf/99-29181.pdf

3. Lastly, here is an excerpt from the 2010 EPA MS4 Permit Improvement Guide regarding post construction permit language:

(See attached file: MS4 Permit Improvement Guide Chapter 5.pdf)

and the full MS4 Permit Improvement Guide can be found at http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf

Thanks!

Amy Clark
EPA Region 8
1595 Wynkoop St.
Mail Code: 8P-W-WW
Denver CO, 80202
303.312.7014 (office)
800.227.8917 Ext.7014 (toll-free)
303.312.6116 (fax)

40 CFR Part 122

§ 122.34 As an operator of a regulated small MS4, what will my NPDES MS4 storm water permit require?

(a) Your NPDES MS4 permit will require at a minimum that you develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from your MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. Your storm water management program must include the minimum control measures described in paragraph (b) of this section unless you apply for a permit under § 122.26(d). For purposes of this section, narrative effluent limitations requiring implementation of best management practices (BMPs) are generally the most appropriate form of effluent limitations when designed to satisfy technology requirements (including reductions of pollutants to the maximum extent practicable) and to protect water quality. Implementation of best management practices consistent with the provisions of the storm water management program required pursuant to this section and the provisions of the permit required pursuant to § 122.33 constitutes compliance with the standard of reducing pollutants to the "maximum extent practicable." Your NPDES permitting authority will specify a time period of up to 5 years from the date of permit issuance for you to develop and implement your program.

(b) *Minimum control measures.....*

(5) *Post-construction storm water management in new development and redevelopment.* (i) You must develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Your program must ensure that controls are in place that would prevent or minimize water quality impacts.

(ii) You must:

(A) Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community;

(B) 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; and

(C) Ensure adequate long-term operation and maintenance of BMPs.

(iii) Guidance: If water quality impacts are considered from the beginning stages of a project, new development and potentially redevelopment provide more opportunities for water quality protection. EPA recommends that the BMPs chosen: be appropriate for the local community; minimize water quality impacts; and attempt to maintain pre-development runoff conditions. In choosing appropriate BMPs, EPA encourages you to participate in locally-based watershed planning efforts which attempt to involve a diverse group of stakeholders including interested citizens. When developing a program that is consistent with this measure's intent, EPA recommends that you adopt a planning process that identifies the municipality's program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures. In developing your program, you should consider assessing existing ordinances, policies, programs and studies that address storm water runoff quality. In addition to assessing these existing documents and programs, you should provide opportunities to the public to participate in the development of the program. Non-structural BMPs are preventative actions that involve

management and source controls such as: 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 water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; policies or ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure; education programs for developers and the public about project designs that minimize water quality impacts; and measures such as minimization of percent impervious area after development and minimization of directly connected impervious areas. Structural BMPs include: storage practices such as wet ponds and extended-detention outlet structures; filtration practices such as grassed swales, sand filters and filter strips; and infiltration practices such as infiltration basins and infiltration trenches. EPA recommends that you ensure the appropriate implementation of the structural BMPs by considering some or all of the following: pre-construction review of BMP designs; inspections during construction to verify BMPs are built as designed; post-construction inspection and maintenance of BMPs; and penalty provisions for the noncompliance with design, construction or operation and maintenance. Storm water technologies are constantly being improved, and EPA recommends that your requirements be responsive to these changes, developments or improvements in control technologies.

MS4s, as they would to other point sources.

EPA does not presume that water quality will be protected if a small MS4 elects not to implement all of the six minimum measures and instead applies for alternative permit limits under § 122.26(d). Operators of such small MS4s that apply for alternative permit limits under § 122.26(d) must supply additional information through individual permit applications so that the permit writer can determine whether the proposed program reduces pollutants to the MEP and whether any other provisions are appropriate to protect water quality and satisfy the appropriate water quality requirements of the Clean Water Act.

iii. *Maximum Extent Practicable.* Maximum extent practicable (MEP) is the statutory standard that establishes the level of pollutant reductions that operators of regulated MS4s must achieve. The CWA requires that NPDES permits for discharges from MS4s "shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods." CWA Section 402(p)(3)(B)(iii). This section also calls for "such other provisions as the [EPA] Administrator or the State determines appropriate for the control of such pollutants." EPA interprets this standard to apply to all MS4s, including both existing regulated (large and medium) MS4s, as well as the small MS4s regulated under today's rule.

For regulated small MS4s under today's rule, authorization to discharge may be under either a general permit or individual permit, but EPA anticipates and expects that general permits will be the most common permit mechanism. The general permit will explain the steps necessary to obtain permit authorization. Compliance with the conditions of the general permit and the series of steps associated with identification and implementation of the minimum control measures will satisfy the MEP standard. Implementation of the MEP standard under today's rule will typically require the permittee to develop and implement appropriate BMPs to satisfy each of the required six minimum control measures.

In issuing the general permit, the NPDES permitting authority will establish requirements for each of the minimum control measures. Permits typically will require small MS4 permittees to identify in their NOI the BMPs to be performed and to develop the measurable goals by which implementation of the BMPs can be assessed. Upon receipt of the NOI from a small MS4 operator, the NPDES permitting authority will have the opportunity to review the NOI to verify that the identified BMPs and measurable goals are consistent with the requirement to reduce pollutants under the MEP standard, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. If necessary, the NPDES permitting authority may ask the permittee to revise their mix of BMPs, for example, to better reflect the MEP pollution reduction requirement. Where the NPDES permit is not written to implement the minimum control measures specified under § 122.34(b), for example in the case of an individual permit under § 122.33(b)(2)(ii), the MEP standard will be applied based on the best professional judgment of the permit writer.

Commenters argued that MEP is, as yet, an undefined term and that EPA needs to further clarify the MEP standards by providing a regulatory definition that includes recognition of cost considerations and technical feasibility. Commenters argued that, without a definition, the regulatory community is not adequately on notice regarding the standard with which they need to comply. EPA disagrees that affected MS4 permittees will lack notice of the applicable standard. The framework for the small MS4 permits described in this notice provides EPA's interpretation of the standard and how it should be applied.

EPA has intentionally not provided a precise definition of MEP to allow maximum flexibility in MS4 permitting. MS4s need the flexibility to optimize reductions in storm water pollutants on a location-by-location basis. EPA envisions that this evaluative process will consider such factors as conditions of receiving waters, specific local concerns, and other aspects included in a comprehensive watershed plan. Other factors may include MS4 size, climate, implementation schedules, current ability to finance the program, beneficial uses of receiving water, hydrology, geology, and capacity to perform operation and maintenance.

The pollutant reductions that represent MEP may be different for each small MS4, given the unique local hydrologic and geologic concerns that may exist and the differing possible pollutant control strategies. Therefore, each permittee will determine appropriate BMPs to satisfy each of the six minimum control measures through an evaluative process. Permit writers may evaluate small MS4 operator's proposed storm water management controls to determine whether reduction of pollutants to the MEP can be achieved with the identified BMPs.

EPA envisions application of the MEP standard as an iterative process. MEP should continually adapt to current conditions and BMP effectiveness and should strive to attain water quality standards. Successive iterations of the mix of BMPs and measurable goals will be driven by the objective of assuring maintenance of water quality standards. If, after implementing the six minimum control measures there is still water quality impairment associated with discharges from the MS4, after successive permit terms the permittee will need to expand or better tailor its BMPs within the scope of the six minimum control measures for each subsequent permit. EPA envisions that this process may take two to three permit terms.

One commenter observed that MEP is not static and that if the six minimum control measures are not achieving the necessary water quality improvements, then an MS4 should be expected to revise and, if necessary, expand its program. This concept, it is argued, must be clearly part of the definition of MEP and thus incorporated into the binding and operative aspects of the rule. As is explained above, EPA believes that it is. The iterative process described above is intended to be sensitive to water quality concerns. EPA believes that today's rule contains provisions to implement an approach that is consistent with this comment.

b. Program Requirements'Minimum Control Measures

A regulated small MS4 operator must develop and implement a storm water management program designed to reduce the discharge of pollutants from their MS4 to protect water quality. The storm water management program must include the following six minimum measures.

i. Public Education and Outreach on Storm Water Impacts. Under today's final rule, operators of small MS4s must 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 to reduce storm water pollution. The public education program should inform individuals and households about the problem and the steps they can take to reduce or prevent storm water pollution.

EPA believes that as the public gains a greater understanding of the storm water program, the MS4 is likely to gain

GENERAL PERMIT
FOR
STORM WATER DISCHARGE ASSOCIATED WITH SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

PERMIT NUMBER MTR040000

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

AUTHORIZATION TO DISCHARGE UNDER THE MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with Section 75-5-101 *et seq.*, Montana Code Annotated (MCA); Administrative Rules of Montana (ARM) 17.30.1101; 17.30.1301 *et seq.*; and ARM 17.30.601 *et seq.*, applicants with an authorization letter issued under this *General Permit for Storm Water Discharge Associated with Small Municipal Separate Storm Sewer System (MS4)* are permitted to discharge storm water resulting only from Small MS4s to state waters in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, IV, V, and VI.

This Permit shall become effective January 1, 2010.

This Permit and the authorization to discharge shall expire at midnight, December 31, 2014.

FOR THE MONTANA DEPARTMENT
OF ENVIRONMENTAL QUALITY

Jenny Chambers, Chief
Water Protection Bureau
Permitting and Compliance Division

Date: December 30, 2009

TABLE OF CONTENTS

APPLICABILITY

MPDES General Permit MTR040000 is a second-generation General Permit for storm water discharges associated with Small Municipal Separate Storm Sewer Systems (MS4s). Pursuant to 75-5-402, MCA and requirements found in ARM, Title 17, Chapter 30, Subchapters 11, 12, and 13, the Department regulates storm water discharges from Small MS4s. To elaborate, ARM 17.30.1103(1)(d) requires MPDES permit coverage for Small MS4s that are identified in ARM 17.30.1102(23) or designated pursuant to ARM 17.30.1105. Regulated Small MS4s are required to apply for, and obtain, authorization for the discharge of storm water into state waters. This permit does not authorize, or supersede permitting requirements for, "storm water discharge associated with construction activity" as defined in ARM 17.30.1102(28), "storm water discharge associated with industrial activity" as defined in ARM 17.30.1102(29), "storm water discharge associated with mining and oil and gas activity" as defined in ARM 17.30.1102(30), or storm water discharges required or covered under another MPDES permit.

PART I. EFFLUENT LIMITATIONS

Effective immediately upon issuance of an authorization under this General Permit and lasting through the General Permit's expiration date, the following conditions apply to all Small MS4s covered under this General Permit. There must be no discharge of pollutants via storm water runoff to state waters except as provided for below.

A. No discharge of storm water containing pollutants from process wastewater streams may occur under this General Permit.

B. No discharge of storm water containing pollutants from Small MS4s covered under this General Permit may cause or contribute to a violation of water quality standards.

C. Discharges of storm water containing pollutants associated with Small MS4s covered under this General Permit will be controlled through the development, implementation, and enforcement of a Storm Water Management Program (SWMP). Management practices defined within the SWMP must help eliminate or minimize the discharge of pollutants to state waters.

D. For regulated Small MS4s which have been designated through ARM 17.30.1102(23) and had initial authorization under the preceding January 1, 2005 to December 31, 2009 *General Permit for Storm Water Discharge Associated with Small Municipal Separate Storm Sewer System (MS4)*, the permittee was required to develop, implement, and enforce a SWMP, as stated in Part II of that General Permit, no later than the December 31, 2009 expiration date. This requirement is still valid and binding under this reissued January 1, 2010 to December 31, 2014 *General Permit for Storm Water Discharge Associated with Small Municipal Separate Storm Sewer System (MS4)*, although for the few new inclusions or revisions to the SWMP as stated in Part II of this reissued General Permit, the permittee must develop, implement, and enforce those additional or revised components no later than January 1, 2012.

E. For any regulated Small MS4s which have been designated through ARM 17.30.1102(23) and have never been authorized, the permittee must develop, implement, and enforce a SWMP, as stated in Part II of the General Permit, no later than five years from the initial date of permit authorization.

PART II. STORM WATER MANAGEMENT PROGRAM (SWMP)

A. Requirements

1. Permittees shall develop, implement, and enforce a Storm Water Management Program (SWMP) designed to reduce the discharge of pollutants from the permitted Small MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Montana Water Quality Act. Implementation of Best Management Practices (BMPs) consistent with the provisions of the SWMP and the requirements in this General Permit shall constitute compliance with the requirement of reducing pollutants to the MEP. The SWMP must include management practices, control techniques, systems, designs, good standard engineering practices, and such other provisions necessary for the control of such pollutants. The Application Form for a new Small MS4 authorization (never been authorized) under the General Permit requires the following information for each of the six minimum control measures described in Part II.B.:

   a. The BMPs that the permittee or another entity will implement for each of the six storm water minimum control measures;

   b. The measurable goals for each of the BMPs including, as appropriate, the months and years in which the permittee will undertake required actions, including interim milestones and the frequency of the action; and

   c. The person or persons (or position(s)) responsible for implementing or coordinating the BMPs for the SWMP.

   Another type of Application Form is used for the "reapplication" (renewal of authorizations) under subsequent General Permits, and is slightly different than the original Application Form in that it does not typically include a resubmittal of the items in Parts II.A.1.a., b., and c. above. For "reapplications", the Application Form and instructions state required inclusions.

   Permittees can refer to the Department website for a link to EPA's Menu of BMPs for use in the development and implementation of the SWMP. Additionally, permittees can refer to EPA's January 2007 "MS4 Program Evaluation Guidance" for typical compliance expectations for the SWMP.

   The Department encourages permittees to utilize the vast amount of guidance developed by the EPA and others around the country with respect to BMPs. In Montana, due to numerous factors (the amount of information available nationally and from EPA, the geographic variability, the climate variability, the geology and topography variability, a relatively low population, a relatively low amount of industrial activity, a relatively low amount of permitted MS4s and respective drainage areas, a relatively low amount of significant historical storm water-related pollution problems, a relatively low amount of precipitation, and to promote flexibility for new technologies, new ideas, and local input)

the Department does not utilize a customized Montana-specific storm water BMP manual at this time. Similarly, the Department has no list of approved BMPs specific to Montana at this time.

Permittees can also look up information about various MPDES permits in their area, including Department-issued storm water construction, industrial, and mining permit authorizations by referencing the EPA "ECHO" website, which as of the issuance of this General Permit, may be found at http://www.epa-echo.gov/echo/compliance_report_water_icp.html

Small MS4 permitting information, forms, and links may be accessed through the Department's internet homepage: http://www.deq.mt.gov

2. In addition to the requirements listed above, the permittee shall maintain documentation describing how and why each of the BMPs and measurable goals for the SWMP was selected. The information required for such documentation is given in Part II.B. for each minimum control measure.

B. Minimum Control Measures

The six minimum control measures that must be included in the Storm Water Management Program are:

1. Public Education and Outreach on Storm Water Impacts

a. The permittee 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 waterbodies and the steps that the public can take to reduce pollutants in storm water runoff.

b. The permittee 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:

i. Identify how the permittee plans to inform individuals and households about the steps they can take to reduce storm water pollution.

ii. Identify how the permittee plans to inform individuals and groups on how to become involved with the SWMP (with activities such as local stream and beach restoration activities).

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.

iv. Identify the target pollutant sources the public education program is designed to address.

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 General Permit term.

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.

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.

2. Public Involvement/Participation

a. The permittee shall at a minimum, comply with State, Tribal, and local public notice requirements when implementing a public involvement/participation program.

b. The permittee shall maintain documentation with respect to the development of a storm water public involvement/participation program. This documentation must address both the overall public involvement/participation program and the individual BMPs, measurable goals, and responsible persons/positions for this program. This documentation must include the following information, at a minimum:

i. Identify how the public was involved in the development and submittal of the permit application and the SWMP.

ii. Identify plans to actively involve the public in the development and implementation of the SWMP.

iii. Identify the target audiences for the public involvement program, including a description of the types of ethnic and economic groups engaged. The permittee 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.

iv. Identify the types of public involvement activities included in this program. Where appropriate, consider the following types of pubic involvement activities:

(a) Citizen representatives on a storm water 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.

v. Identify who is responsible for the overall management and implementation of the storm water public involvement/participation program and, if different, who is responsible for each of the BMPs identified for this program.

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.

3. Illicit Discharge Detection and Elimination (IDDE)

a. The permittee shall:

i. Develop, implement and enforce a program to detect and eliminate illicit discharges (as defined in ARM 17.30.1102(7)) into the permitted Small MS4;

ii. 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 and the SWMP would typically include mapping storm sewer system components including inlets, open channels, subsurface conduits/pipes, dry wells (discharges to ground water directly), and other similar discrete conveyances. The permittee 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.;

NOTE: To differentiate between the terms "municipal separate storm sewer" and "surface water", and only for the purposes of determining "outfall" locations with respect to Part II.B.3. of this General Permit, the Department provides the following clarification. If the ephemeral stream (drainage) has been used (altered, constructed, depended upon, maintained, etc.) to manage rainfall or snowmelt storm water runoff from any areas developed for any purpose, then consider it part of the "municipal separate storm sewer". Also, natural ephemeral streams which drain into the aforementioned storm water conveyances in the preceding sentence would also need to be considered part of the "municipal separate storm sewer". Other natural and unaltered ephemeral streams which do not drain from any areas developed for any purpose, and which drain directly into downgradient intermittent (has a ground water component) surface waters or into perennial surface waters would not be considered a part of the "municipal separate storm sewer". Of course, downgradient intermittent and perennial surface waters are not considered a part of the "municipal separate storm sewer" for the purposes of determining "outfall" locations. Consequently, formal "outfall" locations would then be where "municipal separate storm sewer" components discharge into downgradient perennial waterbodies, intermittent waterbodies, or natural and unaltered ephemeral streams which do not drain from any areas developed for any purpose.

Another helpful consideration is that natural or manmade conveyance structures used solely for transporting storm water which originates within the designated MS4 are not "surface water". An outfall is the physical location where these conveyance structures discharge

sewer system components with field surveys was performed. Also, describe how the map will be regularly updated.

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.

iii. Identify the appropriate enforcement procedures and actions which are used to ensure the illicit discharge ordinance (or other regulatory mechanism) is implemented.

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 descriptionmust address the following, at a minimum:

(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.

(b) Procedures for tracing the source of an illicit discharge, including the specific techniques the permittee will use to detect the location of the source.

(c) Procedures for removing the source of the illicit discharge.

(d) Procedures for program evaluation and assessment.

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.

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.

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.

4. Construction Site Storm Water Runoff Control

a. The permittee shall develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the permitted Small MS4 from construction activities

pollutants or storm water into surface water or where they leave the boundary of the designated MS4.

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.vi. below) into the permitted storm sewer system and implement appropriate enforcement procedures and actions;

iv. Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the permitted system;

v. Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste; and

vi. Address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if the permittee 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 effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to state waters).

vii. The permittee 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 permittee) to be significant sources of pollutants to the Small MS4, because of either the nature of the discharges or conditions the permittee 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 permittee must document, as a part of the SWMP, any local controls or conditions placed on these discharges. The permittee 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.

b. The permittee 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:

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

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:

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;

ii. Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;

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;

iv. Procedures for the Small MS4 permittee 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;

v. Procedures for receipt and consideration of information submitted by the public; and

vi. Procedures for the Small MS4 permittee 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.

b. The permittee 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:

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.

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.

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.

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.

v. Identify the procedures for receipt and consideration of information submitted by the public. Consider coordinating this requirement with the public education program.

vi. Identify procedures for site inspection and enforcement of control measures, including how sites for inspection will be selected and prioritized.

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.

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.

ix. Identify measures to train pertinent municipal employees on the construction program

5. Post-Construction Storm Water Management in New Development and Redevelopment

a. The permittee shall:

i. Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the permitted Small MS4. This program must ensure that controls are in place that would prevent or minimize water quality impacts;

ii. Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community;

iii. 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;

iv. Ensure adequate long-term operation and maintenance of BMPs;

v. 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; and,

vi. Develop and implement procedures for the Small MS4 permittee to perform site inspection and enforcement of post-construction BMPs.

vii. For new development or redevelopment projects greater than or equal to one 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 runoff generated from 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.

b. The permittee 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, measurable goals, and responsible persons/positions for the program. This documentation must include the following information, at a minimum:

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.

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 runoff generated from the first 0.5 inches of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation.

iii. Identify any non-structural BMPs in the program, including, as appropriate:

(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;

(b) Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure;

(c) Education programs for developers and the public about project designs that minimize water quality impacts; and

(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, preventive maintenance, and spill prevention.

iv. Identify any structural BMPs in the program, including, as appropriate:

(a) Storage practices such as wet ponds and extended-detention outlet structures;

(b) Filtration practices such as grassed swales, bioretention cells, sand filters and filter strips; and

(c) Infiltration practices such as infiltration basins and infiltration trenches.

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.

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 permittee and another party such as the post-development landowners or regional authorities.

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.

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.

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.

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.

6. Pollution Prevention/Good Housekeeping for Municipal Operations

a. The permittee shall:

i. 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; and

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.

b. The permittee 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/positions for the program. This documentation must include the following information, at a minimum:

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 permittee shall also include a list of facilities or activities (excluding construction) which are owned or operated by the permittee 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.

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.

iii. The program description must specifically address the following areas:

(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.

(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 permittee.

(c) Procedures for the proper disposal of waste removed from the permitted Small MS4 through the permittee's municipal operations, including dredge spoil, accumulated sediments, floatables, catch basin cleaning, and other debris.

(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.

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.

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.

C. Qualifying Local Program

If the application indicates a Qualifying Local Program requires a Small MS4 to implement one or more of the six minimum control measures as stated in ARM 17.30.1111(9), and the permittee elects to do this in the application, then the permittee is directed to follow that qualifying program's requirements rather than the applicable minimum control measure requirements stated in Part II.B.

D. Sharing Responsibility

Implementation of one or more of the minimum control measures may be shared with another entity, or the entity may fully take over the measure. The permittee may rely on another entity only if:

1. The other entity, in fact, implements the control measure;

2. The particular control measure, or component of that measure, is at least as stringent as the corresponding permit requirement.

3. The other entity agrees to implement the control measure on the permittee's behalf. Written acceptance of this obligation is required. This obligation must be maintained as part of the description of the permittee's SWMP. If the other entity agrees to report on the minimum control measure, the permittee must supply the other entity with the reporting requirements contained in this General Permit. If the other entity fails to

implement the control measure on the permittee's behalf, then the permittee remains liable for any discharges due to that failure to implement.

E. Reviewing and Updating Storm Water Management Programs

1. Storm Water Management Program Review

The permittee must do an annual review of their SWMP in conjunction with preparation of the annual report required under Part IV.I.

2. Storm Water Management Program Updates Required by the Department

The Department may require changes to the SWMP as needed to:

a. Address impacts on receiving water quality caused, or contributed to, by discharges from the Small MS4;

b. Include more stringent requirements necessary to comply with new federal statutory or regulatory requirements; or

c. Include such other conditions deemed necessary by the Department to comply with the goals and requirements of the Montana Water Quality Act.

d. Changes requested by the Department must be made in writing, set forth the time schedule for the permittee to develop the changes, and offer the permittee the opportunity to propose alternative program changes to meet the objective of the requested modification. All changes required by the Department will be made in accordance with ARM 17.30.1365, ARM 17.30.1361, or as appropriate ARM 17.30.1362.

3. Transfer of Ownership, Operational Authority, or Responsibility for Storm Water Management Program Implementation

The permittee must implement the SWMP on all new areas added to the permittee's portion of the Small MS4 (or for which the permittee becomes responsible for implementation of storm water quality controls) as expeditiously as practicable, but no later than one year from addition of the new areas. Implementation may be accomplished in a phased manner to allow additional time for controls that cannot be implemented immediately.

a. Within 90 days of a transfer of ownership, operational authority, or responsibility for SWMP implementation, the permittee must have a plan for implementing the SWMP on all affected areas. The plan may include schedules for implementation.

Information on all new annexed areas and any resulting updates required to the SWMP must be included in the annual report.

b. Only those portions of the SWMP specifically required as permit conditions shall be subject to the modification requirements of ARM 17.30.1365. Addition of components, controls, or requirements by the permittee and replacement of an ineffective or infeasible BMP implementing a required component of the SWMP with an alternate BMP expected to achieve the goals of the original BMP shall be considered minor changes to the SWMP and not modifications to the permit.

PART III. SPECIAL CONDITIONS

A. Discharges to Water Quality Impaired Waters

1. Water Quality Controls for Discharges to Impaired Waterbodies

The permittee's SWMP must include a section describing how the SWMP will control discharges of pollutants of concern and ensure storm water discharges will not cause or contribute to instream exceedances of water quality standards. This discussion must specifically identify measures and BMPs that will collectively control the discharges of pollutants of concern. Information on impaired waterbodies may be obtained from the Department or from the Montana DEQ website: http://cwaic.mt.gov/

2. Consistency with Total Maximum Daily Load (TMDL) Allocations

If a TMDL has been approved for any waterbody into which the permittee discharges storm water, and the TMDL considered and addressed MPDES-regulated storm water discharges, then the Department shall incorporate the Waste Load Allocation, as applicable, into the permittee's permit as required by 75-5-703, MCA.

PART IV. MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. Self-Monitoring Requirements

Storm water monitoring requirements contained in this General Permit must initiate on the effective date of authorization issued under this General Permit, or as otherwise directed by the Department. The Department reserves the right to require additional storm water sampling, testing, and reporting on a case-by-case basis. Factors which may trigger additional monitoring requirements could include, but are not limited to: atypical discharges into the Small MS4; SWMP development, implementation, and enforcement effectiveness; storm water quality issues; potential contamination issues; historical issues; compliance issues; new requirements; or other water quality issues.

1. Storm Water Discharge Monitoring

The cities of Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, and Missoula are required to perform sampling, testing, and reporting of storm water discharges for their Small MS4s under this General Permit, or as otherwise required by the Department. These samples must be obtained within the city limits of each of the above cities, regardless of whether the cities are co-permitted with others such as the county.

2. Specific Monitoring Parameters

For Small MS4 permittees stated in Part IV.A.1., the standard required monitoring parameters are listed in Table 1.

Table 1. Small MS4 Monitoring Requirements

Parameter[(1) (2)]	**Frequency**	**Type**[(3)]
Total Suspended Solids (TSS), mg/L	Semiannual	Grab or Composite
Chemical Oxygen Demand (COD), mg/L	Semiannual	Grab or Composite
Total Phosphorus, mg/L	Semiannual	Grab or Composite
Total Nitrogen, mg/L	Semiannual	Grab or Composite
pH, standard units	Semiannual	Instantaneous
Copper, mg/L	Semiannual	Grab or Composite
Lead, mg/L	Semiannual	Grab or Composite
Zinc, mg/L	Semiannual	Grab or Composite
Estimated Flow, gpm	Semiannual	Instantaneous[(4)]
Oil and Grease[(5)], mg/L	Semiannual	Grab

(1) Detection limits are pursuant to levels defined in WQB-7.
(2) Total recoverable methods to be used on all metals.
(3) See Definitions in Part VI. of this General Permit.
(4) Estimated flow rates are appropriate in cases where measurement gauges are not installed.
(5) Hexanes extraction (EPA Method 1664A).

3. Monitoring Location

a. For each half-year monitoring period, each of the identified Small MS4 permittees in Part IV.A.1. must sample at the following locations within the permitted geographic area:

i. a discharge point which represents storm water runoff drainage areas from a relatively commercial and/or industrial area; and,

ii. a discharge point which represents storm water runoff drainage areas from a relatively residential area.

b. The formal names for the initially selected sampling locations must be consistently identified as "001A" for the industrial/commercial location, and "002A" for the residential location. If a new sampling location is necessary to replace the initially selected location, then a new unused and unique identifying outfall name/number will be assigned by the Department.

4. Monitoring Frequency

a. Except as stated in Part IV.A.4.b., sampling, testing, and reporting must be conducted at least semi-annually (two times per year) for each of the parameters listed in Table 1 above. One set of samples must be taken between January 1st and June 30th of each permitted calendar year and the other set between July 1st and December 31st. Samples must not be collected from back-to-back storm events.

b. All permittees required to monitor must be able to dependably collect samples during each six month monitoring period. In order to help ensure the consistent and routine accumulation of required monitoring information at identified outfalls, as well as obtaining grab samples within the first thirty minutes of the discharge, permittees are encouraged to use automatic samplers at the two required monitoring locations. The use of automatic samplers may be required by the Department due to non-compliance.

c. To ensure consistent and complete sampling throughout the General Permit cycle:

i. If a permittee is not able to dependably obtain a sample at the identified required sampling outfall during a six-month monitoring period due to a reported lack of storm water runoff, then a new sampling location must be obtained with dependable storm water runoff.

ii If a permittee fails to obtain the required sample or reports "No Discharge" on the Discharge Monitoring Report form at a particular outfall for two consecutive six-month monitoring periods or for three total six-month monitoring periods during the General Permit cycle, then the permittee must obtain a new monitoring location outfall prior to the next regularly scheduled sampling period. This new outfall monitoring location will be identified by the permittee with a new unique and

previously unused outfall name/number which will be assigned by the Department. The new outfall monitoring location must be indicated on updated SWMP documentation. The Department must be provided with a copy of the outfall location and respective drainage area on an updated MS4 map.

iii. If a permittee fails to obtain the required sample or reports "No Discharge" on the Discharge Monitoring Report form at a particular outfall for any six-month monitoring period and for any reason during the General Permit cycle, then the permittee must collect a substitute sample during the subsequent six-month monitoring period in addition to their regularly scheduled sample. The substitute sample must be collected from a different storm event from the regularly scheduled sample. In making up the missed sampling event, all pertinent sampling, monitoring, reporting, and recordkeeping requirements shall still apply. For the purposes of meeting this permit requirement, a "different storm event" means rainfall events separated by at least 48 hours of no measurable precipitation.

d. For new authorizations issued under this General Permit, the first required monitoring period must be the first complete Discharge Monitoring Report (see Part IV.E.) period following the date the authorization was issued.

5. Sample Type

For all discharges, sampling data must typically be obtained by collecting a grab sample. The grab sample must be taken during the first thirty minutes of the discharge. If a grab sample is not taken within the first thirty minutes of the discharge, the permittee shall maintain with the monitoring records required in Part IV.G. of this General Permit a written description of why the collection of a grab sample was impracticable during the first thirty minutes.

A composite sample may be required by the Department on a case-by-case basis. If required, composite samples shall either be flow-weighted or time-weighted.

6. Evaluation of Storm Water Quality Monitoring Test Results

Upon the completion of each sampling event, and upon receipt of the sampling test results by the permittee, the permittee shall evaluate each parameter test result by:

a. comparison with the pertinent median concentration in Table 2 below;

b. comparing the pH value to the desired range of 6 to 9 standard units; and

c. comparing the Oil & Grease concentration with the receiving water standard of 10 mg/L.

If there is an exceedance of the median concentration, the acceptable pH range, or the oil & grease standard value, the permittee shall evaluate the source and reason for this, and consider additional BMPs and/or other management measures which may need to be initiated to improve the quality of storm water discharges. These measures must be

implemented as necessary and updated in the SWMP as required in Part II.E. A summary of the evaluation of storm water quality data, including the results of the above comparisons, and additional BMPs and/or other measures which may be necessary must be submitted in addition to the annual report form required to be submitted to the Department in Part IV.I.

Table 2. Median Concentrations

Parameter, units	**Median Concentration**
Total Suspended Solids, mg/L	125
Chemical Oxygen Demand, mg/L	80
Total Phosphorus, mg/L	0.41
Total Nitrogen, mg/L	2.00
Total Copper, mg/L	0.040
Total Lead, mg/L	0.165
Total Zinc, mg/L	0.210

Source: *EPA Environmental Impacts of Stormwater Discharges: A National Profile*, published June 1992 (Nationwide Urban Runoff Program (NURP))

B. Representative Sampling

Samples and measurements taken for the purpose of monitoring under Part IV. must be representative of the volume and nature of the monitored discharge. A sample location must be selected such that it is a representative location for the storm water runoff drainage area within the Small MS4. Samples of the storm water discharge must be obtained prior to the storm water discharge mixing with water from the receiving intermittent or perennial waterbody.

C. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under Part 136, Title 40 of the Code of Federal Regulations, unless other test procedures have been specified in this General Permit.

D. Penalties for Tampering

The Montana Water Quality Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $25,000, or by imprisonment for not more than six months, or both.

E. Reporting of Monitoring Results

1. Discharge monitoring results must be recorded on Discharge Monitoring Report (DMR) forms provided by the Department. The permittee shall complete and submit to the Department a DMR form for each point source outfall requiring monitoring. If sampling was not completed for any reason, it must be noted on the DMR form.

2. Results of the self-monitoring must be reported semiannually on the DMR form to the Department, postmarked no later than the 28th day of the month following the half-year reporting period; the due date of one semiannual report is July 28th and the due date of the other semiannual report is January 28th. DMR forms must be submitted to the following address:

   Montana Department of Environmental Quality
   Water Protection Bureau
   P.O. Box 200901
   Helena, Montana 59620-0901
   Phone: (406) 444-3080

   All reports, notifications, and inquiries regarding the conditions of this General Permit must be submitted to the Department at the above address, and must comply with the signatory requirements stated in Part V.K.2.

F. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this General Permit, using approved analytical methods as specified in this General Permit, the results of this monitoring must be included in the reporting of the data submitted in the DMR. Such increased frequency must also be indicated.

G. Monitoring Records

The following information must be recorded and maintained at the office of the contact person/position for all storm water discharges which are sampled:

1. Date, exact place, and time of sampling;

2. Estimated duration (in hours) of the storm event(s) sampled;

3. Total rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff;

4. Name(s) of the individuals which performed the sampling or measurements; and

5. Analytical laboratory test result data and reports for storm water samples, and/or records, which minimally indicate:

i. The date(s) analyses were performed;

ii. The time analyses were initiated;

iii. The initials or name(s) of individual(s) who performed the analyses;

iv. References and written procedures, when available, for the analytical techniques or methods used; and

v. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc. used to determine these results.

6. If not in compliance with Part IV.A.5. of the General Permit, a written description of why the collection of a sample was impracticable during the first thirty minutes.

H. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this General Permit, and records of all data used to complete the application for this General Permit, for a period of at least three years from the date of sample, measurement, report, or application. This period may be extended by request of the Department at any time.

I. Annual Report

1. The permittee (or co-permittee if co-permitted under one permit authorization number) shall prepare and submit an annual report to the Department for each calendar year within the General Permit term.

2. The permittee shall submit the original signed copy of the annual report form and required attachments to the Department by March 1st of each year for the preceding calendar year.

3. Each co-permittee shall submit an annual report form pertaining to their respective permitted Small MS4(s) unless formal written shared responsibilities allow another entity to complete the annual report form obligations.

4. The standard EPA annual report form, or if available, a Department-customized version of the standard EPA annual report form, must be used by all permittees or co-permittees in the completion of annual reports. No retyped, reformatted, or customized versions of the form may be developed and used, only the hard-copy or electronic versions provided by the Department.

5. If additional information is requested on or with a Department-customized version of the standard EPA annual report form, then the permittee must submit this additional

information at the same time as the form. If an electronic EPA or DEQ form submittal is used, then the required additional information must be submitted separately but at the same time as the form.

6. For those permittees required to perform storm water sampling and analytical testing, the summary of the evaluation of storm water quality data and additional BMPs and/or other measures which may be necessary, as required in Part IV.A.6. of the General Permit, must be attached to the annual report form.

7. If the permittee or co-permittee has made any updates, changes, or improvements to their Storm Water Management Program during the prior calendar year, then an attachment to the annual report must identify these.

8. Full-size hard-copies of storm sewer system maps, including updates, must be submitted to the Department with the annual report form if the map(s) was developed or modified during the calendar year for which the annual report pertains.

9. The completion of this annual report must initiate for the calendar year in which authorization under the General Permit was issued.

10. The annual report must comply with the signatory and certification requirements stated in Parts V.K.2. and V.K.4.

J. Changes In Small MS4 Contact Person

The Application Form identifies a formal Small MS4 Contact Person for each permittee or co-permittee. Should the Small MS4 Contact Person person/position, mailing address, email address, or telephone number identified on the Application Form change, the permittee or co-permittee must notify the Department in writing of this change within 15 calendar days of the change. This written notification must specifically reference that there is a "change of the Small MS4 Contact Person", specifically identify the permit authorization number, and specifically identify the formal "Small MS4 Name" as identified on the Application Form. The written notification letter for a change in the Small MS4 Contact Person must be signed by a person meeting the requirements of Part V.K.1.c.

K. Records For Inspection

A copy of the General Permit, permit authorization letter, required SWMP documents, annual reports, Discharge Monitoring Reports (if required), and other pertinent records required by the General Permit shall be maintained by the Small MS4 Contact Person for their respective Small MS4, and shall be made available to Department inspectors upon request for all permittees and co-permittees.

PART V. STANDARD MPDES PERMIT CONDITIONS

A. Duty to Comply

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. The permittee shall give the Department advance notice of any planned changes at the permitted facility or of an activity, which may result in permit noncompliance.

B. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall first apply for and obtain a new permit. The Application Form and fee must be submitted at least 30 days before the expiration date of this permit. The Department reserves the authority to administratively extend permit coverage in the event the General Permit is no longer effective, if the permittee has reapplied for permit coverage.

C. Need to Halt or Reduce Activity not a Defense

It may not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.

F. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

G. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege.

H. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

I. Inspection and Entry

The permittee shall allow the Department, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

J. Monitoring and Records (See Part IV of the General Permit)

K. Signatory and Certification Requirements

All applications, reports, or information submitted to the Department must be signed and certified.

1. All permit applications shall be signed as follows:

   a. For a corporation, by a responsible corporate officer. A responsible corporate officer means:

      i. a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

      ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

   b. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency, by either a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes:

i. the chief executive officer of the agency; or

ii. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. All reports required by permits, other information requested by the Department, must be signed by a person described in Part V.K.1. or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. the authorization is made in writing by a person described in Part V.K.1.;

b. the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position); and,

c. the written authorization is submitted to the Department.

3. Changes to authorization. If an authorization under Part V.K.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.K.2. must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part V.K.1. or 2. shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Planned Changes

The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit.

M. Anticipated Noncompliance

The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

N. Permit Transfers

This permit is not transferable to a new permittee. A new owner or operator of a facility must apply according to the standard application procedures 30 days prior to taking responsibility for the facility.

O. Monitoring Reports - (See Part IV of the General Permit)

P. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

Q. Twenty-Four Hour Reporting

1. The permittee shall report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. This oral report must be made to the Water Protection Bureau at (406) 444-3080.

2. A written submission must also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

3. The following must be included as information which must be reported within 24 hours:

   a. any unanticipated bypass which exceeds any effluent limitation in the permit;

   b. any upset which exceeds any effluent limitation in the permit;

   c. violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours; and

4. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Water Protection Bureau.

5. Reports shall be submitted to the address in Part IV.E., Reporting of Monitoring Results.

R. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Part IV. or Parts V.L., P., or Q. at the time monitoring reports are submitted. The reports must contain the information listed Part V.Q. above.

S. Other Information

When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

T. Bypass of Treatment Facilities

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. and 3. below.

2. Notice:

   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass.

   b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under Part V.Q. (Twenty-Four Hour Reporting).

3. Prohibition of bypass.

   a. Bypass is prohibited and the Department may take enforcement action against a permittee for a bypass, unless:

      i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

      ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

      iii. The permittee submitted notices as required under Part V.T.2. above.

4. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in Part V.T.3.i.

U. Upset

1. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Part V.U.2. below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   a. an upset occurred and that the permittee can identify the cause(s) of the upset;

   b. the permitted facility was at the time being properly operated;

   c. the permittee submitted notice of the upset as required in Part V.Q.3.b. (24-hour notice); and

   d. the permittee complied with any remedial measures required under Part V.D.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

V. Penalties for Violations of Permit Conditions

The Montana Water Quality Act provides that any person who violates a permit condition of the Act is subject to a civil penalty not to exceed $25,000 per day or one year in prison, or both, for the first conviction, and $50,000 per day of violation or by imprisonment for not more than two years, or both, for subsequent convictions. Except as provided in permit conditions on Part III.G. (Bypass of Treatment Facilities), nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

W. Penalties for Falsification of Reports

The Montana Water Quality Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $25,000 per violation, or by imprisonment for not more than six months per violation, or both.

X. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

Y. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

Z. Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations (and compliance schedule, if necessary), or other appropriate requirements if one or more of the following events occurs:

1. Water Quality Standards

   The water quality standards of the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.

2. Waste Load Allocation

   A Waste Load Allocation is developed and approved by the Department and/or EPA for incorporation in this permit.

3. Water Quality Management Plan

   A revision to the current water quality management plan is approved and adopted which calls for different effluent limitations than contained in this permit.

AA. Fees

The permittee is required to submit payment of an annual fee as set forth in ARM 17.30.201. If the permittee fails to pay the annual fee within 90 days after the due date for the payment, the Department may:

1. Impose an additional assessment consisting of 20% of the fee plus interest on the required fee computed at the rate established under 15-1-216(4), MCA, or

2. Suspend the processing of the application for a permit or authorization or, if the nonpayment involves an annual permit fee, suspend the permit, certificate or authorization for which the fee is required. The Department may lift suspension at any time up to one year after the suspension occurs if the holder has paid all outstanding fees, including all penalties, assessments and interest imposed under this sub-section. Suspensions are limited to one year, after which the permit will be terminated.

PART VI. DEFINITIONS

1. The **"Act"** means the Federal Clean Water Act.

2. **"Best Management Practices" ("BMPs")** means schedule of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of state waters. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

3. **"Control measure"** as used in this General Permit, means any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to state waters.

4. The **"Department"** means the Montana Department of Environmental Quality.

5. **"Flow-weighted composite sample"** means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

6. **"Grab Sample"** for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

7. **"Hazardous substance"** means any substance designated under 40 CFR Part 116 pursuant to section 311 of the federal Clean Water Act.

8. **"Illicit Connection"** means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

9. **"Illicit discharge"** means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to an MPDES permit (other than the MPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

10. **"MEP"** is an acronym for **"Maximum Extent Practicable"**, the technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in storm water discharges that was established by the Clean Water Act, Section 402(p). A discussion of MEP as it applies to Small MS4s is found in ARM 17.30.1111(5).

11. **"MS4"** means a municipal separate storm sewer system.

12. **"Municipal separate storm sewer"** means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that discharges to surface waters and is:

(a) owned or operated by the state of Montana, a governmental subdivision of the state, a district, association, or other public body created by or pursuant to Montana law, including special districts such as sewer districts, flood control districts, drainage districts and similar entities, and designated and approved management agencies under section 208 of the federal Clean Water Act, which has jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, and is:

(i) designed or used for collecting or conveying storm water;

(ii) not a combined sewer; and

(iii) not part of a publicly owned treatment works (POTW) as defined in ARM Title 17, chapter 30, subchapter 13.

13. **"Outfall"** means a point source, as defined in Part VI.15. of this General Permit, at the point where a municipal separate storm sewer discharges to surface waters. The term does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances that connect segments of the same stream or other surface waters and that are used to convey surface waters.

14. **"Owner or operator"** means a person who owns, leases, operates, controls, or supervises a point source.

15. **"Point Source"** means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

16. **"Process wastewater"** means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

17. **"Small municipal separate storm sewer system"** means:

(a) small MS4s, and portions of them, that are located in the following urbanized areas in Montana as determined by the latest decennial census by the United States census bureau:

(i) the city of Billings and Yellowstone County;

(ii) the city of Missoula and Missoula County; and

(iii) the city of Great Falls and Cascade County;

(b) the following small MS4s serving a population of at least 10,000 as determined by the latest decennial census by the United States census bureau and that are located outside of an urbanized area:

(i) MS4s located in the city of Bozeman;

(ii) MS4s located in the city of Butte;

(iii) MS4s located in the city of Helena; and

(iv) MS4s located in the city of Kalispell;

(c) MS4s designated by the department pursuant to 17.30.1107; and

(d) systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large educational, hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

18. **"Small MS4"** means a small municipal separate storm sewer system.

19. **"State waters"** is defined at 75-5-103, MCA

20. **"Storm Water"** means storm water runoff, snow melt runoff, and surface runoff and drainage.

21. **"Storm Water Management Program"** or **"SWMP"** means a comprehensive program to manage the quality of storm water discharged from the Small municipal separate storm sewer system.

22. **"Surface waters"** means any waters on the earth's surface including, but not limited to, streams, lakes, ponds, and reservoirs, and irrigation and drainage systems discharging directly into a stream, lake, pond, reservoir, or other surface water. Water bodies used solely for treating, transporting, or impounding pollutants shall not be considered surface water.

23. **"Time-weighted composite sample"** means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

24. **"Total Maximum Daily Load"** or **"TMDL"** is defined at 75-5-103, MCA

25. **"Waste Load Allocation"** or **"WLA"** means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources.

Permit No: NDR04-0000
Effective Date: July 1, 2009
Expiration Date: March 31, 2014

AUTHORIZATION TO DISCHARGE UNDER THE

NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with Chapter 33-16-01 of the North Dakota Department of Health rules as promulgated under Chapter 61-28 (North Dakota Water Pollution Control Act) of the North Dakota Century Code,

Small Municipal Separate Storm Sewer Systems both qualifying for and satisfying the requirements identified in Part II of this permit

are authorized to discharge stormwater

to waters of the state

in accordance with the conditions set forth in this permit.

This permit and the authorization to discharge shall expire at midnight,

March 31, 2014

Signed this 18th day of June, 2009.

Dennis R. Fewless, Director
Division of Water Quality

BP 2008.10.08

TABLE OF CONTENTS

OUTFALL DESCRIPTION

Storm Sewer System Outfall(s) – Active. Municipal Separate Storm Sewer System discharges. The stormwater discharges from a pipe, ditch, or other discrete conveyance to receiving waters.

PERMIT SUBMITTALS SUMMARY

Coverage Point	Submittal	Frequency	First Submittal Date
System-wide	Stormwater Management Program Annual Report	Annually	March 31, 2010
Application Renewal	NPDES Application Renewal	1/permit cycle	December 31, 2013
New Applicants	NPDES Application	1/permit cycle	180 Days After Notification

Applications and reports shall be submitted to the Department at the following address:

North Dakota Department of Health
Division of Water Quality
918 East Divide Ave
Bismarck, ND 58501-1947

I. PERMIT COVERAGE AND LIMITATIONS

During the effective period for this general permit municipalities are authorized to discharge stormwater from regulated portions of their municipal separate storm sewer system (MS4) in accordance with the requirements and conditions outlined in this permit.

A. Discharges Covered

1. This permit applies to stormwater discharges from small Municipal Separate Storm Sewer Systems (MS4s) as defined in the phase II stormwater rules, 40 CFR 122.26(b)(16) and designated under 40 CFR 122.32(a)(1) & (a)(2).

2. Certain non-stormwater discharges into the MS4 from sources listed in Part V.G.3 of this permit do not need to be addressed unless determined to be a significant contributor of pollutants to waters of the state.

3. Stormwater discharges from certain municipally operated industrial activities provided the conditions in Part V.G.6 are met.

B. Coverage Limitations

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

2. This permit does not authorize the discharge of stormwater when a separate NPDES permit is required for these activities. For example, while stormwater from industrial activity or construction activity may be discharged from a MS4 with authorized stormwater discharges, this permit does not replace or satisfy any other permits required for those discharges.

3. Authorization under this permit applies only to the storm sewer system (or portions of a system) that you operate and described in your application. Your coverage under this permit does not authorize other regulated MS4s operated within or connected to your system.

4. This permit does not authorize new or expanded discharges unless the following requirements are met:

   a. A new or expanded discharge must be constructed and operated in accordance with the conditions in this permit. A review may be required under the antidegradation procedure outlined in the North Dakota Standards of Water Quality (NDAC 33-16-02.1-02(2)(c)) for new or expanded sources that would result in significant effects on the quality or uses of receiving waters. Unless otherwise directed by the Department a review is not required for new or expanded MS4 sources developed in accordance with this permit.

   b. This permit does not replace or satisfy any environmental review requirements, such as the National Environmental Policy Act (NEPA). You must complete any environmental review required by law, including any required Environmental Assessment Work Sheets or Environmental Impact Statements, Federal environmental review, or other required review.

c. This permit does not replace or satisfy any review requirements for threatened or endangered species, for discharges whose direct, indirect, interrelated, interconnected, or independent impacts would jeopardize a listed endangered or threatened species or adversely modify a designated critical habitat. You must conduct any required review and coordinate with appropriate agencies for any project with the potential of affecting threatened or endangered species, or their critical habitat.

d. This permit does not replace or satisfy any review requirements for historic or archeological sites, for discharges which adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered archeological sites. You must be in compliance with National Historic Preservation Act and conduct all required review and coordination related to historic preservation, including significant anthropological sites and any burial sites, with the appropriate agency(s).

C. Obtaining Authorization

To obtain authorization under this general permit for stormwater discharges you must submit a complete application and develop a Stormwater Management Program as outlined in Part V of this permit. The stormwater management program must be implemented as a condition of this permit authorization. The submittal and authorization effective dates are provided below.

1. New Designation Applicants
   The Department may designate small MS4s that were not previously regulated by a permit to obtain permit coverage under this permit for discharges from their MS4. The operators of MS4s that are designated for coverage after the permit effective date must submit a complete application within 180 days of notification unless otherwise specified by the Department. Authorization under the permit will become effective 30 days after the application is submitted unless the Department requests additional information during that time.

2. Renewal Permittees
   The permittees that were previously covered by the MS4 general permit are authorized by this permit on the effective date of this permit. Renewal permittees that cannot demonstrate that one or more of the minimum control measures are being implemented in accordance with the conditions in Part V may be required to submit a compliance schedule for developing and implementing the control measures.

II. APPLICATION REQUIREMENTS

The requirements of this section apply only to new permit applicants (systems not covered under the previous general permit for discharges from MS4s). Renewal permittees are not required to meet the requirements of this section.

A. Application Content

The application shall contain the following information:

1. The street address and the name of the owner, agency or person with operational control of the MS4.

2. The name, address, and telephone number of the person responsible for overall permit compliance.

3. A brief description of the location of the MS4.

4. The name or general description of the water body(s), or other MS4s, that receive stormwater from your MS4.

5. The location of transportation facilities with vehicle maintenance activities, public works maintenance yards, transfer stations, waste handling facilities and wastewater treatment plants with a design flow of 1.0 mgd or greater.

6. The location and description of systems operated by other public entities within the MS4.

B. Stormwater Management Program Summary

The Stormwater Management Program will consist of a combination of Best Management Practices (BMPs), including education, maintenance, control techniques, system design and engineering methods, and such other provisions determined to be appropriate to meet the minimum requirements of this permit. A summary of the Stormwater Management Program you will implement must be attached to the application which includes the following:

1. The BMPs that you will implement for each of the stormwater minimum control measures in Part V.G. of this permit;

2. The measurable goals for the BMPs you plan to implement, including as appropriate, a description of the planned actions, timing and frequency of actions, and milestones;

3. Estimated schedule(s) (months, years) in which you will implement each BMP.

4. Identify the person(s) responsible for implementing and/or coordinating each component of the Phase II Stormwater Program. This should be the person(s) you want the Department to contact regarding the overall program or the particular components.

C. Implementation

New permittees must develop and implement their program within five (5) years from the date you are required to obtain a permit for your small MS4. The ordinance for construction site stormwater runoff controls required in Part V.G.4 must be completed within three (3) years from the date coverage is obtained.

D. Submittal

Applications signed in accordance with the signatory requirements in Part VII.A.6 (or as indicated on application forms), are to be submitted to the Department at the address below:

North Dakota Department of Health
Division of Water Quality
918 East Divide Ave
Bismarck, ND 58501-1947

III. RENEWAL REQUIREMENTS

Permittees that were covered under the previous MS4 general permit, and have submitted a permit renewal application in accordance with the Department's request, are covered by this permit. The permittee must continue to implement the Stormwater Management Program as described in the application and submittals provided in accordance with the previous MS4 general permit, unless proposed modifications or revisions are made in accordance with this permit.

IV. DISCHARGE CONDITIONS

A. Releases in Excess of Reportable Quantities

This permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117 or 40 CFR 302. Any discharge of hazardous material must be handled in accordance with the Notification Requirements in Part VII.A.7.

B. Stormwater Sampling

The Division reserves the right to require water quality sampling and testing, on a case-by-case basis. Monitoring may also be required if a stormwater-based Total Maximum Daily Load(s) have been implemented for any waterbody into which the permittee discharges.

C. Section 303(d) listings and Total Maximum Daily Load (TMDL)

If your MS4 discharges to waters identified on the current list of impaired waters under Section 303(d) of the Clean Water Act (see *Integrated Report* on Department's web site), you must review whether changes may be warranted in your Stormwater Management Program to reduce the impact of your discharge. If a TMDL(s) has been approved for a water body, you must review the adequacy of your Stormwater Management Program to meet the TMDL's Waste Load Allocation (WLA) set for stormwater sources. If the Stormwater Management Program is not meeting the applicable requirements, schedules and objectives of the TMDL, you must modify your Stormwater Management Program, as appropriate.

V. STORMWATER MANAGEMENT PROGRAM (Stormwater Pollution Prevention Program)

A. Implementation Requirement

The Stormwater Management Program is an enforceable part of this permit and a condition for coverage under this permit. The permittee must develop, implement and enforce a Stormwater Management Program designed to reduce the discharge of pollutants from their MS4, to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the North Dakota Water Pollution Control Act (NDCC 61-28) and the Clean Water Act. Implementation of Best Management Practices (BMPs) consistent with the provisions of the Stormwater Management Program and the other requirements in this permit constitutes compliance with the standard of reducing pollutants to the MEP.

B. Shared Programs

Implementation of one or more of the program elements may be shared with another entity, or the other entity may fully implement the measure. The agreement outlining such an arrangement must be maintained as part of the description of your stormwater management program.

C. Reporting

You must submit an annual report, as outlined in Part VI.D., on the implementation of the Stormwater Management Program by March 31 of each year, or on another date if established for your MS4 by the Department.

D. Pollutant Assessment

The Stormwater Management Program must include BMPs that control or reduce pollutants, as appropriate for your community. In the development of BMPs for your Stormwater Management Program, you must consider the sources of pollutants, the potentially polluting activities being conducted in the watershed, and the sensitivity of the receiving waters.

E. BMP Descriptions

Each minimum control measure must include; a description of the BMPs for the measure, responsible department in charge, an implementation schedule and measurable goals that will be used to determine the success or benefits of the BMPs.

F. Local Requirements

This permit does not pre-empt or supersede the authority of local agencies to prohibit, restrict or control discharges to storm drain systems or other water courses within their jurisdiction. The stormwater discharges must comply with the requirements of municipalities, counties, drainage districts and other local agencies in regard to discharges to storm drain systems or other water courses under their jurisdiction.

G. Control Measures

The six minimum control measures to include in your Stormwater Management Program are:

1. Public Education and Outreach on Stormwater Impacts.

   a. You must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.

   b. The education program must address each of the Minimum Control Measures listed below (Parts V.G.3 through 6):

      Measure 3 - Illicit discharge detection and elimination;
      Measure 4 - Construction site stormwater runoff control;
      Measure 5 - Post-construction stormwater management in new development; and
      Measure 6 - Pollution prevention/good housekeeping for municipal operations.

   c. The public education program, including the education programs for the Minimum Control Measures listed above, should identify the following:

      1) The audience or audiences involved;
      2) Educational goals for each audience in terms of increased awareness, increased understanding, acquired skills, and/or desired changes in behavior;
      3) Activities used to reach educational goals for each audience;
      4) Activity implementation plans, including responsible Department in charge, entities responsible for given activities, and schedules; and
      5) Available performance measures that can be used to determine success in reaching educational goals.

   d. Your education program(s) may be coordinated with and make use of other stormwater education programs being conducted in your area by other entities such as; community groups, nonprofit organizations, lake conservation districts, soil and water conservation districts, watershed districts, watershed management organizations, school districts, university outreach and extension, and county, regional, state, and federal government.

2. Public Participation/Involvement.

   a. You must provide the opportunity for public involvement and input on the Stormwater Management Program through formal and/or informal public meetings or notices soliciting comments from the public.

   b. The permittee must comply with state and local public notice requirements when implementing the Stormwater Management Programs required under the permit. Notice of all public hearings should be published in a community publication or newspaper of general circulation, to provide opportunities for public involvement that reach a majority of citizens through the notification process.

   c. You must consider the public input, oral and written, to the Stormwater Management Program and shall make adjustments you find appropriate.

3. Illicit Discharge Detection and Elimination.
   You must develop, implement and enforce a program to detect and eliminate illicit discharges into your MS4. Illicit discharges do not include discharges or flows from emergency fire fighting activities or other activities authorized by a separate NPDES permit. For the program you must:

   a. Develop and maintain a current storm sewer system map showing the location of:

      1) Ponds, streams, lakes and wetlands that are part of your system;
      2) Structural pollution control devices (grit chambers, separators, etc.) that are part of your system;
      3) All pipes and conveyances in your system, at a minimum, those pipes that are 24 inches in diameter and larger;
      4) Outfalls, including discharges from your system to other MS4s, or waters and wetlands that are not part of your system (where you do not have operational control); structures that discharge stormwater directly into groundwater; overland discharge points; and all other points of discharge from your system that are outlets, not diffuse flow areas.

   b. To the extent allowable under law, effectively prohibit, through ordinance or other regulatory mechanism, non-stormwater discharges into your storm sewer system and implement appropriate enforcement procedures and actions.

   c. Develop and implement a plan to detect and address improper non-stormwater discharges, including illegal dumping, to your system. The permittee should investigate any illicit discharge within fifteen (15) days of its detection, and should take action to eliminate the source of the discharge within forty-five (45) days of its detection.

   d. Develop and implement a program to train municipal staff to recognize and respond to improper discharges that may be observed during typical duties. The program must address who will be likely to make such observations and therefore receive training, and how staff will report observed suspected illicit discharges.

   e. Address the following categories of non-stormwater discharges or flows (i.e., illicit discharges), only if you identify them as significant contributors of pollutants to your MS4:

water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash water, and discharges or flows from fire fighting activities.

4. Construction Site Stormwater Runoff Control.
You must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to your MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Controls on stormwater discharges from construction activity disturbing less than one acre must be included in your program, if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The program must include, at a minimum, the development, implementation, and documentation of the following:

   a. An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under law.

   b. Requirements for construction site operators to implement appropriate erosion and sediment control best management practices.

   c. Requirements for construction site operators to control waste, such as discarded building materials, concrete truck washout, concrete grindings and slurry, chemicals, litter, sanitary waste and other non-stormwater discharges such as construction dewatering, at the construction site that may cause adverse impacts to water quality.

   d. Procedures for site plan review which incorporate consideration of potential water quality impacts.

   e. Procedures for receipt and consideration of information submitted by the public.

   f. Procedures for site inspection and enforcement of control measures.

5. Post-construction Stormwater Management for New Development and Redevelopment.
You must 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, which discharge into your MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts. At a minimum the post-construction stormwater management program must:

   a. Develop, implement, and document strategies which include the use of structural and/or non-structural BMPs appropriate for the community that address the discharge of pollutants from new development and redevelopment projects, and/or maintain or restore hydrologic conditions at sites to minimize the discharge of pollutants and prevent in-channel impacts associated with increased impervious surface. The post-construction controls should include a water quality component as outlined in Appendix 1.

   b. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under law.

c. Develop, implement, and document procedures to ensure adequate long-term operation and maintenance of BMPs, including procedures to enforce the requirements for other parties to maintain BMPs as appropriate.

   1) Verify the BMPs required by this measure are being installed according to specifications (this may be implemented as part of the construction program).
   2) Implement procedures to document the location, maintenance specifications and inspections for long-term BMPs (this may be implemented as part of the municipal operations program).

6. Pollution Prevention for Municipal Operations.
You must develop an operation and maintenance program to prevent and reduce stormwater pollution from municipal operations. The program must contain the following:

   a. *You must develop and implement a training component for your operation and* maintenance program with the goal of preventing or reducing pollutants in runoff from municipal operations. The program must include employee training to prevent and/or reduce stormwater pollution from activities such as park and open space maintenance, snow disposal, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

   b. Operation and maintenance procedures that minimize the discharge of pollutants in stormwater. As part of your operation and maintenance program, you must:

      1) Inspect annually all structural pollution control devices, such as trap manholes, grit chambers, sumps, floatable skimmers, traps, separators, and other small settling or filtering devices.

      2) Inspect, at minimum, 20% of the MS4 outfalls, snow disposal areas, sediment basins and ponds each year on a rotating basis.

      3) Based on your inspection, determine if repair, replacement, or maintenance measures are necessary for proper operation to prevent environmental impacts such as erosion. The necessary corrective measures shall be completed as soon as possible, usually during the same year as the inspection. When this is not practicable, the reasons and a schedule for completion shall be submitted in the annual report.

      4) Keep records of inspection results, including as appropriate, date, antecedent weather conditions, sediment storage and capacity remaining, and any maintenance performed or recommended. After two years of inspections, if patterns of maintenance become apparent, the frequency of inspections may be adjusted. If maintenance or sediment removal is required as a result of each of the first two annual inspections, the frequency of inspection should be increased to at least two (2) times annually, or more frequently as needed to prevent carry-over or washout of pollutants from the structures and maximize pollutant removal. If maintenance or sediment removal is not required as a result of both of the first two annual inspections, the frequency may be reduced to once every two years.

   c. Municipal facilities must be operated to minimize the potential for pollutants in stormwater discharges. Your program must provide for the following:

1) Provide for the enclosure or covering of your salt storage piles, including salt treated sand, used for winter road deicing to prevent exposure to precipitation. Salt storage piles do not need to be covered or enclosed when adding to or taking materials from the pile and when stormwater drainage from the pile is contained on-site.

2) Locate and operate snow disposal sites using BMPs to minimize litter and sediment from leaving the site. A 50 foot vegetated buffer or other BMPs (such as berms, basins or fencing) should be used between the snow disposal site and both waters of the state and storm sewer inlets. Avoid locating disposal sites in riparian areas, abandoned gravel pits, landfills or areas that could adversely affect wells. Remove litter and accumulated sand from snow disposal sites as needed.

3) A Stormwater Pollution Prevention (SWPP) plan must be developed and implemented for each of the following permittee owned facilities: maintenance garages, public works facilities, transfer stations, and other waste handling facilities. If facilities are located at the same property, the permittee may develop one SWPP plan for the entire property. The SWPP plan is a separate document from the Stormwater Management Program required in this permit. A SWPP plan does not need to be developed if a permittee owned facility is covered by a currently effective Industrial Stormwater General Permit or other NPDES permit. The SWPP plan minimum requirements are outlined in Appendix 2.

H. Modifications to the Stormwater Management Program

1. The Department may require you to modify the Stormwater Management Program as needed, and may consider the following factors:

   a. Discharges from the storm sewer system are adversely impacting the quality of receiving waters;

   b. More stringent requirements are necessary to comply with new state or federal regulations; or

   c. Additional conditions are deemed necessary to comply with the goals and requirements of the Clean Water Act or water quality standard.

   Modifications to the SWMP required by the Department will be made in writing. The modification request will set forth a schedule for compliance and offer you the opportunity to propose alternative program modifications to meet the objectives of the requested modification.

2. The Stormwater Management Program may be modified by you without prior approval of the Department, provided it is in accordance with the following:

   a. A BMP is added, and none subtracted, from the Stormwater Management Program;

   b. A less effective BMP identified in the Stormwater Management Program is replaced with an alternate BMP. The alternate BMP shall address the same, or similar, concerns as the ineffective or failed BMP;

   c. The Department is notified of the modification in the annual report for the year the modification is made; and

   d. When a BMP is identified as ineffective a schedule for implementing an alternate BMP must be provided.

VI. EVALUATING, RECORDKEEPING AND REPORTING

A. Evaluation and Assessment.

You must evaluate program compliance, the appropriateness of your identified best management practices, and progress towards achieving your identified measurable goals.

B. Recordkeeping and Record Retention.

You must keep records required by the NDPDES permit for at least 3 years beyond the term of the permit. You must submit your records to the Department only if specifically asked to do so.

C. Public Availability

You must make your records, including your Stormwater Management Program, available to the public at reasonable times during regular business hours (see 40 CFR 122.7 for confidentiality provision). You may assess a reasonable charge for copying. You may require a member of the public to provide advance notice.

D. Annual Report

Your annual report covering the calendar year (January 1 to December 31) must summarize:

1. The status of compliance with permit conditions, including an assessment of the appropriateness of your identified BMPs and progress towards achieving your identified measurable goals for each of the minimum control measures. Your assessment must be based on results of information collected and analyzed, including monitoring (if any), inspection findings, and public input received during the reporting period;

2. The stormwater activities you plan to undertake during the next reporting cycle;

3. A change in any identified best management practices or measurable goals for any of the minimum control measures;

4. Notice that you are relying on another entity to satisfy some of your permit obligations (if applicable); and

5. The results of outfall inspections including the dates of inspections.

E. Report submittals

You must submit annual reports to the Department by March 31, or another date set by the Department, for each year of the permit term. The reports shall be submitted to:

North Dakota Department of Health
Division of Water Quality
918 East Divide Ave
Bismarck, ND 58501-1947

VII. STANDARD CONDITIONS

A. COMPLIANCE RESPONSIBILITIES BP 2008.09.18

1. **Duty to Comply**
The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. **Operation and Maintenance**
The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. If necessary to achieve compliance with the conditions of this permit, this shall include the operation and maintenance of backup or auxiliary systems.

3. **Planned Changes**
The Department shall be given advance notice of any planned changes at the permitted facility or of an activity which may result in permit noncompliance. Any anticipated facility expansions, production increase, or process modifications which might result in new, different, or increased discharges of pollutants shall be reported to the Department as soon as possible. Changes which may result in a facility being designated a "new source" as determined in 40 CFR 122.29(b) shall also be reported.

4. **Duty to Provide Information**
The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit. When a permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in a permit application or any report, it shall promptly submit such facts or information.

5. **Records Retention**
All records and information (including calibration and maintenance) required by this permit shall be kept for at least three years or longer if requested by the Department or EPA.

6. **Signatory Requirements**
All applications, reports or information submitted to the Department shall be signed and certified.

   a. All permit applications shall be signed by a responsible corporate officer, a general partner, or a principal executive officer or ranking elected official.

   b. All reports required by the permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

      (1) The authorization is made in writing by a person described above and submitted to the Department; and

      (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

If an authorization under "Compliance Responsibilities-Signatory Requirements" section is no longer accurate for any reason, a new authorization satisfying the above requirements must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.

Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

7. **Noncompliance Notification**
The permittee shall report any noncompliance which may seriously endanger health or the environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The report shall be made to the EPA, Region VIII, Emergency Response Branch at 1.800.424.8802 and the state of North Dakota, Division of Homeland Security at 1.800.472.2121. The following occurrences of noncompliance shall be reported by telephone to the Department at 701.328.5210 by the first workday (8:00 a.m.-5:00 p.m. Central time) following the day the permittee became aware of the circumstances:

   a. Any lagoon cell overflow or any unanticipated bypass which exceeds any effluent limitation in the permit (see "Compliance Responsibilities-Bypass of Treatment Facilities" section);

   b. Any upset which exceeds any effluent limitation in the permit (see "Compliance Responsibilities-Upset Conditions" section); or

   c. Violation of any daily maximum effluent or instantaneous discharge limitation for any of the pollutants listed in the permit.

A written submission shall also be provided within five days of the time that the permittee became aware of the circumstances. The written submission shall contain:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times;

   c. The estimated time noncompliance is expected to continue if it has not been corrected; and

   d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

Reports shall be submitted to the address in the "Recordkeeping and Reporting" section. The Department may waive the written report on a case by case basis if the oral report has been received within 24 hours by the Department at 701.328.5210 as identified above.

All other instances of noncompliance shall be reported no later than at the time of the next Discharge Monitoring Report submittal. The report shall include the four items listed in this subsection.

8. Bypass of Treatment Facilities

Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to any of the following provisions in this section.

Bypass exceeding limitations-notification requirements.

a. Anticipated Bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of bypass.

b. Unanticipated Bypass. The permittee shall submit notice of an unanticipated bypass as required in the "Compliance Responsibilities-Noncompliance Notification" section.

Prohibition of Bypass. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

c. The permittee submitted notices as required in the "Bypass of Treatment Facilities-Anticipated Bypass" section.

The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above.

9. Upset Conditions

An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of the following paragraph are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and the permittee can identify its cause(s);

b. The permitted facility was, at the time being, properly operated;

c. The permittee submitted notice of the upset as required under "Compliance Responsibilities-Noncompliance Notification" section; and

d. The permittee complied with any remedial measures required under "Compliance Responsibilities-Duty to Mitigate" section.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

10. Duty to Mitigate
The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. The permittee, at the Department's request, shall provide accelerated or additional monitoring as necessary to determine the nature and impact of any discharge.

11. Removed Materials
Collected screenings, grit, solids, sludges, or other pollutants removed in the course of treatment shall be buried or disposed of in such a manner to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not be directly blended with or enter either the final plant discharge and/or waters of the state. The permit issuing authority shall be contacted prior to the disposal of any sewage sludges. At that time, concentration limitations and/or self-monitoring requirements may be established.

12. Duty to Reapply
Any request to have this permit renewed should be made six months prior to its expiration date.

B. GENERAL REQUIREMENTS

1. Right of Entry
The permittee shall allow Department and EPA representatives, at reasonable times and upon the presentation of credentials if requested, to enter the permittee's premises to inspect the wastewater treatment facilities and monitoring equipment, to sample any discharges, and to have access to and copy any records required to be kept by this permit.

2. Availability of Reports
Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department and EPA. As required by the Act, permit applications, permits, and effluent data shall not be considered confidential.

3. Transfers
This permit is not transferable except upon the filing of a Statement of Acceptance by the new party and subsequent Department approval. The current permit holder should inform the new controller, operator, or owner of the existence of this permit and also notify the Department of the possible change.

4. New Limitations or Prohibitions
The permittee shall comply with any effluent standards or prohibitions established under Section 306(a), Section 307(a), or Section 405 of the Act for any pollutant (toxic or conventional) present in the discharge or removed substances within the time identified in the regulations even if the permit has not yet been modified to incorporate the requirements.

5. Permit Actions
This permit may be modified, revoked and reissued, or terminated for cause. This includes the establishment of limitations or prohibitions based on changes to Water Quality Standards, the development and approval of waste load allocation plans, the development or revision to water quality management plans, changes in sewage sludge practices, or the establishment of prohibitions or more stringent limitations for toxic or conventional pollutants and/or sewage sludges. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

6. **Need to Halt or Reduce**
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

7. **State Laws**
Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation preserved under Section 510 of the Act.

8. **Oil and Hazardous Substance Liability**
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

9. **Property Rights**
The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

10. **Severability**
The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

11. **General Permits**
Coverage under this permit may be modified, revoked and reissued, or terminated for cause. The Department may require any operator covered by this permit to apply and obtain an individual or alternative general permit if:

    a. The discharge is not in compliance with the conditions of the general permit

    b. Conditions or standards have changed so that the discharge no longer qualifies for a general permit

    c. Information becomes available which indicates that the permitee's discharge has a reasonable potential to contribute to an exceedance of a water quality standard

When an individual NDPDES permit is issued to an operator otherwise subject to this permit or the operator is approved for coverage under an alternative NDPDES general permit, the applicability of this permit to the operator is automatically inactivated upon the effective date of the individual permit or coverage under the alternative general permit.

VIII. GENERAL PERMIT DEFINITIONS

1. "Act" means the Clean Water Act.

2. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

3. "Best management practices" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leads, sludge or waste disposal, or drainage from raw material storage areas.

4. "Common plan of development or sale" means a contiguous area where multiple separate and distinct construction activities are planned to occur at different times on different schedules under one plan, e.g., a housing development of five ¼ - acre lots. (40 CFR Sec. 122.26 (b)(15)(i)).

5. "Department" means the North Dakota Department of Health, Division of Water Quality.

6. "DMR" means Discharge Monitoring Report, which for the purpose of this permit is the annual report.

7. "EPA" means the U.S. Environmental Protection Agency.

8. "Expanded source of pollutants" means any changes in volume, quality, location, or any other factor that results in increased pollutant loading from a regulated discharge source which would have significant permanent effects on waters of the state.

9. "General permit" means a permit issued under NDAC 33-16-01 to a category of permittees whose operations, emissions, activities, discharges, or facilities are the same or substantially similar.

10. "Maximum extent practicable" or "MEP" is the statutory standard that establishes the level of pollutant reductions that an owner or operator of regulated MS4s must achieve. The USEPA has intentionally not provided a precise definition of MEP to allow maximum flexibility in MS4 permitting. The pollutant reductions that represent MEP may be different for each small MS4, given the unique local hydrologic and geologic concerns that may exist and the differing possible pollutant control strategies. Therefore, each permittee will determine appropriate BMPs to satisfy each of the six minimum control measures through an evaluative process. The USEPA envisions application of the MEP standard as an iterative process.

11. "Municipal separate storm sewer system" or "MS4" means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

    - Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management Agency under section 208 of the CWA that discharges to waters of the United States;

- Designed or used for collecting or conveying stormwater;
- Which is not a combined sewer; and
- Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

12. "NPDES" means National Pollutant Discharge Elimination System and includes the authorized state program.

13. "New development" means construction activities that create new impervious surface.

14. "New source of pollutants" means a discharge that started after the effective date of this permit.

15. "Notice of Intent" as referenced in the US EPA documents is synonymous with the term "permit application" for the purposes of this permit.

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

17. "Operator" means the person with primary operational control and legal responsibility for the municipal separate storm sewer system.

18. "Outfall" means the point where a municipal separate storm sewer system discharges from a pipe, ditch, or other discrete conveyance to receiving waters, or other municipal separate storm sewer systems. It does not include diffuse runoff or conveyances, which connect segments of the same stream or other water systems.

19. "Owner" means the person that owns the municipal separate storm sewer system.

20. "Person" means the state or any agency or institution thereof, any municipality, governmental subdivision, public or private corporation, individual, partnership, or other entity, including, but not limited to, association, commission or any interstate body, and includes any officer or governing or managing body of any municipality, governmental subdivision, or public or private corporation, or other entity.

21. "Physical alteration" means the dredging, filling, draining, or permanent inundating of a wetland. Restoring a degraded wetland by reestablishing its hydrology is not a physical alteration.

22. "Redevelopment" refers to alterations of a property that change the "footprint" of a site or building in such a way that results in the disturbance of equal to or greater than 1 acre of land. The term is not intended to include such activities as exterior remodeling, which would not be expected to cause adverse stormwater quality impacts and offer no new opportunity for stormwater controls.

23. "Small municipal separate storm sewer system" or "small MS4" means all separate storm sewers that are:

- Owned or operated by the United States, a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.

- Not defined as "large" or "medium" municipal separate storm sewer systems pursuant to 40 CFR 122.26 paragraphs (b)(4) and (b)(7) of, or designated under paragraph (a)(1)(v).

- This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

24. "Stormwater" means stormwater runoff, snowmelt runoff, surface runoff and drainage.

25. "Stormwater discharge associated with construction activity" means discharge of stormwater from construction activities; including clearing, grading, and excavating that result in land disturbance of equal to or greater than one acre. Construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one acre. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

26. "Stormwater associated with industrial activity" means stormwater runoff, snow melt runoff, or surface runoff and drainage from industrial activities as defined in 40 CFR 122.26(b)(14). Industrial facilities (including industrial facilities that are federally or municipally owned or operated that meet the description of the facilities listed in this paragraph (i)-(xi)) include those facilities designated under 122.26(a)(1)(v). The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under Category (xi) of this paragraph);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28, 29, 30, 311, 32, 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations meeting the definition of a reclamation area under 40 CFR 434.11(1)) and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge stormwater contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, by products or waste products located on the site of such operations; inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator;

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrap yards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42, 44 and 45 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (i) - (vii) or (ix) - (xi) of this subsection are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with 40 CFR 503;

(x) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 31 (except 311), 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25.

27. "Total Maximum Daily Load" or "TMDL" is the process established by the USEPA for the allocation of pollutant loads, including stormwater, to a particular water body or reach of a water body.

28. "Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20))" means water other than wastewater that enters a sewer system (including sewer service connections and foundation drains) from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.

29. "Waters of the State" means any and all surface waters that are contained in or flow in or through the state of North Dakota as defined in NDCC 61-28-02. This definition includes all water courses, even if they are usually dry.

30. "You" means the owner, operator or permittee as appropriate.

APPENDIX 1 Post-Construction Control Guidelines

The criteria outlined in this section serve as guidelines for pollutant reductions from post-construction stormwater management in new development or redevelopment areas. The post-construction stormwater practices for managing a water quality volume as outlined below are for reducing pollutants carried in the first flush of stormwater runoff.

The water quality criteria would apply to on-site or regional systems for post-construction stormwater management. The water quality considerations do not replace or substitute for water quantity or flood management requirements implemented on the local level for new developments. The water quality features may be incorporated into the design of structures for flow control; or water quality control may be achieved with separate features.

A combination of practices may be used such that the water quality volume is accounted for on a percentage basis for the practices used. For areas or projects where it is impractical to meet the water quality treatment criteria or the lack of right of way precludes the installation of described practices, other treatment such as grassed swales, smaller ponds, or grit chambers; must be provided as an alternative. Low impact development practices and/or green infrastructure practices may be used to provide post-construction stormwater runoff control.

The design considerations for treating a water quality volume for common stormwater management methods are as follows:

Method	Water Quality Design Consideration
Wet Detention Ponds	Permanent Pool Volume (Vpp) = 1800 cu-ft per acre draining to pond; or the runoff from 2yr-24hr design rainfall event. Water Quality Volume (Vwq) = 0.5 inches from impervious area. The drawdown time for the Vwq should be a minimum of 12 hours.
Dry Detention Ponds (w/Extended Detention)	Extended Detention/ Water Quality Volume (Vwqed) = 1800 cu-ft per acre draining to pond; or the runoff from 2yr-24hr design rainfall event. The drawdown time for the Vwqed should be a minimum of 24 hours and not more than 72 hours.
Infiltration	Water Quality Volume (Vwq) = 0.5 inches from impervious area. The volume captured in rain gardens or passed through biofilters with under drains would be grouped with infiltration for water quality treatment. The Vwq should discharge through the soil or filter media within 48 hours. Additional flows that cannot be infiltrated in 48 hours should be routed to bypass the system through a stabilized outlet.
Flow-Through Treatment Devices	Size devices to treat the first 0.5 inches of runoff from impervious area.

Redevelopment / Retrofit	Where site conditions allow, consider incorporating water quality components or reduction in impervious surface area. The goals to consider are: Reducing impervious surface area; Implement BMPs or treatment methods to manage a portion of the first 0.5 inches of runoff from the impervious area.

The selection and design of post-construction controls must take into consideration clogging or obstruction issues, freeze-thaw problems, effect on slope stability and groundwater, and the ability to effectively maintain the control. Post-construction controls should be designed for ease of inspection and have adequate maintenance access (e.g., a stable access that allows equipment to enter a pond).

Recommended resources for planning and designing controls for urban stormwater runoff are:

The EPA National Menu of Best Management Practices at:

http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm

APPENDIX 2 Stormwater Pollution Prevention Plans

The requirements outlined in this section are for permittee owned facilities that are defined as industrial activity under 40 CFR 122.26(b)(14) such as vehicle maintenance shops, wastewater treatment plants, and landfill facilities. The objective of the plan is to identify potential sources of stormwater pollution associated with industrial activity and ensure that practices are implemented to minimize the contribution of pollutants. Stormwater management measures developed under other regulatory programs can be included in the SWPP plan or incorporated by reference.

The Stormwater Pollution Prevention Plan shall include the following:

1. **Site Description.**

   a. Provide a description of the type of activity conducted at the facility.

   b. A site map indicating drainage patterns; the outline of the drainage area for each stormwater outfall; areas used for storage or disposal of materials; and any existing or planned structures to reduce stormwater contamination. Clearly identify property boundaries, natural drainage ways receiving discharges, section, township, and range or lines of latitude and longitude. The map or drawing must be of suitable scale and quality to show the required information.

   c. Identify the individual(s) responsible for implementing, maintaining and revising the SWPP plan.

2. **Description of Potential Pollutant Sources.**

   a. Identify materials that are processed, handled, stored, or disposed of at your site that have the potential to be released with stormwater.

   b. Provide an assessment of the various sources at the site that could contribute pollutants to stormwater runoff. Each of the following shall be evaluated for the reasonable potential to contribute pollutants: loading/unloading operations, outdoor storage, disposal and processing activities, significant dust generating activities, and disturbed areas vulnerable to erosion. Factors to consider in assessing potential sources are: the nature and quantity of material, degree of exposure to stormwater, history of spills or leaks, and any measures in place to control stormwater.

   c. Identify sources of non-stormwater discharges that may be present and controls used to minimize the impact of the source. If the non-stormwater discharge is from a source other than those listed below, include measures to remove the illicit discharge.

      Allowable non-stormwater discharge include: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), 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.

   d. For facilities subject to Emergency Planning and Community Right-to-Know Act Section 313 (EPCRA 313) requirements, the potential pollutant sources for which you report under EPCRA 313 must be identified in your description of potential pollutant sources.

3. **Stormwater Controls**. The plan shall describe the existing or planned controls for each source or operation that may contribute pollutants to stormwater runoff. A combination of Best Management Practices (BMPs) and structural controls must be implemented as appropriate to reduce pollutant contributions in stormwater. Such practices include:

   a. Good housekeeping practices to maintain a clean and orderly facility. Litter, debris, chemicals, and parts must be handled properly to minimize their exposure to stormwater. This includes measures to reduce and clean up vehicle tracking of sediment off-site and generation of dust.

   b. Preventive maintenance practices must be provided for the inspection and maintenance necessary to ensure the proper operation of stormwater management devices (oil/water separators, catch basins, and silt fences) as well as equipment used or stored at a site.

   c. Spill prevention and response procedures must be developed where potential spills can occur. Where appropriate, specific handling procedures, storage requirements, spill containment, and cleanup procedures shall be identified.

   d. Employee training informs personnel of their responsibility in implementing the practices and controls included in the plan such as spill response, good housekeeping, preventive maintenance, and sediment control practices.

   e. Erosion and sediment controls must be implemented on areas of the facility vulnerable to erosion. Areas vulnerable to erosion include those with little or no vegetation, steep slopes, or those with concentrated runoff flows such as ditches and culverts. The plan shall identify the control measures that will be used to minimize the release of sediment from the site (such as sediment basins, rock check dams, silt fences, vegetative buffers, permanent seeding, grassed swales, etc.) as well as methods to recover off-site sediment accumulations.

   f. Minimize exposure of industrial materials and activities to the extent practicable. Identify practices or site feature (such as storm resilient shelters) which limit the exposure or contact of stormwater with materials or activities.

   g. Stormwater Management. The plan shall include a description of practices that have been installed (or will be installed during construction) to control pollutants in stormwater discharges from the facility or offset the increase in runoff due to impervious area at the facility. Such practices may include: stormwater ponds; flow reduction by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems which combine several practices. The plan should include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

4. **Maintenance.** All structural stormwater controls and other protective measures identified in the plan must be maintained in effective operating condition. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. The plan must indicate as appropriate the maintenance or clean out interval for sediment controls. If site inspections, required in this permit, identify BMPs that are not operating effectively, maintenance shall be arranged and accomplished as soon as practicable.

5. **Inspections.** The plan must provide for site inspections to monitor the condition of stormwater discharge outlets and the effectiveness of stormwater controls. The permittee shall ensure that personnel conducting site inspections are familiar with permit conditions and the proper installation and operation of control measures. A comprehensive inspection of the facility's stormwater control

system should be made at least once (1) during a 6 month period or as specified in the permittee's program for pollution prevention/good housekeeping for municipal operations.

6. **Plan Review and Revisions.**

   a. The plan shall be signed in accordance with the signatory requirements, Part VII.A.6, and retained on-site for the duration of activity at the permitted location.

   b. The permittee shall make plans available upon request to the Department, EPA, or, in the case of discharges to a municipal separate storm sewer system, to the operator of the municipal system.

   c. The permittee shall amend the SWPP plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the state. The plan shall also be amended if the plan is found to be ineffective in controlling pollutants present in stormwater.

   d. A plan implemented under the previous version of this permit may be continued under this permit. Facilities operating under an existing SWPP plan are responsible for incorporating any changes necessitated by the conditions described in this permit. Any such changes must be implemented within 180 days of this permit's effective date, except for those related to inspection requirements which must be implemented within 30 days.

MS4 Permit Improvement Guide

U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF WATER

OFFICE OF WASTEWATER MANAGEMENT

WATER PERMITS DIVISION

APRIL 2010

EPA 833-R-10-001

Poor Quality Source Document

The following document images have been scanned from the best available source copy.

To view the actual hard copy, contact the Region VIII Records Center at (303) 312-6473.

APR 14 2000

CHAPTER 5: POST-CONSTRUCTION OR PERMANENT/LONG-TERM STORMWATER CONTROL MEASURES

Introduction

Phase I MS4s are required to address new development and significant redevelopment in their SWMPs through controls to reduce pollutants in stormwater discharges after construction is completed. See 40 CFR 122.26(d)(2)(iv)(A)(2).

The Phase II regulations require regulated small MS4 operators to develop, implement, and enforce a program to address stormwater discharges from new development and redevelopment sites that disturb greater than or equal to one acre to the MS4 (including projects that disturb less than one acre that are part of a larger common plan of development or sale). The regulations also require that the MS4 ensure that control measures are installed and implemented that prevent or minimize water quality impacts. See 40 CFR 122.34(b)(5)(i)

Included Concepts

- Post-construction stormwater management program
- Site performance standards
- Site plan review
- Long-term maintenance of post-construction stormwater control measures
- Watershed protection
- Tracking of post-construction stormwater control measures
- Inspections and enforcement
- Retrofit plan

As part of these Phase II requirements, the MS4 must:

- Develop and implement approaches to addressing post-construction stormwater discharges that include a combination of structural and/or non-structural controls;
- Adopt adequate legal authority to enable the MS4 to address post-construction stormwater discharges from new development and redeveloped sites; and
- Ensure adequate long-term operation and maintenance of applicable post-construction control measures. See 40 CFR 122.34(b)(5)(ii).

As of April 2010, most MS4 permits only require permittees to adopt a post-construction program with enforceable requirements designed to reduce stormwater impacts from new development and redevelopment, without specifying a performance standard. To meet this requirement many MS4s have adopted criteria in ordinances or other legally enforceable mechanisms based on already promulgated flood-control based standards (i.e., focused only on discharge rates). However, performance standards can be a very useful and meaningful mechanism in the post-construction toolbox to ensure that water quality objectives are met.

The example permit provisions that follow present the current thinking on how to strengthen the effectiveness of the permittee's stormwater program by preventing the harmful effects of increased stormwater flows and pollutant loads from new development and redeveloped sites on receiving waterbodies. EPA recognizes that there are a wide variety of approaches that some states have already

taken to control discharges from new development and redeveloped sites, some of which are more stringent than the permit language recommended below. The language below includes components that EPA believes would provide focus and enforceability, and would bring about significant improvements in stormwater controls on site. However, the "maximum extent practicable" may be greater than is reflected in the example permit language below for some MS4s, and EPA encourages states, where possible, to go beyond these example provisions and to achieve even better watershed planning and water quality outcomes. For these reasons, this chapter presents the minimum permit provisions EPA currently recommends to be included in permits in order for permittees to reduce their discharges to the maximum extent practicable as well as the optional, more stringent, requirements.

5.1 Post-Construction Stormwater Management Program

Example Permit Provision

5.1.1 The permittee must continue to implement a program to control stormwater discharges from new development and redeveloped sites that disturb at least one acre (including projects that disturb less than one acre that are part of a larger common plan of development or sale) that discharge into an MS4 [*or insert smaller alternative size*]. The program must apply to private and public development sites, including roads.

5.1.2 The program must require that controls are in place that will infiltrate, evapotranspire, or harvest and use stormwater from the site to meet the performance standards in Part 5.2 to protect water quality.

5.1.3 Written procedures for implementing this program, including the components described in Parts 5.2 – 5.8, must be incorporated into the SWMP document.

Example Permit Requirement Rationale for the Fact Sheet

The stormwater regulations require that an MS4 develop and implement a program to address post-construction discharges from new development and redeveloped sites, and ensure the long-term operation and maintenance of these controls (see Part 5.4 for the maintenance requirements). (See 40 CFR 122.34(b)(5)). The permit requires the use of specific stormwater controls, i.e., those that infiltrate, evapotranspire, or harvest and use stormwater, with the aim of maintaining or restoring the pre-development stormwater runoff conditions at the site.

Many traditional stormwater management practices, and the permit language that drives them, fail to address the hydrologic modifications that increase the quantity of stormwater discharges, and cause excessive erosion and stream channel degradation. Frequently the volume, duration, and velocity of stormwater discharges cause degradation to aquatic systems. Protecting and restoring the physical, chemical and biological integrity of receiving waters must be a central issue in stormwater permits. The recent report of the National Research Council (*Urban Stormwater Management in the United States*, National Academies Press, 2008, www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf) recommends that the NPDES stormwater

program examine the impacts of stormwater flow, treat flow as a surrogate for other pollutants, and includes the necessary control requirements in stormwater permits. Specifically the report recommends that the volume retention practices of infiltration, evapotranspiration and rainwater harvesting be used as primary stormwater management mechanisms. For this reason, EPA recommends use of a permit condition that is based on maintaining or restoring predevelopment hydrology although other forms of this permit condition maybe appropriate as well.

Additional information on the development of a post-construction program for Phase II permittees can be found in the Center for Watershed Protection's *Managing Stormwater In Your Community: A Guide for Building an Effective Post-Construction Program* (available at www.cwp.org/postconstruction). Also, EPA's green infrastructure website includes information on post-construction controls and programs (see www.epa.gov/greeninfrastructure).

5.2 Site Performance Standards

Example Permit Provision

5.2.1 The permittee must establish, implement and enforce a requirement that owners or operators of new development and redeveloped sites discharging to the MS4, which disturb greater than or equal to one acre (including projects that disturb less than one acre that are part of a larger common plan of development or sale), design, install, implement, and maintain stormwater control measures that infiltrate, evapotranspire, harvest, and use stormwater discharges.

5.2.2 Within [*insert deadline, e.g., 12 months, 24 months, etc.*] the permittee must require that stormwater discharges from such new development and redevelopment sites be managed such that post-development hydrology does not exceed the pre-development hydrology at the site, in accordance with the performance standard set forth in this paragraph. The SWMP must describe the site design strategies, control measures, and other practices deemed necessary by the permittee to maintain or improve pre-development hydrology.[11] [*Insert a new development performance standard, such as one or a combination of the following:*

Basis for Performance Standard	*Description*	*Performance Standard*
Rainfall	*Minimum storm volume to be retained on site.*	*Design, construct, and maintain stormwater management practices that manage rainfall on-site, and prevent the off-site discharge of the precipitation from [insert standards, such as "the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation"]. Discharge volume reduction can be achieved by canopy interception, soil amendments, evaporation, rainfall harvesting, engineered infiltration, extended filtration and/or evapotranspiration and any combination of the aforementioned practices. This first one inch of rainfall*

[11] *Big Darby Creek Watershed CGP, Part III.G.2.d. (web.epa.ohio.gov/dsw/permits/DarbyStormWater_Final_GP_sep06.pdf)*

		must be 100% managed with no discharge to surface waters, except when the permittee chooses to implement the conditions in Part 5.2.5.d below.[12]
Rainfall	*Minimum storm size to be retained on site.*	*Design, construct, and maintain stormwater management practices that manage rainfall on-site, and prevent the off-site discharge of the precipitation from all rainfall events less than or equal to [insert standards, such as "the 95th percentile rainfall event"]. This objective must be accomplished by the use of practices that infiltrate, evapotranspire and/or harvest and reuse rainwater. The 95th percentile rainfall event is the event whose precipitation total is greater than or equal to 95 percent of all storm events over a given period of record.*[13]
Recharge/Runoff	*Hydrologic analysis.*	*Design, construct, and maintain stormwater management practices that preserve the pre-development runoff conditions following construction. The post-construction rate, volume, duration and temperature of discharges must not exceed the pre-development rates and the pre-development hydrograph for 1, 2, 10, 25, 50 and 100 year storms must be replicated through site design and other appropriate practices. These goals must be accomplished through the use of infiltration, evapotranspiration, and/or rainwater harvesting and reuse practices. Defensible and consistent hydrological assessments and modeling methods must be used and documented.* [14]
Recharge	*Groundwater recharge requirement.*	*Any "major development" project, which is one that disturbs [insert standards, such as at least one (1) acre of land or creates at least 0.25 acres of new or additional impervious surface], must comply with one of the following two groundwater recharge requirements:* • *Demonstrate through hydrologic and hydraulic analysis that the site and its stormwater management measures maintain 100 percent of the average annual pre-construction groundwater recharge volume for the site; or* • *Demonstrate through hydrologic and hydraulic analysis that the increase of stormwater discharges volume from pre-construction to post-construction for the two-year storm is infiltrated.*[15]
Impervious Cover	*Limiting total impermeable surface (or effective impermeable surface)*	*Minimize total impervious cover resulting from new development and redevelopment to [insert standards, such as <10% of disturbed land cover and/or limit total amount of effective impervious surface to no more than 5% of the landscape].*

[12] *West Virginia Small MS4 Permit (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*
[13] *Section 438, Energy Independence & Security Act (EISA) Guidance (www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf)*
[14] *Section 438, Energy Independence & Security Act (EISA) Guidance (www.epa.gov/owow/NPS/lid/section438/pdf/final_sec438_eisa.pdf)*
[15] *New Jersey Stormwater Management Rules, N.J.A.C. 7:8 (www.nj.gov/dep/rules/adoptions/2004_0202_njpdes.pdf)*

5.2.3 Incentives for Redeveloped Sites. When considered at the watershed scale, certain types of developed sites can either reduce existing impervious surfaces, or at least create less 'accessory' impervious surfaces. The Permittee may develop a program to allow adjustments to the performance standard for new development or redevelopment sites that qualify. A reduction of [*insert the amount of stormwater the Permittee can reduce for utilizing redevelopment principles, e.g. 0.2 inches from the one inch runoff reduction standard*] may be applied to any of the following types of development. Reductions are additive up to a maximum reduction of [*insert amount, such as 0.75 inches*] for a project that meets four or more criteria. The permittee may choose to be more restrictive and allow a reduction of less than [*insert amount, such as 0.75 inches*] if they choose. In no case will the reduction be greater than [*insert amount, such as 0.75 inches*].

1. Redeveloped sites
2. Brownfield redeveloped site
3. High density (>7 units per acre)
4. Vertical Density, (Floor to Area Ratio (FAR) of 2 or >18 units per acre)
5. Mixed use and Transit Oriented Development (within ½ mile of transit)[16]

5.2.4 Additional Requirements and Exceptions: The permittee must implement the following additional requirements where applicable:

a. A site that is a potential hot spot with the reasonable potential for contaminating underground sources of drinking water must provide treatment for associated pollutants (e.g., petroleum hydrocarbons at a vehicle fueling facility).

b. A site that discharges or proposes to discharge to any surface water or ground water that is used as a source of drinking water must comply with all applicable requirements relating to source water protection and must not cause an exceedance of drinking water standards.[17]

c. Sites may not infiltrate stormwater in areas of soil contamination.

d. For projects that cannot meet 100% of the performance standard in Part 5.2.2 on site, two alternatives are available: off-site mitigation and payment in lieu. If these alternatives are chosen, then the permittee must develop and fairly apply criteria for determining the circumstances under which these alternatives will be available and establish reasonable schedules for mitigation and require payment in lieu of prior to project inception. A determination that standards cannot be met on site must include multiple criteria that would rule out fully meeting the performance standard in Part 5.2.2, such as: too small a lot outside of the building footprint to create the necessary infiltrative capacity even with amended soils; soil instability as documented by a thorough geotechnical

[16] *West Virginia Small MS4 Permit (Section C.b.5.a.ii.A.3)*
(www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)
[17] *West Virginia Small MS4 Permit (Section C.b.5.a.ii.A.2)*
(www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)

analysis; a site use that is inconsistent with capture and reuse of stormwater; or too much shade or other physical conditions that preclude adequate use of plants. Sites must still maximize stormwater retention on-site, before applying the remaining stormwater to one of the alternatives. In instances where alternatives are chosen, technical justification as to the infeasibility of on site management is required to be documented.[18]

Example Permit Requirement Rationale for the Fact Sheet

Developed land changes the hydrology of sites, leading to higher stormwater discharge volumes and higher pollutant loads. The purpose of this standard is to maintain or restore stable hydrology in receiving waters thereby protecting water quality by having post-construction hydrology mimic the natural hydrology of the area.

A simpler, but reasonably approximate 'mimicking the natural hydrograph' approach can typically be accomplished by retaining (as opposed to detaining stormwater for later discharge) on a developed site the volume of water that was retained prior to development, through the mechanisms of infiltration, evapotranspiration, and capture and use. By significantly reducing the volume of stormwater discharges, these mechanisms significantly reduce the discharge of pollutants in stormwater, making discharge volumes the ideal all-around focus and metric for stormwater management. These provisions must be clear about the retention requirement, e.g., an underdrained rain garden likely functions more as a detention and filtration system than an infiltration system.

In Part 5.2.3, the five types of development which qualify for incentives are redevelopment, brownfield redevelopment, high density, vertical density, and mixed use with transit oriented development. Redeveloping already degraded sites can reduce regional land consumption and minimize new land disturbance. Minimizing land disturbance and impervious cover is critical to maintaining watershed health. In addition to water quality benefits, cleaning up and reinvesting in brownfield properties increases local tax bases, facilitates job growth, utilizes existing infrastructure, takes development pressures off of undeveloped, open land, and both improves and protects the environment. The effect of low-density urbanization on watersheds and the hydrologic cycle is substantial. High-density development, including vertical density, slows land consumption rates and accommodates more land uses on a smaller footprint. Finally, mixing land uses and promoting transit-oriented development can directly reduce runoff since mixed-use developments have the potential to use surface parking lots and transportation infrastructure more efficiently, requiring less pavement.[19]

In Part 5.2.4.d, the permittee must establish clear and stringent criteria for the conditions under which payment in lieu and off-site mitigation could be used. These criteria must be related to physical constraints such as a combination of soils which limit infiltration opportunities, space or light limited situations restricting the amount of vegetation that can be used, and a land use that is not conducive to capture and use of stormwater. Further, appropriate schedules for

[18] *West Virginia Small MS4 Permit (Section C.b.5.a.ii.A.4)*
(www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)
[19] Adapted from the WV Phase II MS4 Fact Sheet
(www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Pages/default.aspx)

payment and implementation of mitigation measures must be established to ensure stormwater impacts are addressed in a timely manner.

Recommendations for Permit Writer

Many communities have adopted criteria based on already promulgated flood-control based standards (i.e., focused only on discharge rates). This example permit language instead promotes the concept that effective standards should be based on the objective of maintaining or restoring stable hydrology to protect the quality of receiving waters by having post-construction hydrology mimic the natural hydrology of the area. The permit language provides a number of example standards that can be used to achieve this objective.

Performance standards should take into account the wide variability in hydrologic conditions in different areas. Ideally, standards should reflect the local naturally-occurring hydrology with respect to runoff, infiltration, evapotranspiration, and storage – that is, the water balance that would be present in the absence of development. Key parameters, such as rainfall patterns, soil characteristics, and topography, can be used to establish likely 'natural' hydrology. Where maintaining or reestablishing such hydrologic conditions is infeasible, off-site mitigation, payment-in-lieu, or fee programs may be used. Based on current (2010) information, EPA recommends that permits allow for a combination of techniques that utilize infiltration, capture and use, and evapotranspiration as appropriate, rather than relying only on infiltration or some other technique alone to meet performance standards.

The permit writer could include a performance standard that stipulates that predevelopment hydrographs match post-development hydrographs. In order for this type of performance standard to be effective, the permit writer should make sure that the permit clearly spells out all variables of the hydrograph (volume, rate, duration, frequency) to be matched, and not just the discharge rate. Many current pre-post hydrology standards focus only on discharge rate, which is primarily a flood control approach. In addition, a pre-development condition should also be defined, and that condition should be one that is reasonably 'natural', rather than simply the conditions (perhaps already fairly impervious) that existed immediately prior to the current developed site. A calculator tool based on key hydrologic parameters (soil, rainfall, slope, and vegetation) or an on-site rainfall retention standard that is appropriate for that area can help the permittee determine what constitutes pre-development hydrology and the means by which it may be matched.

As contemplated in the example permit provisions, permit writers may want to consider the difference between new development and redevelopment sites, as well as differences among some types of developed sites, in establishing performance standards. From the standpoint of imperviousness at a watershed scale, redeveloped sites are usually more desirable than new development sites, which replace relatively naturally functioning green spaces with impervious surfaces such as roads, and parking lots. Certain types of development generate less impervious surfaces than others. For example, typically, there is little or no increase in net stormwater discharges when redeveloping underused properties such as vacant properties, brownfield sites, or greyfield sites, since new impervious cover replaces existing impervious cover. The net discharge increase from already developed properties would likely be zero since the site was already predominately impervious cover. In many cases, redeveloped sites break up or remove some portion of the impervious cover, converting it to pervious cover and allowing for some stormwater infiltration. Redevelopment sites can produce a net improvement in regional water quality by decreasing total impervious area and its

associated stormwater discharges. Redeveloped sites can also reduce regional land consumption. By building on underused, already degraded land, the pressure to convert previously undeveloped land is reduced. Therefore differential standards for new development and redeveloped sites, as well as for different types of developed sites, may be reasonable. However, they should be crafted to minimize creation of imperviousness at the watershed scale, and still include some reasonable level of stormwater management at the site scale.

Redevelopment is the act of improving by renewing or restoring any developed property that results in the land disturbance of one acre or greater, and that has one of the following characteristics:

- Land that currently has an existing structure, such as buildings or houses, or
- Land that is currently covered with an impervious surface, such as a parking lot or roof, or
- Land that is currently degraded and is covered with sand, gravel, stones, or other non-vegetative covering.

Infiltration may not be appropriate in all cases. For example, a site that is a potential hot spot with the reasonable potential for significant pollutant loading(s) may not be appropriate for stormwater infiltration. Hot spots may include commercial, industrial, institutional, municipal, or transportation related operations that may produce higher levels of stormwater pollutants, and/or present a higher level or risk for spills, leaks, or illicit discharges such as: gas stations, petroleum wholesalers, vehicle maintenance and repair, auto recyclers, recycling centers and scrap yards, landfills, solid waste facilities, wastewater treatment plants, airports, railroad stations and associated maintenance facilities, and highway maintenance facilities.

In addition, the permit writer may want to consider what type of flexibility to afford sites where the owner/operator is not able to meet the performance standard on site. For instance, if a site is constrained by size or previous impervious surfaces, such that the use of control measures that infiltrate stormwater is severely limited, the permit could allow alternatives for meeting the performance standard in other ways such as payment in lieu and off-site mitigation within the same watershed.

Off-site mitigation and payment in lieu programs are options that can be used in these instances. Off-site mitigation generally means that control measures may be implemented at another location, in the same sewershed/watershed as the original project, and as approved by the regulatory agency. Payment in lieu programs generally mean that the developer pays a fee to the permittee which will then be applied to a stormwater control project, in lieu of installing the required control measures.

If the permit writer chooses to include an off-site mitigation or payment in lieu program in the permit, the permit writer could specify that the programs meet several criteria, for example, those described in the 2009 West Virginia Phase II General Permit Fact Sheet (www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Pages/default.aspx):

1. The permittee must establish clear and stringent criteria for the conditions under which these options are available that must be related to real physical constraints such as a combination of soils limiting infiltration opportunities, space or light limited situations restricting the amount of vegetation that can be used, and a land use that is not conducive to capture and use of

stormwater. While one or two of these characteristics should not be adequate to qualify for the alternative, the combination of multiple constraints could;

2. A minimal requirement for at least [*0.4 inch*] of stormwater managed on-site;

3. A [*1:1.5 ratio*] of the amount of requisite stormwater not managed on site to the amount of stormwater required to be mitigated at another site, or for which in-lieu payments must be made;

4. If demonstrated to the permittee that it is completely infeasible to manage the remainder [*0.4 inches*], then the ratio for this unmanaged portion is [*1:2*].

5. The necessary tracking systems for both types of programs, including the necessary inventory of public and retrofit projects for off-site mitigation; and,

6. The establishment of a credible valuation structure for payment in lieu, i.e., what is the actual cost for the permittee to provide retrofits for the necessary amount of stormwater, not just a token payment. The purpose of these provisions is to disincentivize the use of alternatives unless really needed, but also to provide a financial foundation for implementation of public stormwater management projects, including retrofits where those needs have been identified.

Additional justification for the development types which qualify for these incentives can be seen in the West Virginia Phase II MS4 Permit Fact Sheet (www.dep.wv.gov/WWE/Programs/stormwater/MS4/permits/Pages/default.aspx).

5.3 Site Plan Review

Example Permit Provision

5.3.1 To ensure that all applicable new development and redeveloped sites conform to the performance standards required in Part 5.2, the permittee must continue to implement project review, approval, and enforcement procedures that include:

a. Procedures for the site plan review and approval process(es) that include inter-departmental consultations, as needed, and a required re-approval process when changes to an approved plan are desired; and

b. A requirement for submittal of 'as-built' certifications within 90 days of completion of a project.

5.3.2 The permittee must conduct site plan reviews, using the procedures described in Part 5.3.1, of all new development and redeveloped sites which will disturb greater than or equal to one acre [*or a smaller threshold as set by the permitting authority*] and discharge to the MS4 (including sites that disturb less than one acre that are part of a larger common plan of development or sale). The site plan review must specifically address how the project applicant meets the performance standards in Part 5.2 and how the project will ensure long-term maintenance as required in Part 5.4.

Example Permit Requirement Rationale for the Fact Sheet

Specific standards are a critical component of a stormwater management program. However, even the best requirements need to be supported by a review program to ensure that the standards are met. The example permit provision would require permittees to fully implement a comprehensive site plan review and approval program. To meet this requirement, the permittee must have the authority to withhold approvals when standards are not met.

Recommendations for the Permit Writer

The permit writer may want to consider adding a requirement for a pre-application concept plan meeting to occur (in addition to the requirement for the project applicant to submit a site plan for review). During this meeting the project land owner or developer, the project design engineer, and municipal planning staff could discuss the conceptual designs that would be used to ensure that they meet the performance standards. This meeting would ensure that stormwater and performance standards are addressed early in the development process. However, if this pre-application concept plan meeting is not consistent with local planning procedures, the permit writer could consider omitting this requirement.

5.4 Long-Term Maintenance of Post-Construction Stormwater Control Measures

Example Permit Provision

5.4.1 All structural stormwater control measures installed and implemented to meet the performance standards of Part 5.2 must be maintained in perpetuity. The permittee must ensure the long-term maintenance of structural stormwater control measures installed according to this Part through one, or both, of the following approaches:

a. Maintenance performed by the Permittee. See part 6.4.

b. Maintenance performed by the owner or operator of a new development or redeveloped site under a maintenance agreement. The permittee must require the owner or operator of any new development or redeveloped site subject to the performance standards in Part 5.2 to develop and implement a maintenance agreement addressing maintenance requirements for any structural control measures installed on site to meet the performance standards. The agreement must allow the permittee, or its designee, to conduct inspections of the structural stormwater control measures and also account for transfer of responsibility in leases and/or deeds. The agreement must also allow the permittee, or its designee, to perform necessary maintenance or corrective actions neglected by the property owner/operator, and bill or recoup costs from the property owner/operator when the owner/operator has not performed the necessary maintenance within thirty (30) days of notification by the permittee or its designee.

5.4.2 Verification of maintenance responsibilities. The permittee must require that property owners or operators of any new development or redeveloped site subject to the performance standards in Part 5.2 provide verification of maintenance for the approved structural stormwater control measures used to comply with the performance standards. Verification must include one or more of the following as applicable:

a. The owner/operator's signed statement accepting responsibility for maintenance with a provision for transferring maintenance responsibility if the property is legally transferred to another party; and/or

b. Written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance; and/or

c. Written conditions in project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to a home owner's association, or other appropriate group, for maintenance of structural and treatment control stormwater management practices; and/or

d. Any other legally enforceable agreement that assigns permanent responsibility for maintenance of structural or treatment control stormwater management practices.

Example Permit Requirement Rationale for the Fact Sheet

Appropriate operation and maintenance are critical aspects to the function of any suite of controls. In many cases, controls may be located on private property, and it is necessary to establish some provision to assure responsibility and accountability for the operation and maintenance of these controls.

The permittee must ensure maintenance of all structural stormwater control measures. In this Guide, structural controls also include many green infrastructure practices such as rainwater harvesting, rain gardens, permeable pavement, and vegetated swales.

Recommendations for the Permit Writer

Most non-traditional MS4 permittees will probably not have the legal authority to recoup costs where the owner/operator has not completed necessary maintenance. Permit writers may want to be more specific in this requirement to include other options for non-traditional MS4 permittees.

5.5 Watershed Protection

Example Permit Provision

5.5.1 When the Permittee revises its General Plan (or equivalent) or other relevant plans (e.g. Transportation Master, or Community Plan) they must include effective water

quality and watershed protection elements that require implementation of consistent water quality protection measures for new development and redeveloped sites within [*insert deadline*]. Examples of water quality and watershed protection elements to be considered include the following: [*insert principles and/or policies which are appropriate for the watershed such as,*

- Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each watershed, by minimizing the creation, extension and widening of parking lots, roads and associated development.
- Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to; riparian corridors, headwaters, floodplains and wetlands.
- Implement management practices that prevent or reduce thermal impacts to streams, including requiring vegetated buffers along waterways, and disconnecting discharges to surface waters from impervious surfaces such as parking lots.
- Prevent disturbances of natural waterbodies and natural drainage systems caused by development, including roads, highways, and bridges.
- Avoid development in areas that are particularly susceptible to erosion and sediment loss.
- Implement standards to protect trees, and other vegetation with important evapotranspirative qualities.
- Implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.
- Implement water conservation policies that will reduce both stormwater and non- stormwater discharges via storm sewer systems.[20]
- Implement policies that encourage stormwater practices close to the source of the runoff rather than downstream and lower in the watershed.]

Example Permit Requirement Rationale for the Fact Sheet

Imperviousness has been shown to correlate with water quality impacts. In order to minimize water quality impacts, the permittee must examine their planning principles to manage the creation of impervious surfaces at the watershed level, such as reducing the footprint of streets and parking lots. Also, ecologically sensitive areas can protect water quality by acting both as filters that reduce pollutants in stormwater discharges and as sponges to reduce the impact on the ecosystem's hydrology. Thermal pollution is also a concern that can impact biota in waterways. Stormwater discharges from impervious surfaces are often characterized by higher temperatures than natural, pervious surfaces. Reducing the chances of further increasing this temperature by preserving, protecting, and restoring natural features that provide shading for the waterway can further help reduce thermal pollution. Whenever possible natural waterways

[20] *West Virginia Small MS4 Permit (www.wvdep.org/Docs/17444_SW_WV%20MS4%20permit%202009.pdf)*

must be protected and not disturbed by stormwater from developed sites. For example, areas that have a high potential for erosion must be avoided for development when possible. Protecting vegetation, native soils, and conserving water can also help ensure the hydrologic qualities of the site remain intact.

Consideration of stormwater impacts from development is critical during the planning phases of development. This not only includes planning on the site-level, but also with respect to discharges from the MS4 on the watershed level. To the extent possible, stormwater management must be an integral part of higher level planning documents that determine where and how development that will result in stormwater discharges to the MS4 should occur since these decisions affect water quality. Using land efficiently can result in better stormwater management by putting development where it is most appropriate. For example, by directing and concentrating new development in areas targeted for growth, communities can reduce or remove development pressure on undeveloped parcels and protect sensitive natural lands and recharge areas. Another strategy is redeveloping already degraded sites such as abandoned shopping centers or underutilized parking lots. In this case, the net increase in discharges from developed sites would likely be zero, and it would likely decrease, depending on the on-site infiltration practices used. Also, by allowing or encouraging denser development, less land is converted overall, and less total impervious area created.

Recommendations for the Permit Writer

Examining stormwater on a watershed basis and including watershed principles is an important part of protecting waterways in a holistic manner. Climate change may increase the size and frequency of storms in some area of the nation. Including watershed-type assessments and considerations as Permit Requirements will help the permittee better focus their efforts to ensure the best water protection outcomes for existing conditions and those anticipated future conditions. Therefore, permit writers should consider including watershed protection principles. Newer programs may not be ready for permit writers to include the exact example permit provision provided. If possible, permit writers should be as specific as possible for the needs of the watershed where the MS4 permittee is located. Permittees should be careful when installing new stormwater BMPs to ensure that there are not any negative, unintended consequences.

5.6 Tracking of Post-Construction Stormwater Control Measures

Example Permit Provision

5.6.1 *Inventory of Post-Construction Stormwater Control Measures. The permittee must* continue to maintain an inventory of all post-construction structural stormwater control measures installed and implemented at new development and redeveloped sites, including both public and private sector sites located within the permit area. The inventory must be searchable by property location (either on paper or electronic). New entries to the inventory must be made during the site plan review and approval process in Part 5.3.1.

5.6.2 Tracking Information. Each entry to the inventory must include basic information on each project, such as project name, owner's name and contact information, location, start/end date, etc. In addition, inventory entries must include the following for each project:

a. Short description of each stormwater control measure (type, number, design or performance specifications);

b. Latitude and longitude coordinates of each stormwater control measure;

c. Short description of maintenance requirements (frequency of required maintenance and inspections); and

d. Inspection information (date, findings, follow up activities, prioritization of follow-up activities, compliance status).

Based on inspections conducted under Part 5.7, the permittee must update the inventory as appropriate where changes occur in property ownership or the specific control measures implemented at the site. This inventory must be maintained and available for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

Creating an inventory of post-construction structural stormwater control measures, including tracking of specific information, will first enable permittees to know what control measures they are responsible for. Without this information the permittee will not be protecting water quality to their full potential since inspections, maintenance, and follow-up changes cannot be performed. Tracking information such as the latitude/longitude, maintenance and inspection requirements and follow-up will allow the permittee to be able to better allocate their resources for those activities that are immediately necessary. Although not required, including photographs will help the permittee assess how the control measure has changed since it was first created and will likely aid in determining proper maintenance and/or retrofitting opportunities if the measure is no longer providing the water quality benefits it was originally designed.

Recommendations for the Permit Writer

Permit writers may wish to specifically define the types of structural controls that must be included in the inventory. For example, rain barrels may be considered a structural control, but the MS4 likely does not need latitude and longitude coordinates of the rain barrels.

5.7 Inspections and Enforcement

Example Permit Provision

5.7.1 Inspection Frequency. To ensure that all stormwater control measures are operating correctly and are being maintained as required consistent with its applicable maintenance agreement, the permittee must conduct inspections of each project site covered under Part 5.2 performance standards, [*insert inspection frequency, e.g., at least one time during the permit term, 20% of sites per year, etc.*]. The inspections must be in accordance with those specified in the [*insert State manual that describes the maintenance of control measures*]. A description of inspection procedures must be included in the SWMP document.

5.7.2 Post-Construction Inspection. Within [*insert deadline, e.g., 1 week, 2 weeks, etc.*] of completion of construction of any project required to meet the Section 5.2 performance standards, the permittee must conduct a post-construction inspection to verify that the permittee's performance standards have been met. The permittee must include in its SWMP a procedure for being notified by construction operators/owners of their completion of active construction so that the post-construction inspection may be conducted.

5.7.3 Inspection Reports. The permittee must document its inspection findings in an inspection report. Each inspection report must include:

a. Inspection date;

b. Name and signature of inspector;

c. Project location (street address, latitude/longitude, etc.) and inventory reference number (from inventory established in Section 5.6.1)

d. Current ownership information (for example, name, address, phone number, fax, and email)

e. A description of the condition of the structural stormwater control measure including the quality of: vegetation and soils; inlet and outlet channels and structures; embankments, slopes, and safety benches; catch basins; spillways, weirs, and other control structures; and sediment and debris accumulation in storage and forebay areas as well as in and around inlet and outlet structures;

f. Photographic documentation of all critical structural stormwater control measure components; and

g. Specific maintenance issues or violations found that need to be corrected by the property owner or operator along with deadlines and reinspection dates.

The permittee must document and maintain records of inspection findings and enforcement actions and make them available for review by the permitting authority.

Example Permit Requirement Rationale for the Fact Sheet

Inspection of post-construction control measures is key to ensuring the protection of water quality. If control measures are not inspected and maintained they could become sources of pollution rather than reducing pollution. By including detailed information in the inspection report, the permittee can better determine if maintenance is required and the permittee can have a snapshot of sorts to know the status of their control measures to prioritize funding.

Recommendations for the Permit Writer

Permit writers should clearly specify the requirements for inspections. Inspecting and properly maintaining structural stormwater controls to ensure they are working as designed is just as important as installing them in the first place. By having specific requirements, permittees will be reminded that they must allocate resources to ensure control measures are properly maintained and functioning. The permit writer may also want to add a prioritization scheme to the requirement to help the permittee determine what maintenance activities are priorities for protecting water quality and which ones are minor changes.

5.8 Retrofit Plan

Example Permit Provision

5.8.1 The permittee must develop a plan to retrofit existing developed sites that are impacting water quality. The retrofit plan must be developed within [*insert deadline, such as within two years of permit issuance*] and must emphasize controls that infiltrate, evapotranspire, or harvest and use stormwater discharges. The plan must include[21]:

a. An inventory of potential retrofit locations, which considers, at a minimum:

- Locations that contribute pollutants of concern to an impaired waterbody
- Locations that contribute to receiving waters that are significantly eroded
- Locations that are tributary to a sensitive ecosystem or protected area
- Locations that are tributary to areas prone to flooding

[21] Orange County Municipal Stormwater Permit (Section F.3.d) (www.waterboards.ca.gov/sandiego/water_issues/programs/stormwater/oc_stormwater.shtml)

b. An evaluation and ranking of the inventoried locations to prioritize retrofitting which includes, at a minimum:
   - Feasibility
   - Cost effectiveness
   - Pollutant removal effectiveness
   - Impervious area potentially treated
   - Maintenance requirements
   - Landowner cooperation
   - Neighborhood acceptance
   - Aesthetic qualities, and
   - Efficacy at addressing concern.

Example Permit Requirement Rationale for the Fact Sheet

It is clear that we cannot protect the nation's waters without also addressing degradation caused by stormwater discharges from existing developed sites. For that reason stormwater *programs must include substantive retrofit provisions.*

It is possible and reasonable to significantly improve water quality in many urban receiving waters. This requires more than just a new development and redeveloped sites program, however, which at best can only hold the line. To actually improve the quality of receiving waters it is necessary to mitigate discharges from existing developed sites, which generally means implementation of measures to bring about the retrofit the stormwater control measures at existing sites to retain most stormwater on site.

In addition, research indicates that most streambank restoration projects that actively stabilize eroding channels should not be implemented until after hydrologic retrofits have been completed that restore the hydrologic regime not concurrently with the implementation of the retrofits.

Municipal projects, such as traffic calming sites could also include stormwater retrofit components, such as curb bump outs that include bioretention features, rain gardens, and curb cuts.

Information on retrofit options and the development of a retrofit plan can be found in the Center for Watershed Protection's guidance on Urban Stormwater Retrofit Practices (available at www.cwp.org as Manual No. 3 under the Urban Subwatershed Restoration Manual Series).

Recommendations for the Permit Writer

Permittees may need a permit term or two to adequately develop and implement a retrofit plan. Some permittees may not be ready to have retrofit plans as part of their requirements. It is up to the permit writer to make this determination based on the specific information they have available on current programs. A retrofit plan should assess the areas where retrofitting is appropriate and will result in increased water quality protection and restoration. The permit writer should determine

the appropriate timeframe and language for a retrofit plan. For example, if the permittee was already required to develop a retrofit plan in a previous permit term the permit may specify a schedule for implementation rather than development.