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Regional NPDES Phase II Stormwater Program Guide

Rogue Valley, Oregon



March 2004



Rogue Valley, Oregon

REGIONAL NPDES PHASE II STORMWATER PROGRAM GUIDE

March 2004

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Stormwater Advisory Team
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Regional NPDES Phase II Stormwater Program Guide – Rogue Valley, Oregon

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Chapter 1 - Introduction

1.1 Overview

1.1.1 Objective

The primary object of this *Regional NPDES Phase II Stormwater Program Guide (Guide)* is to help local governments in the Rogue Valley (Jackson County, Oregon) achieve compliance with National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Stormwater requirements and protect both ground and surface water quality.

A Storm Water Advisory Team (SWAT), comprised of representatives of local jurisdictions, was formed to lead the development of this *Guide*.

Rogue Valley Stormwater Advisory Team (SWAT)	
City of Ashland	Jim Olson
City of Central Point	Mike Ono
City of Medford	Larry Beskow
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It is envisioned that this *Guide* described herein will assist Rogue Valley communities (elected officials, staff, and citizens) that must plan and implement programs to comply with NPDES Phase II Municipal Stormwater regulations and protect local water quality. It is also envisioned that this *Guide* will describe how the state and federal requirements can be implemented in a way that is the most economical, as well as meaningful and beneficial to the citizens and environment of Jackson County and the Rogue Valley.

It is further envisioned that this *Guide* will provide useful information for non-regulated communities that are seeking to implement stormwater management activities to protect local water quality.

1.1.2 Intent

It is the intent of this document to provide and describe a stormwater management program that can help communities more easily understand and implement the requirements of a state NPDES Permit, based upon federal regulations. The elements of this *Guide* will form the basis of the primary requirements and conditions that will be set forth in the Oregon

Department of Environmental Quality's (DEQ's) Phase II NPDES Municipal Stormwater Permits for each jurisdiction. The sections of this *Guide* will:

1. Provide overall guidance to assist with permit compliance and implementation of program activities over the first 5 years of the permit.
2. Provide guidance to communities concerning what is required under the Phase II municipal stormwater permit, and the basic record keeping and reporting requirements.
3. Provide guidance and examples on what can be done to comply with permit requirements. Examples may include: educational programs, plan review processes, construction site inspection and enforcement activities, examples of required local ordinances, annual inspection and maintenance activities, a program for detecting and eliminating "illicit discharges."
4. Provide examples of activities that are already occurring in communities that can count toward permit compliance and reduce the overall cost of the program.
5. Explain to communities the benefit of implementing a stormwater program.
6. Identify the organizational structures and costs related to meeting each permit requirement (staffing, equipment, planning, etc.).
7. Estimate the costs associated with each permit requirement for each permitted jurisdiction.
8. Provide examples of possible funding sources and mechanisms.

1.1.3 Group Approach for the Rogue Valley

It is the intent of the municipalities in the Rogue Valley (which are to be covered by an NPDES Phase II permit) to work together on a number of activities as described in this document. Those activities include, but are not limited to the following:

1. Stormwater Public Education and Outreach
2. Stormwater Public Involvement and Participation
3. Selected activities for Illicit Discharge Detection and Elimination
4. Selected activities for Construction Site Stormwater Runoff Control
5. Selected activities for Post-Construction Stormwater Management
6. Selected activities for Pollution Prevention in Municipal Operations

7. Selected activities for Evaluation and Assessment, Record Keeping, and Annual Reporting
8. Development of local and regional funding strategies
9. Other pertinent considerations for regional surface water management.

1.1.4 Benefits of Implementing a Stormwater Management Program

Developing and implementing a comprehensive municipal stormwater management program as described in this *Guide* can result in a wide array of benefits for cities, counties, and the environment. Successful implementation of a stormwater program that addresses identified minimum control measures has the potential to generate positive impacts and benefits related to water quality, municipal operations, preservation of green space, and other aspects of a community's quality of life (e.g., recreational and public health and safety). Ultimately, these types of benefits can translate into economic benefits for cities and counties as a result of factors such as more efficient and cost-effective operating practices, increased property values, and increased revenues from recreation and tourism. Provided below is a description of the various benefits that communities in the Rogue Valley may generate through implementation of the *Guide*.

Poorly managed stormwater can contribute high levels of pollutants such as excess sediment, nutrients, bacteria, and heavy metals as runoff travels over land and discharges into receiving rivers, lakes, streams, and ground water. Improving water quality is a primary achievement of managing stormwater that can generate a host of related benefits for cities and counties. Stormwater management programs recognize the potential impacts of unchecked stormwater runoff: accelerated stream flows, destruction of aquatic habitat, modified natural hydrologic patterns, and elevated pollutant concentrations. A stormwater management program that promotes or requires advanced land use practices can minimize negative chemical, physical, and biological impacts and produce water quality improvements over time.

A successful stormwater management program that improves water quality can help to ensure that rivers, lakes, streams, and ground water meet regulatory water quality standards, the measuring stick that identifies a need for additional pollution controls such as Total Maximum Daily Loads (TMDLs) or other water cleanup plans. Avoiding the need for such additional pollution controls or limiting development can translate into cost savings for communities. Sound stormwater management programs can also play an important role in reducing the number of impaired water bodies due to bacteria levels and reducing the need for additional expensive treatment technologies for drinking water supplies.

In addition to water quality benefits, stormwater management programs can provide communities with a framework and measures to conduct operational activities in a more efficient and cost-effective manner. Management practices that seek to prevent pollutants from entering the storm sewer system (e.g., construction best management practices and illicit discharge detection and elimination practices) will reduce the need for costly system maintenance and repair activities. Through the various reporting mechanisms required in stormwater management programs, communities will establish the ability to track activities and expenditures related to stormwater management activities, thereby improving communication and coordination among responsible departments and with citizens.

As mentioned earlier, stormwater management programs can produce a ripple effect in terms of benefits. Other benefits to consider include enhanced fishing and opportunities for recreation. Stormwater management helps to reduce pollutants that can harm important fish habitat and minimize the contaminants that make fish unsafe to eat – often the same pollutants that make swimming and boating unsafe. Stormwater quantity is often addressed through stormwater management techniques intended to improve water quality. Effective management techniques help to limit increases in impervious surface, thereby decreasing the quantity and velocity of stormwater runoff and minimizing flooding events. Stormwater management programs can help promote maintaining green spaces in the community, improve visual appearance of waterways, and promote cleaner, more attractive sites on land (e.g., better maintained parking lots, industrial sites, and municipal facilities).

1.2 Regulatory Framework

1.2.1 Background

The federal Clean Water Act is the primary federal law protecting water quality and includes the National Pollutant Discharge Elimination System (NPDES) permit program. Point source discharges to waters of the U.S., including stormwater and wastewater discharges, are regulated through NPDES permits issued by the U.S. Environmental Protection Agency (EPA) or by delegated states. In Oregon, NPDES permits are issued and implemented by the Oregon State Department of Environmental Quality (DEQ). The Water Pollution Control requirements of ORS 468B is the primary Oregon State law protecting water quality.

DEQ combines the federal NPDES regulations with pertinent state regulations and issues combined permits that regulate discharges to waters of the U.S. and waters of the state. These permits are designed to satisfy NPDES permit requirements under the federal Clean Water Act and state law under the Water Pollution Control Act. “Waters of the state” include lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams,

creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or effect a junction with natural surface or underground waters), which are wholly or partially within or bordering the state or within its jurisdiction.

The stormwater portion of the federal NPDES regulations has been implemented in two phases. Phase I addressed stormwater discharges by large and medium municipal separate storm sewer systems (MS4s) and certain industrial activities, including construction sites disturbing more than five acres. The term “separate” means that wastewater such as sewage is not combined with stormwater runoff. The Phase I stormwater regulations were published in 1990. Phase II addressed MS4s in smaller municipalities and construction sites disturbing between one and five acres; those regulations were adopted in 1999.

1.2.2 Phase I NPDES Permits for Municipalities

Certain municipalities and other entities are subject to permitting under the U.S. Environmental Protection Agency (EPA) Phase I stormwater regulations (40 CFR Part 122). In Oregon, DEQ has issued NPDES permits to regulate the discharges of stormwater from the municipal separate storm sewer systems (MS4s) operated by the following cities and counties:

Stormwater NPDES Phase I Jurisdictions in Oregon	
Clean Water Services Many jurisdictions in Washington County are covered by this permit	Clackamas County SD No. 1 Clackamas County City of Gladstone City of Happy Valley City of Johnson City City of Lake Oswego City of Milwaukie City of Oregon City City of River Grove City of West Linn City of Wilsonville Oak Lodge Sanitary District
Eugene	
Gresham City of Fairview Portion of Multnomah County	
Portland Port of Portland Portion of Multnomah County	
Salem	

These Phase I jurisdictions were originally permitted in 1995, except for Salem, which was permitted in 1997. DEQ has administratively extended these “5-year” municipal Phase I permits and is scheduled to reissue updated permits in early 2004.

The Oregon State Department of Transportation (ODOT) is also a Phase I municipal stormwater permittee for its stormwater discharges within the jurisdictions of the above cities and counties. Initially, ODOT was a

co-permittee on all the Phase I permits, but DEQ issued ODOT their own separate permit in 2000. That permit is scheduled for renewal in 2005.

There are no cities or counties covered under Phase I municipal stormwater permits in eastern Oregon or southern Oregon.

1.2.3 Phase II NPDES Permits for Municipalities

EPA adopted Phase II stormwater regulations in December 1999. Those rules identify additional municipalities as subject to NPDES municipal stormwater permitting requirements. Cities and counties in Oregon were required to apply for stormwater Phase II permit coverage if they meet all of the following conditions:

- Own and operate a municipal separate storm sewer system (MS4),
- Discharge from the MS4 to surface waters, and
- Are within a census-defined urbanized area (see Section 1.4.2) or are otherwise designated by DEQ.

The Phase II stormwater regulations apply only to discharges to surface waters. Communities that do not discharge to surface waters are not required to apply for NPDES stormwater permits.

DEQ has reviewed the list and has determined which jurisdictions were required to apply for permits. [Those not required to apply at this time are listed in Section 1.4.3.] The cities and counties listed below meet the three conditions above must therefore develop and implement a stormwater management program under NPDES Phase II regulations.

Designated Stormwater NPDES Phase II Jurisdictions (Located in Census-Defined Urbanized Areas)	
<p>The Phase II regulations require coverage for the following cities in the urbanized areas of Oregon, as defined by the 2000 Census:</p>	
<ul style="list-style-type: none"> • City of Ashland • City of Bend • City of Central Point • City of Corvallis • City of Keizer • City of Medford 	<ul style="list-style-type: none"> • City of Philomath • City of Phoenix • City of Springfield • City of Talent • City of Troutdale • City of Turner
<ul style="list-style-type: none"> • City of Wood Village 	
<p>The census-defined urbanized area of the following counties in Oregon, as defined by the 2000 Census:</p>	
<ul style="list-style-type: none"> • Benton County • Jackson County 	<ul style="list-style-type: none"> • Lane County • Marion County
<ul style="list-style-type: none"> • Polk County 	

The Phase II stormwater regulations address runoff from the urban areas of the cities and counties listed above. If runoff from agricultural land is discharging to a municipal storm drain system and contributing to a water quality problem, then the community should work to resolve those discharges.

The federal regulations specify minimum measures for the stormwater programs developed to comply with the Phase II permits. A more detailed description of these minimum measures is found in Section 1.4.4 and in the individual chapters of this *Regional Guide*.

To at least partially fulfill these requirements, DEQ intends to require Phase II municipalities to adopt ordinances and implement minimum measures and Best Management Practices (BMPs) equivalent to those in the federal guidance and in DEQ's Internal Management Directive – *Phase II MS4 General Permit: Storm Water Management Program (SWMP) Plan Framework* (see Appendix 1A). A draft NPDES Phase II permit has also been prepared by DEQ (see Appendix 1B).

Under the Phase II rules, municipalities may be subject not only to the requirements of MS4 owners and operators, but also to two other components of the federal NPDES stormwater program, also delegated to DEQ for implementation:

- The Industrial Stormwater General Permit as an operator of regulated industrial activity described below in Section 1.2.5
- The Construction Stormwater General Permit as an operator of regulated construction activity (more than one acre of land disturbed), described below in Section 1.2.6

Each of the three (municipal, industrial and construction) components of the NPDES stormwater program has its own separate requirements and permits.

1.2.4 Municipalities Not Subject to NPDES Municipal Stormwater Permit Requirements

Municipalities not subject to NPDES stormwater municipal permits are encouraged to adopt stormwater programs at least equivalent to the program components described in this *Guide*; adoption of such a program is voluntary. Such municipalities would benefit by: helping to protect local ground and surface water sources from stormwater pollution, reducing potential flooding concerns, and ensuring that their storm drain system is properly maintained. Such programs would include adoption of ordinances and implementation of minimum measures, including Best Management Practices (BMPs).

Jurisdictions in Oregon that are not subject to NPDES Phase II for stormwater (at this time) are listed in Section 1.4.3.

1.2.5 Industrial Stormwater General Permit [1200-Z] (NPDES Permit for Stormwater Discharges Associated With Industrial Activities)

Businesses subject to the Industrial Stormwater General Permit have to prepare and implement a Stormwater Pollution Prevention Plan in accordance with the terms of that permit. The general permit, (which was first issued in 1992, then reissued in 1997 in the form of a 1200-Z permit, and was again reissued in 2002), requires a description and implementation of operational source control BMPs and structural source control BMPs as applicable to their industrial activity. Additionally, application of erosion and sediment control (ESC) BMPs, flow control BMPs, and treatment BMPs is required if necessary to address an erosion, flow, or pollution problem.

Municipalities with industrial facilities and activities are also required to apply for the 1200-Z Industrial Permits. Under NPDES Phase II a permitted small MS4 should probably apply for the 1200-Z permit, but optionally, they could designate those facilities be covered under the “Municipal Operations” section of their plan (see Chapter 7). This should be confirmed with DEQ during the permitting process.

1.2.6 Construction Stormwater General Permit [1200-C] (NPDES General Permit for Stormwater Discharges Associated With Construction Activity)

Operators of construction activities are required to seek coverage under the NPDES 1200-C general permit if the activity results in the disturbance (including clearing, grading, and excavation activities) of one acre or greater, or if the activity is part of a “larger common plan of development or sale” with a planned disturbance of one acre or greater, and also has a discharge of stormwater to a surface water and/or to a storm drain used to convey water to a stream, lake, or wetland.

Construction projects that disturb one or more acres are subject to three major requirements:

- Submit an NPDES 1200-C permit application, along with a Land Use Compatibility Statement signed by the local land-use authority (county or city planning department) prior to the construction start.
- Develop, submit, and fully implement an erosion and sediment control plan that is approved by DEQ or DEQ agent prior to initiating any on-site activities. This plan specifies the measures that will be put in place to prevent and/or control erosion and sediment run-off.
- Submit a Notice of Termination when the following criteria have been met: final stabilization of the site has been achieved as defined in the permit, all temporary erosion and sediment controls have been removed, and no potential remains for construction-related sediment discharge to surface waters.

Jurisdictions can implement the state's 1200-C permit program locally, by Memorandum of Agreement, through coordination with the Oregon DEQ. By 2005, DEQ plans to prepare a statewide *Erosion Prevention and Sediment Control Manual* for use by the construction industry and state and local inspectors. Training workshops will also be scheduled.

1.2.7 Underground Injection Control (UIC) Program

One of the provisions of the federal Safe Drinking Water Act (SDWA) is to protect underground sources of drinking water (USDW). The Underground Injection Control (UIC) Program was established to protect USDW by regulating the discharges of fluids into the subsurface by underground injection wells. The federal UIC program was enacted in 1974, and is administered under 40 Code of Federal Regulations (CFR) part 144. The Oregon Department of Environmental Quality (DEQ) was delegated primacy by the Environmental Protection Agency (EPA) in 1984, and was re-authorized in 1991. DEQ regulates this program under the Oregon Administrative Rules (OAR) Chapter 340, Division 44. The intent of the UIC program is to protect groundwater aquifers, primarily used for drinking water, from contamination. All groundwater aquifers in Oregon are considered suitable as drinking water.

Subsurface infiltration systems, such as drywells, are classified as Class V injection wells in the EPA's federal UIC program. The two requirements of the UIC program are:

- A non-endangerment performance standard must be met, prohibiting discharges that allow movement of fluids containing contaminants into potential underground sources of drinking water, and
- All UIC facility owners/operators must provide inventory information by registering the facilities.

Under the federal UIC regulations, the definition of an underground injection well is a bored, drilled, or driven shaft whose depth is greater than the largest surface dimension; a dug hole whose depth is greater than the largest surface dimension; an improved sinkhole; or a subsurface fluid distribution system which includes an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground. Examples of a UIC well or a subsurface infiltration system are drywells, drain fields, pipe or French drains, and other similar devices that discharge to ground.

1.3 Organization of this Regional Guide

To accomplish the objectives described in Section 1.1, this document includes BMPs, measurable goals, and guidance on the following:

- Chapter 2 – Stormwater Public Education and Outreach Program
- Chapter 3 – Stormwater Public Involvement and Participation Program

- Chapter 4 – Illicit Discharge Detection and Elimination Program
- Chapter 5 – Construction Site Stormwater Runoff Control Program
- Chapter 6 – Post-Construction Stormwater Management Program
- Chapter 7 – Pollution Prevention in Municipal Operations Program
- Chapter 8 – Evaluation and Assessment, Record Keeping, and Annual Reporting

1.4 Other Related Topics for NPDES Phase II

1.4.1 Common Terms

The stormwater Phase II regulations apply to certain governmental entities that own or operate municipal separate storm sewer systems (MS4s). Typically, this is a city or county public works department (or equivalent).

A Municipal Separate Storm Sewer System (MS4), when combined with state law, means a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, storm drain pipes, subsurface infiltration systems (drywells and infiltration trenches), detention systems, and stormwater quality facilities.

An **operator** of an MS4 can be a town, city, county, Oregon State Department of Transportation, a tribe, or special district (drainage improvement district, flood control district, etc.) and may include state owned facilities (universities, prisons, hospitals, etc.).

An MS4, which carries only stormwater, is separate and distinct from a combined sewer which carries both stormwater and wastewater.

A **combined sewer** is a sewer system designed to convey commingled wastewater and stormwater runoff to a wastewater treatment plant. Where treatment plant or pipe capacity is inadequate during wet weather, the excess combined sewage discharges from the system at designated outfalls (termed combined sewer overflows).

Under the federal rules, only a subset of small MS4s need to apply for a Phase II permit. These are termed ‘regulated small MS4s.’

Regulated small MS4s are defined as all small MS4s located in "urbanized areas" (UAs) as defined by the Bureau of the Census, and those small MS4s located outside of a UA that are designated by NPDES permitting authorities.

1.4.2 Urbanized Areas in Oregon and the Phase II NPDES Municipal Stormwater Permit

In Oregon, there are 6 census-defined urbanized areas:

- Bend Urbanized Area
- Corvallis Urbanized Area
- Eugene Urbanized Area
- Medford Urbanized Area
- Portland Urbanized Area
- Salem Urbanized Area

An **Urbanized Area** is a land area composed of one or more central places and the adjacent surrounding area (urban fringe) that together have a residential population of at least 50,000 and a density of at least 1,000 people per square mile. Other MS4s may be designated as needing a permit based on application of criteria to be developed by the permitting authority (DEQ). The criteria must evaluate whether stormwater discharges result in or have the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including adverse habitat and biological impacts.

The federal Phase II stormwater regulations require the stormwater program to be implemented only within these urbanized areas. However, these urbanized areas do not generally follow city and county boundaries. Phase II communities, for ease of implementation, may want to implement the program jurisdiction-wide instead of only within the urbanized areas. For Phase II counties where only a small portion of the county is in the urbanized area, the county may want to implement the program within the urban growth boundary or other planning boundary or similar urban area.

When identifying the area of implementation of their stormwater programs, communities may want to consider areas of significant development and industrial or commercial land uses that are outside of the urbanized area and discharge to their storm drain system.

DEQ, in coordination with local governments, must consider the following when identifying the coverage area for the Phase II permit:

- *Where the urbanized area does not follow city/county boundaries.* The census defined urbanized area does not follow city and county boundaries. Therefore, for cities where only a small portion of the jurisdiction is outside of the urbanized area, it may be easier to apply the *Regional Guide* to all areas.
- *Where the urbanized area includes a combined sewer area.* Some areas of Oregon contain combined sewer systems. Areas drained by combined sewers are not addressed in the Phase II regulations, but are

instead addressed by the Combined Sewer Overflow Reduction Program. Cities and counties served by combined sewers should coordinate the development and implementation of these programs and practices jurisdiction-wide.

- *Where parts of the urbanized area discharge to ground through subsurface infiltration systems or do not drain to waters of the U.S.* NPDES municipal stormwater permits are not required in areas that do not drain to waters of the U.S. For cities or counties with numerous drywells and outfalls to surface waters, this could result in a patchwork program where Phase II requirements apply in some areas or to some stormwater discharges, but not others. Phase II jurisdictions may want to consider applying this *Regional Guide* across all areas and discharges. The state's Water Pollution Control Act (ORS 468B) requires that discharges to all waters of the state be managed to protect water quality. The state's UIC rule will require cities and counties to manage stormwater discharges to UIC wells. Stormwater management programs developed in compliance with the Phase II Municipal Stormwater Permit and with this *Regional Guide* may assist in complying with those UIC regulations.
- *Where the urbanized area is only a small portion of a jurisdiction.* This especially applies to counties, where the urbanized areas are generally only a small portion of their jurisdictions. While many cities may choose to apply the *Regional Guide* jurisdiction-wide, counties may choose to apply the program, or some portions of the program, in only the urban and urbanizing portions of the county. (In addition, counties' stormwater programs will need to be implemented in unincorporated "islands" within incorporated cities that fall within the urbanized area.)
- *Where the urban growth boundary is located with respect to the census defined urbanized area boundary.* DEQ is considering whether coverage under the Phase II municipal stormwater permit should be based on the Urban Growth Boundaries established by cities and counties under the state Growth Management Act. A coincident boundary may ease program implementation in the long run.
- *Where there are unincorporated islands within a city.* The Phase II stormwater regulations apply to all storm drain systems within urbanized areas. Where a city has an unincorporated island within the city boundary, this unincorporated island is subject to the permit, but responsibility for compliance falls to the county. These unincorporated islands present an excellent opportunity for city and county agencies to cooperate on developing a joint stormwater program.

1.4.3 Who is Not Covered by the Phase II NPDES Municipal Stormwater Regulations?

In Oregon, twenty-five small MS4s within the census-defined urbanized areas designated by EPA in the 2000 Census were mandated to be evaluated for Phase II coverage. DEQ has performed an analysis and has designated eighteen municipalities for coverage (see Section 1.2.3). From the initial list, DEQ has determined that seven municipalities are exempt at this time. Generally, these jurisdictions either had less than 1,000 people in the urbanized area served by MS4s, or they did not discharge to surface water.

Mandated Phase II Jurisdictions Exempted by DEQ (Located in Census-Defined Urbanized Areas)	
<u>Cities and Towns in Oregon:</u>	
<ul style="list-style-type: none"> • Adair Village • Coburg 	<ul style="list-style-type: none"> • Jacksonville • Maywood Park • Rainier
<u>Counties in Oregon:</u>	
<ul style="list-style-type: none"> • Columbia County 	<ul style="list-style-type: none"> • Deschutes County

Additionally, there were an additional eighteen jurisdictions outside of census-defined urbanized areas that required consideration for coverage by DEQ. Those listed in the table below were not designated at this time.

Discretionary Phase II Jurisdictions Not Designated by DEQ (Located Outside of Census-Defined Urbanized Areas)	
<u>Cities and Towns in Oregon:</u>	
<ul style="list-style-type: none"> • Albany • Canby • Coos Bay • Dallas • Grants Pass • Hermiston • Klamath Falls • La Grande • Lebanon 	<ul style="list-style-type: none"> • McMinnville • Newberg • Ontario • Pendleton • Redmond • Roseburg • St. Helens • The Dalles • Woodburn

Any of the above listed jurisdictions can be designated by DEQ, should their status change. One of the most likely criteria for designation will result from a TMDL evaluation that indicates stormwater is a significant contributor to water quality pollution in a receiving water.

1.4.4 What Does Phase II Require?

The Phase II stormwater regulations specify that an operator of an MS4 must implement a program of stormwater management activities to protect water quality. The program must at least address the minimum requirements shown in Table 1.1. These requirements are described in detail in the chapters of this *Regional Guide*.

The federal regulations do not require Phase II jurisdictions to inspect industrial sites. DEQ is responsible for inspecting industrial sites to ensure compliance with the statewide Industrial Stormwater General Permits. Phase II communities will still be expected to investigate reports of illicit discharges to their storm drain systems at industrial sites, review erosion and sediment control plans for construction of new industrial sites, and implement other aspects of their stormwater management programs that are generally applicable jurisdiction-wide.

Table 1.1 – Summary of the Minimum Stormwater and Surface Water Management Program Requirements

1. Public education and outreach – Develop and distribute educational materials and conduct public outreach aimed at informing citizens about the impacts of polluted stormwater as well as ways to minimize their contribution to pollution.
2. Public involvement and participation – Involve the public in stormwater management program development and implementation.
3. Illicit discharge detection and elimination – Develop and implement a program of detecting and eliminating illicit discharges to the storm drain system. This includes storm system mapping, dry weather sampling, and citizen information activities.
4. Construction site stormwater runoff control – Develop, implement, and enforce a program and standards to control/prevent construction site erosion and sediment discharges from construction sites which disturb one or more acres of land. This includes preparation of a construction site erosion and sediment control plan.
5. Post-construction stormwater management – Develop, implement, and enforce a program and standards to control/prevent discharge of polluted runoff from new development and redeveloped sites. This can include structural treatment and detention systems as well as resource protection measures (wetland protection, habitat protection, etc.) and pollution prevention planning.
6. Pollution prevention, or "good housekeeping," for municipal operations – Develop, implement, and enforce a program to control/prevent the discharge of polluted runoff from municipal operations (road maintenance, vegetation management, storm drain maintenance, etc.).

7. Compliance with more stringent conditions – Measures beyond the six above may be needed to achieve Total Maximum Daily Loads (TMDLs) or other cleanup plans to meet federal Clean Water Act requirements to restore beneficial uses of impaired water bodies.
8. Evaluation and Assessment – Evaluate the program’s compliance with permit conditions and the effectiveness and appropriateness of the identified Best Management Practices. Keep records and notify/report to the permitting authority (DEQ) of any changes in activities resulting from program evaluation and assessment.

Development of a Phase II-compliant stormwater management program may necessitate additional staff, office space, equipment, and funding mechanism. Some cities and counties are already implementing some of these stormwater management requirements and will not need to add significant staff or other resources to implement the *Regional Guide*.

As a practical matter, implementing a stormwater management program to address the minimum requirements of a NPDES Permit may require that many operators of small MS4s (typically counties and cities) do the following things:

- Integrate a stormwater management program into their organizational structure
- Hire additional staff to carry out the work (public involvement and education, plan review, inspection and enforcement, maintenance, planning, complaint response, management, etc.)
- Find additional office space for staff
- Obtain additional office, field, and maintenance equipment
- Develop and adopt ongoing funding method(s)
- Develop and adopt various legal ordinances
- Conduct ongoing stormwater and surface water planning efforts

1.5 Funding Stormwater Programs and Activities

1.5.1 Stormwater Financial Planning

The cities within the Rogue Valley and Jackson County have the authority under Oregon statute to provide the full range of storm drainage/water quality management services along with the funding necessary to support these programs. To date, the jurisdictions have endeavored to establish levels of service along with the funding mechanisms necessary to fund the day-to-day operations, improvement, and maintenance of the current stormwater system. Given National Pollutant Discharge Elimination System (NPDES) Phase II stormwater permitting requirements and costs, these jurisdictions will evaluate whether, and the degree to which,

available funding sources will need to be revisited to address these permitting requirements. The NPDES Phase II permit planning process has documented a schedule that forecasts the timing of likely expenditures. Accordingly, this funding program element of the *Regional Guide* is directed at underscoring the fact that each of the cities and Jackson County has the authority to proceed with NPDES Phase II compliance in terms of the funding commitment the permit entails. These mechanisms would also be available to the jurisdictions of Talent, Phoenix, Central Point, and Jackson County if a single NPDES Phase II Permit were issued to Rogue Valley Sewer Services under an ORS 190 agreement.

1.5.2 Stormwater Management Funding

Within the state of Oregon, the options available to a municipality or County for stormwater operations, maintenance, and improvements funding are very much the same as those established for other utility and infrastructure programs. These financial tools include:

General Obligation Bonds

This form of debt enables the jurisdiction to issue general obligation bonds for capital improvements and replacement. General Obligation (G.O.) Bonds are debt instruments backed by the full faith and credit of the jurisdiction which would be secured by an unconditional pledge of the jurisdiction to levy assessments, charges, or ad valorem taxes necessary to retire the bonds. G.O. bonds are the lowest-cost form of debt financing available to local governments and can be combined with other revenue sources such as specific fees, or special assessment charges to form a dual security through the jurisdiction's revenue generating authority. These bonds are supported by the jurisdiction as a whole, so the amount of debt issued for stormwater is limited to a fixed percentage of the real market value for taxable property within the jurisdiction. Again, this cap is a statutory mandate.

Revenue Bonds

This form of debt financing is also available to jurisdictions for drainage related capital improvements. Unlike G.O. bonds, revenue bonds are not backed by the jurisdiction as a whole, but constitute a lien against the stormwater service charge revenues of a stormwater utility. Revenue bonds present a greater comparative risk to the investor than do G.O. bonds, since repayment of debt depends on an adequate revenue stream, legally defensible rate structure, and sound fiscal management by the issuing jurisdiction. Due to this increased risk, revenue bonds generally command a higher interest rate than G.O. bonds. This type of debt also has very specific coverage requirements in the form of a reserve fund specifying an amount, usually expressed in terms of average or maximum debt service due in any future year. This debt service is required to be held as a cash reserve for annual debt service payment to the benefit of

bondholders. Typically, voter approval is not required when issuing revenue bonds.

State/Federal Grants and Loans

Historically, both local and county governments have experienced significant infrastructure funding support from state and federal government agencies in the form of block grants, direct grants in aid, interagency loans, and general revenue sharing. Federal deficit reduction pressures and virtual elimination of federal revenue sharing dollars are clear indicators that local government will be left to its own devices regarding infrastructure finance in general, and stormwater funding in particular.

It is also important to assess likely trends regarding federal/state assistance in infrastructure and program financing. Where EPA's mandate for sanitary sewer improvements in the 1960s and 1970s was accompanied by a very generous and available grant program, future trends indicate that grants will be replaced by loans through a public works revolving fund. Local governments can expect to access these revolving funds or public works trust funds on criteria that includes both the need for and ability to repay the borrowed monies, with interest. Therefore, the ability of infrastructure programs to control their own financial destinies will be a key element in evaluating whether many secondary funding sources, such as federal/state loans, will be available to the jurisdiction's stormwater management program.

System Development Charges

ORS 223.297 for system development charges (SDC) is designed to provide a logical and clear framework for establishing fees, which recover from new development the jurisdiction's costs in providing existing and future system capacity. It is also designed to establish the basis for the fee calculation which the jurisdiction must follow in order to comply with the statute. However, the fundamental objective for the fee structure is the imposition on new development of a proportionate share of those costs associated with providing or expanding stormwater infrastructure to meet the capacity needs created by that specific new development.

SDCs cannot be applied retroactively and are a one-time charge at the time of development approval. The other important consideration under Oregon statute is that only infrastructure funded through stormwater or other jurisdiction fees/charges would be eligible for inclusion in the SDC. The other key issue is whether the existing system has any capacity remaining and available to new development. This available capacity becomes the basis for the reimbursement element of the SDC. The improvement portion of the SDC is based on that portion of future facility cost appropriately allocated to new development requirements. Therefore, only those costs directly related to growth have been allocated to the improvement portion of the SDC. It should also be highlighted that

ORS 223 states that improvements which produce an increase in the “level of performance” of the system for purposes such as such as regulatory compliance are proportionately recoverable through SDCs.

Stormwater Management Service Charges

As conventional funding sources for stormwater management become more difficult to access, and as water quality requirements become mandatory, the utility approach toward funding is becoming generally accepted. There are numerous combinations and variations for stormwater service charges. Ashland, Talent, and Medford have all implemented a measured impervious surface or equivalent residential unit (ERU) approach, and they are collecting established fees from their customers. Because most single-family residents have very similar impervious surface footprints, all single-family homes are considered to be one ERU. All other properties are charged based on their measured impervious surface, divided by the base ERU square footage, to determine the number of ERUs applied to that property. This type of stormwater utility approach is also available to the other jurisdictions in the Rogue Valley. Tested and upheld by the Oregon State Supreme Court, this method of funding has now become the rule rather than the exception for a growing number of Oregon jurisdictions. This popularity is also due to the dedicated nature of the revenues generated, and it is the funding mechanism affording the most flexibility to address stormwater quantity and quality needs.

Appendices

Appendix 1A - DEQ’s DRAFT Internal Management Directive – Phase II MS4 General Permit: Storm Water Management Program (SWMP) Plan Framework [February 2003 version]

Appendix 1B - DEQ’s DRAFT NPDES Storm Water Discharge Permit – 1200-MS4 [7/7/03 version]

Appendix 1A

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Internal Management Directive

*Phase II MS4 General Permit:
Storm Water Management Program
(SWMP) Plan Framework*

February 2003



State of Oregon
Department of
Environmental
Quality



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Introduction

This document is intended to provide assistance to municipalities in developing the storm water management program (SWMP) plans that will be required by DEQ's proposed Phase II Small MS4 General Permit. DEQ will also use this document as a reference in evaluating the SWMPs submitted by regulated small MS4s. The information provided addresses the plan development expectations for each of the six minimum measures outlined in the federal Phase II storm water regulations and the draft DEQ MS4 general permit. The information contained in this document was largely derived from the Environmental Protection Agency's (EPA) draft Model Phase II MS4 General Permit.

a) Public Education and Outreach on Storm Water Impacts

The plan should address both the overall public education program and the individual BMPs, measurable goals and responsible persons for the program. The following information should be included:

- (1) The plans to inform individuals and households about the steps they can take to reduce storm water pollution.
- (2) The plans to inform individuals and groups on how to become involved in the storm water program (with activities such as local stream and beach restoration activities).
- (3) The target audiences for the education program who are likely to have significant storm water impacts (including commercial, industrial and institutional entities) and why those target audiences were selected.
- (4) The target pollutant sources the public education program is designed to address.
- (5) The outreach strategy, including the mechanisms (e.g., printed brochures, newspapers, media, workshops, etc.) will be used to reach the target audiences, and how many people are expected to be reached by the outreach strategy over the permit term.
- (6) 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.
- (7) A description of how the success of this minimum measure will be evaluated, including how the measurable goals were selected for each of the BMPs.

b) Public Involvement/Participation

The plan should address both the overall public involvement/participation program and the individual BMPs, measurable goals, and responsible persons for the program. The following information should be included:

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- (1) A description of how the public has been involved in the development and submittal of the storm water management program.
- (2) The plan to actively involve the public in the development and implementation of the program.
- (3) 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.
- (4) The types of public involvement activities included in the program. Where appropriate, consider the following types of public 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
 - d. Volunteer monitoring or stream/beach clean-up activities
- (5) 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.
- (6) A description of how the success of this minimum measure will be evaluated, including how the measurable goals were selected for each of the BMPs.

c) Illicit Discharge Detection and Elimination

The plan should address both the overall illicit discharge detection and elimination program and the individual BMPs, measurable goals, and responsible persons for the program. The following information should be included:

- (1) How a storm sewer map showing the location of all outfalls and the names and location of all receiving waters will be developed. Describe the sources of information used for the maps, and how the permittee plans to verify the outfall locations with field surveys. If already completed, describe how this map was developed. Also, describe how the map will be regularly updated.
- (2) The mechanism (ordinance or other regulatory mechanism) that will be used to effectively prohibit illicit discharges into the MS4 and why the chose that mechanism. If this mechanism needs to be developed, describe the plans 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.

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- (3) The plan to ensure through appropriate enforcement procedures and actions that the illicit discharge ordinance (or other regulatory mechanism) is implemented.
- (4) The plan to detect and address illicit discharges to the system, including discharges from illegal dumping and spills. The plan should include dry weather field screening for non-storm water flows and field tests of selected chemical parameters as indicators of discharge sources.
- (5) The plan should also address on-site sewage disposal systems that flow into the storm drainage system. The description should address the following, at a minimum:
 1. Procedures for locating priority areas which includes areas with higher likelihood of illicit connections (e.g., areas with older sanitary sewer lines, for example) or ambient sampling to locate impacted reaches.
 2. Procedures for tracing the source of an illicit discharge, including the specific techniques that will be used to detect the location of the source.
 3. Procedures for removing the source of the illicit discharge.
 4. Procedures for program evaluation and assessment.
- (6) A description of how the plans to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. Include in the description how this plan will coordinate with the public education minimum measure and the pollution prevention/good housekeeping minimum measure programs.
- (7) 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.
- (8) A description of how the success of this minimum measure will be evaluated, including how measurable goals for each of the BMPs were selected.

d) Construction Site Storm Water Runoff Control

The plan should address both the overall construction site storm water control program and the individual BMPs, measurable goals, and responsible persons for the program. The following information should be included:

- (1) The mechanism (ordinance or other regulatory mechanism) that will be used to require erosion and sediment controls at construction sites and why that mechanism was chosen. If this 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 storm water management program description.

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- (2) The plan to ensure compliance with the erosion and sediment control regulatory mechanism, including the sanctions and enforcement mechanisms the will use to ensure compliance. Describe the procedures for when the will use certain sanctions. Possible sanctions include non-monetary penalties (such a stop work orders), fines, bonding requirements, and/or permit denials for non-compliance.
- (3) 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 discarded building materials, concrete truck washouts, chemicals, litter, and sanitary waste.
- (4) The procedures for site plan review, including the review of pre-construction site plans, which incorporate consider of potential water quality impacts. Describe the procedures and the rationale for how the certain sites for site plan review will be identified, if not all plans are reviewed. Describe the estimated number and percentage of sites that will have pre-construction site plans reviewed.
- (5) The procedures for receipt and consideration of information submitted by the public. Consider coordinating this requirement with the public education program.
- (6) The procedures for site inspection and enforcement of control measures, including how the sites will be prioritized for inspection.
- (7) 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.
- (8) Provide inspectors with adequate erosion control training related to ensure they have sufficient knowledge to identify violations and provide guidance to contractors.
- (9) Describe how the success of this minimum measure will be evaluated, including how the measurable goals were selected for each of the BMPs.

e) Post-Construction Storm Water Management in New Development and Redevelopment

The plan should address both the overall post-construction storm water management program and the individual BMPs, measurable goals, and responsible persons for the program. The following information should be included:

- (1) The program to address storm water runoff from new development and redevelopment projects. Include in this description any specific priority areas for this program.

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- (2) How the program will be specifically tailored for the local community, minimize water quality impacts, and attempt to maintain pre-development runoff conditions.
- (3) Any non-structural BMPs in the program, including, as appropriate:
 1. 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;
 2. Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure;
 3. Education programs for developers and the public about project designs that minimize water quality impacts; and
 4. 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.
- (4) Any structural BMPs in the program, including, as appropriate:
 1. Storage practices such as wet ponds and extended-detention outlet structures;
 2. Filtration practices such as grassed swales, bioretention cells, sand filters and filter strips; and
 3. Infiltration practices such as infiltration basins, infiltration trenches, and biological infiltration processes. What are the mechanisms (ordinance or other regulatory mechanisms) that will be used to address post-construction runoff from new developments and redevelopments and why did they choose that mechanism. 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.
- (5) How the long-term operation and maintenance (O&M) of the selected BMPs will be ensured. Options to help ensure that future O&M responsibilities are clearly identified include an agreement between the MS4 and another party such as the post-development landowners or regional authorities.
- (6) Who is responsible for overall management and implementation of the post-construction storm water management program and, if different, who is responsible for each of the BMPs identified for this program.

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- (7) How the success of this minimum measure will be evaluated, including how the measurable goals were selected for each of the BMPs.

f) Municipal Operations

The plan should address both the overall pollution prevention/good housekeeping program and the individual BMPs, measurable goals, and responsible persons for the program. The following information should be included:

- (1) The operation and maintenance program to prevent or reduce pollutant runoff from the municipal operations. The program should specifically list the municipal operations that are impacted by this operation and maintenance program. A list of industrial facilities the MS4 owns or operates that are subject to DEQ's 1200-Z industrial storm water general permit (or individual NPDES permits) for discharges of storm water associated with industrial activity that ultimately discharge to the MS4. Include the DEQ permit number or a copy of the permit application form for each facility.
- (2) Any government employee training program that will be used to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. Describe any existing, available materials that you plan to use. Describe how this training program will be coordinated with the outreach programs developed for the public information minimum measure and the illicit discharge minimum measure.
- (3) The program description should specifically address the following areas:
 1. Maintenance activities, maintenance schedules, and long-term inspection procedures for controls to reduce floatables and other pollutants to the MS4.
 2. Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas the operate.
 3. Procedures for the proper disposal of waste removed from the MS4 and municipal operations, including dredge spoil, accumulated sediments, floatables, and other debris.
 4. 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.

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5. 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.
6. How the success of this minimum measure will be evaluated, including how measurable goals were selected for each of the BMPs.

Appendix 1B – DEQ’s DRAFT NPDES Storm Water Discharge Permit – 1200-MS4

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
 STORM WATER DISCHARGE PERMIT
 Department of Environmental Quality
 811 Southwest Sixth Avenue, Portland, OR 97204
 Telephone: (503) 229-5630 or 1-800-452-4011 toll free in Oregon
 Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

ISSUED TO:

All owners or operators of storm water point source discharges that are covered by this permit

SOURCES COVERED BY THIS PERMIT

This general permit authorizes discharges of storm water from regulated small municipal separate sewer systems (MS4s). Regulated small MS4s include the following:

- A small MS4, as defined in 40 CFR §122.26(b)(16), located fully or partially within an Urbanized Area, as determined by the latest Decennial Census by the Bureau of Census, or
- A small MS4 designated by the Department pursuant to 40 CFR §122.32.

 Michael T. Llewelyn, Administrator
 Water Quality Division

Issued:
 Effective:

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify, or operate storm water collection, conveyance, treatment and/or control facilities, and to discharge storm water to waters of the state in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

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Obtaining Permit Coverage and Permit Application Requirements.....	2
Schedule A - Storm Water Management Program.....	4
Schedule B - Monitoring and Reporting Requirements.....	9
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Unless specifically authorized by this permit, by another NPDES or WPCF permit, or by Oregon Administrative Rule, any other direct or indirect discharge to waters of the state is prohibited, including discharges to an underground injection control system.

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OBTAINING PERMIT COVERAGE AND APPLICATION REQUIREMENTS

1. Obtaining Authorization

- a. The permittee must submit a permit application and a description of the permittee's Storm Water Management Program (SWMP) in accordance with Condition 2 and 3 below.
- b. The Department may deny coverage under this permit and require submittal of an application for an individual NPDES or WPCF permit based on a review of the permit application or other information.
- c. If the operator changes, or a new operator is added after submittal of a permit application, the applicant or the permittee must submit a DEQ Name Change and/or Transfer of Ownership Form to the Department.

2. Permit Application Deadlines

- a. *Small MS4s designated by federal regulations.* If a small MS4 is automatically designated under 40 CFR §122.32(a)(1), then it is required to submit a permit application or apply for an individual permit within 90 days of receiving notification from the Department that permit coverage is required.
- b. *Small MS4s designated by the Department.* If a small MS4 is designated by the Department, pursuant to 40 CFR 122.32(a)(2), then it is required to submit an application within 180 days of receiving notification from the Department that permit coverage is required.

3. Contents of the Permit Application

- a. The permittee must sign the permit application in accordance with Schedule F, Section D(5) of this permit and must include the following information on the permittee:
 - i. The name of the permittee's municipal entity/tribe/state agency/federal agency, mailing address, and telephone number; and
 - ii. An indication of whether the permittee is a federal, state, tribal, or other public entity.
- b. The permittee must submit the following information:
 - i. The Urbanized Area (or municipality if the permittee is not located in an Urbanized Area) where the permittee's system is located; the name of the permittee's organization, or county(ies) where the permittee's MS4 is located, and the latitude and longitude of an approximate center of the permittee's MS4;
 - ii. The name of the major receiving water(s);
 - iii. A statement regarding whether all or a portion of the MS4 is located on Tribal lands;
 - iv. A statement regarding whether the small MS4 is relying on another governmental entity regulated under the storm water regulations (40 CFR §122.26 and 122.32) to satisfy one or more of its permit obligations (see Schedule A, Condition 4). The identity of the entities the MS4 intends to share responsibilities with must be provided; and
 - v. A list of actions the MS4 will undertake to fully develop its Storm Water Management Program (SWMP) plan and a timetable for completing these actions. The completed SWMP plan must be submitted to the Department according to Schedule C.

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4. Where to Submit

The permittee must submit a permit application, signed in accordance with the signatory requirements of Schedule F, Section D(5) to the Department at the following address:

Oregon Department of Environmental Quality

Water Quality Division

811 SW Sixth Avenue

Portland, OR 97204

5. Co-Permittees Under a Single Permit Application Package Submittal

A small MS4s may jointly develop and implement a Storm Water Management Program with other small MS4s. However, each MS4 must complete a separate permit application. These applications may be jointly submitted as a package to the Department, with a single description of actions, and associated time table, for developing the SWMP plan [see Condition 3.b.v) above].

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**Schedule A
DISCHARGE LIMITATIONS AND STORM WATER MANAGEMENT PROGRAM**

1. Discharge Limitations

- a. The permittee must not cause or allow the following:
 - i. Discharges that are mixed with sources of non-storm water unless such non-storm water discharges are:
 - (1) In compliance with a separate NPDES permit or state WPCF permit.
 - (2) Not to be a substantial contributor of pollutants to waters of the state
 - ii. Storm water discharges associated with industrial activity as defined in 40 CFR §122.26(b)(14)(i)-(ix) and (xi).
 - iii. Storm water discharges associated with construction activity as defined in 40 CFR §122.26(b)(14)(x) or (b)(15).
 - iv. Storm water discharges to underground injection control (UIC) systems. Such discharges must be authorized by OAR 340-044 or allowed by a Water Pollution Control Facilities (WPCF) permit.

- b. The following types of discharges are authorized by this permit:
 - i. *Storm water discharges.* Storm water discharges to waters of the state from the small MS4s identified in the “Sources Covered” section of this permit, except as excluded by Schedule A, Condition 1.a) above.
 - ii. *Non-storm water discharges.* Discharges from the following non-storm water sources provided that the Department has not determined that these sources are substantial contributors of pollutants to the permittee’s MS4:
 - (1) Water line flushing
 - (2) Landscape irrigation
 - (3) Diverted stream flows
 - (4) Rising ground waters
 - (5) Uncontaminated ground water infiltration (infiltration is defined as 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.)
 - (6) Uncontaminated pumped ground water
 - (7) Discharges from potable water sources
 - (8) Foundation drains
 - (9) Air conditioning condensate
 - (10) Irrigation water
 - (11) Springs
 - (12) Water from crawl space pumps
 - (13) Footing drains
 - (14) Lawn watering
 - (15) Individual residential car washing
 - (16) Flows from riparian habitats and wetlands
 - (17) Dechlorinated swimming pool discharges
 - (18) Street wash water
 - (19) Discharges or flows from fire fighting activities

DRAFT 7/7/03**Permit Number: 1200-MS4****Expiration Date:****Page 5 of 15****2. Storm Water Management Program Plan Requirements**

The permittee must develop, implement, enforce, and measure the effectiveness of a Storm Water Management Program (SWMP) plan designed to reduce the discharge of pollutants from the permittee's small MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the federal Clean Water Act and State of Oregon water quality regulations. The SWMP plan should include management practices, control techniques, system design and engineering methods, and other such provisions the Department determines appropriate for the control of such pollutants. The permittee's SWMP plan must include the following information for each of the six minimum control measures described in Schedule A, Condition 3 of this permit:

- a. The structural and non-structural best management practices (BMPs) that the permittee or another entity will implement for each of the 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 responsible for implementing or coordinating the BMPs for the permittee's SWMP.
- d. In addition to the requirements listed above, the permittee must provide a rationale for how and why the permittee selected each of the BMPs and measurable goals for the permittee's storm water management program.

3. Minimum Control Measures

The permittee must address the following six minimum control measures in its SWMP:

- a. Pollution Prevention in Municipal Operations
 - i. The permittee must develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations; and
 - ii. Using training materials that are available from the Department, EPA, or other organizations, the permittee's program must include employee training to prevent and reduce storm water pollution from activities including, but not limited to, park and open space maintenance, fleet and building maintenance, new municipal facility construction and related land disturbances, design and construction of street and storm drain systems, and storm water system maintenance.
- b. Public Education and Outreach on Storm Water Impacts
The permittee 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 that the public can take to reduce pollutants in storm water runoff.
- c. Public Involvement/Participation
The permittee must at a minimum, comply with State, Tribal, and local public notice requirements when implementing a public involvement/participation program.
- d. Illicit Discharge Detection and Elimination
The permittee must:
 - i. Develop, implement and enforce a program to detect and eliminate illicit discharges [as defined in 40 CFR §122.26(b)(2)] into the permittee's small MS4;

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- ii. Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States and/or the State of Oregon that receive discharges from those outfalls;
 - iii. To the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the permittee's storm sewer system and implement appropriate enforcement procedures and actions. Possible sanctions include non-monetary penalties (such as stop work orders), fines, bonding requirements, and/or permit denials for non-compliance.
 - iv. Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the permittee's 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 (illicit discharges) if the permittee identifies them as substantial contributors of pollutants to the permittee's small 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, 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 substantial sources of pollutants to waters of the United States and the State of Oregon.
 - vii. The permittee must also develop a list of other similar occasional incidental non-storm water discharges (e.g. non-commercial or charity car washes) that will not be addressed as illicit discharges. These non-storm water discharges must not be reasonably expected (based on information available to the permittees) to be substantial sources of pollutants to the MS4, either because of the nature of the discharges or conditions the permittee have established for allowing these discharges to the permittee's MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive waterbodies, BMPs on the wash water). The permittee must document in the permittee's storm water management program plan any local controls or conditions placed on the discharges. The permittee must include a provision prohibiting any individual non-storm water discharge that is determined to be contributing substantial amounts of pollutants to the permittee's MS4.
 - viii. The permittee must develop a process to respond to and document complaints relating to illicit discharges.
- e. Construction Site Storm Water Runoff Control
The permittee must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the permittee's small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in the permittee's 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 requirements for storm water discharges associated with small construction activity in accordance with 40 CFR §122.26(b)(15)(i), the permittee is not required to develop, implement, or enforce a program to reduce pollutant discharges from such sites. The permittee's program must include the development and implementation of, at a minimum:

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- 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 or local law;
 - ii. Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;
 - iii. Requirements for construction site operators to prevent or control waste that may cause adverse impacts to water quality such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site;
 - iv. Procedures for site plan review that incorporate measures to prevent or control potential water quality impacts;
 - v. Procedures for receipt and consideration of information submitted by the public; and
 - vi. Procedures for site inspection and enforcement of control measures.
- f. Post-Construction Storm Water Management in New Development and Redevelopment
The permittee must:
- i. Develop, implement, and enforce a program to ensure reduction of pollutants in storm water runoff to the maximum extent practicable (MEP) from new development and redevelopment projects that disturb one acre or more, or less than one acre if they are part of a larger common plan of development or sale, and discharge into the permittee's small MS4. The permittee's program must ensure that controls are in place that would prevent or minimize water quality impacts.
 - ii. Develop and implement strategies that include a combination of structural or non-structural BMPs appropriate for the permittee's community, and
 - (1) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law;
 - (2) Ensure adequate long-term operation and maintenance of BMPs; and
 - (3) Ensure adequate enforcement of ordinance or alternative regulatory program.

4. Sharing Responsibility

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

- a. The other entity implements the control measure;
- b. The particular control measure, or component of that measure, is at least as stringent as the corresponding permit requirement.
- c. 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 storm water management program. If the other entity agrees to report on the minimum measure, the permittee must supply the other entity with the reporting requirements contained in Schedule B, Condition 3. 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.

5. Reviewing and Updating Storm Water Management Program (SWMP)

- a. *SWMP Review*: The permittee must do an annual review of its SWMP in conjunction with preparation of the annual report required under Schedule B, Condition 3.
- b. *SWMP Update*: The permittee may change its SWMP during the permit term in accordance with the following procedures:

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- i. Changes adding, but not subtracting or replacing, components, controls, or requirements to the SMWP may be made at any time upon written notification to the Department.
 - ii. The permittee must submit a written request to the Department to replace an ineffective or infeasible BMP specifically identified in the SWMP with an alternate BMP. Unless denied by the Department, changes proposed in accordance with the criteria below will be deemed approved and may be implemented 60 days from submittal of the request. If a request is denied, the Department will send the permittee a written response giving a reason for the decision. The permittee's requests to replace BMPs must include the following:
 - (1) An analysis of why the BMP is ineffective or infeasible (including cost prohibitive),
 - (2) Expectations on the effectiveness of the replacement BMP, and
 - (3) An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.
 - iii. Change requests or notifications must be made in writing and signed in accordance with Schedule F, Section D(5).
 - iv. Only those portions of the SWMP specifically required as permit conditions are subject to the modification requirements of 40 CFR §124.5. Addition of components, controls, or requirements by the permittee and replacement of an ineffective or infeasible BMP (that implements a required component of the SWMP) with an alternate BMP expected to achieve the goals of the original BMP are considered minor changes to the SWMP and not modifications to the permit
- c. *SWMP Updates Required by the Department:* The Department may require changes to the permittee's SWMP as needed.
- i. The changes required by the Department may be needed to:
 - (1) Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;
 - (2) Include more stringent requirements necessary to comply with new federal or state statutory or regulatory requirements;
 - (3) Include such other conditions deemed necessary by the Department to comply with the goals and requirements of the federal Clean Water Act or state regulations; or
 - (4) Remove BMPs from the SWMP that are determined to be ineffective.
 - ii. Changes requested by the Department will 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 40 CFR §124.5, 122.62 or 122.63 as appropriate.
- d. *Transfer of Ownership, Operational Authority, or Responsibility for SWMP Implementation:* The permittee must implement its SWMP in all new areas added to the permittee's portion of the MS4 (or areas for which the permittee becomes responsible for SWMP implementation) as expeditiously as practicable, but not 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. Within 90 days of a transfer of ownership, operational authority, or responsibility for SWMP implementation, the permittee must have a plan for implementing its SWMP on all affected areas. The plan must include schedules for implementation.

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Schedule B
MONITORING AND REPORTING REQUIREMENTS

1. Minimum Monitoring Requirements

The permittee must evaluate program compliance, the appropriateness of identified best management practices, and progress toward achieving identified measurable goals. Monitoring of storm water discharged from outfalls or monitoring of the quality of receiving water bodies are not requirements of this permit. However, if such monitoring is undertaken as part of a permittee's program evaluation efforts, the requirements described in Schedule F, Section C(1) and C(2) must be followed. The types of monitoring information that must be maintained in such cases are specified in Schedule F, Section C(6).

2. Record keeping.

The permittee must submit its records to the Department upon request. The permittee must retain a description of the Storm Water Management Program (SWMP) required by this permit at a location accessible to the Department. The permittee must make the records subject to the public records law, including the permit application and the description of its SWMP, available to the public if requested to do so in writing. The permittee must also comply with the records retention requirements in Schedule F, Section C(5).

3. Annual Reporting Requirements

The permittee must submit the following to the Department's Water Quality Division using a reporting form approved by the Department:

- a. The status of the permittee's compliance with permit conditions, an assessment of the appropriateness of the identified best management practices (using available guidance from the Department), progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and the measurable goals for each of the minimum control measures;
- b. Results of information collected and analyzed, if any, during the reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP;
- c. A summary of the storm water activities the permittee plans to undertake during the next reporting cycle (including an implementation schedule);
- d. Proposed changes to the permittee's storm water management program, including changes to any BMPs or any identified measurable goals that apply to the program elements;
- e. Information on all new annexed areas and any resulting updates required to the SWMP (if applicable);
- f. Notice that the permittee is, through an inter-local agreement, relying on another government entity to satisfy some of the permittee's permit obligations (if applicable); and
- g. Enforcement actions taken.

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Schedule C
COMPLIANCE CONDITIONS AND SCHEDULES

1.

1. Initial Implementation of SWMP

No later than 90 days after the Department issues this permit , the permittee must begin implementation of its SWMP.

2. Submittal of TMDL or 303(d) Pollutant Discharge Amendments to the SWMP Plan

The permittee must submit amendments to the SWMP related to completed TMDL waste load allocations or 303(d) listed pollutants within 18 months of permit issuance, as described in Schedule D (2)(b) and (c).

3 Full Implementation of SWMP

The permittee must fully implement its SWMP, as defined by the measurable goals established by the permittee's SWMP plan, within 5 years of obtaining permit coverage. To adequately fulfill this requirement, the permittee must complete the implementation of all of the BMPs it has proposed to address the six minimum measures described in Schedule A, Condition 3.

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**Schedule D
SPECIAL CONDITIONS**

1. Legal Authority

The permittee must maintain, through ordinance, interagency agreement or other means, adequate legal authority to implement and enforce the provisions of this permit.

2. Total Maximum Daily Load (TMDL) Requirements

- a. *Applicability of TMDL requirements.* If a permittee's storm water discharges contribute directly or indirectly to a "303(d)" listed (i.e., impaired) waterbody(s), the permittee must determine whether a TMDL has been developed and approved by the Department for the listed waterbody(s) that assigns a wasteload allocation (WLA) to the storm water discharge. If there is a WLA, the permittee must comply with Schedule D, Condition 2(b) below. If no WLA has been assigned to the discharge, the permittee must comply with Schedule D, Condition 2(c).
- b. *Water Quality Controls for Discharges to Impaired Waterbodies with Completed TMDLs.* The permittee must amend its SWMP plan to include a section describing how the program is designed to control the discharge of pollutants to ensure that the permittee's discharges will attain the storm water wasteload allocations established by the TMDL. This section of the SWMP plan must specifically identify measures and BMPs that will collectively control the discharge of the pollutants identified in the TMDL, and must explain how the permittee determined these measures will result in attainment of the waste load allocation(s). This plan amendment is due 18 months after the date of permit issuance.
- c. *Water Quality Controls for Discharges to Impaired Waterbodies with TMDLs Completed After Permit Issuance.* The permittee must conduct an analysis to determine whether its MS4 discharges are a contributor, or likely contributor, of pollutants on the "303(d)" for water body(s) to which it discharges. Once this analysis is completed, the permittee must amend its SWMP plan to include a section describing how the program is designed to control the discharge of "303(d) listed" pollutants to the maximum extent practicable. This section of the SWMP plan must specifically identify measures and BMPs that will collectively control the discharges of these 303(d) listed pollutants. This plan amendment is due 18 months after the date of permit issuance.

3. Definitions

- a. **Illicit Discharge:** Any discharge to a municipal separate storm sewer that is not composed entirely of storm water, except discharges pursuant to another NPDES permit, discharges resulting from fire fighting activities, and those discharges authorized by Schedule A, Condition 1(b)(ii) of this permit.
- b. **Maximum Extent Practical (MEP):** The statutory standard that establishes the level of pollutant reductions that operators of regulated MS4s must achieve. This standard is considered met if the conditions of the permit are met and the six minimum measures, outlined in this permit, are implemented (*December 8, 1999 Federal Register, Vol. 64, No. 235, Page 68754*)
- c. **Measurable Goals:** Best management practice (BMP) design objectives or targets that quantify the progress of program implementation and the performance of BMPs.
- d. **Municipal Separate Storm Sewer:** A conveyance, or system of conveyances, that is owned or operated by a State, city, town borough, county, parish, district, association, or other public body designed or used for collecting or conveying storm water which not a combined sewer and which is not part of a Publicly Owned Treatment Works as defined in 40 CFR §122.2.

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- e. **Municipal Separate Storm Sewer System (MS4):** Any separate storm sewers that are defined as “large” or “medium” or “small” municipal separate storm sewer systems pursuant to 40 CFR §122.26(b)(4), 40 CFR §122.26(b)(7), and 40 CFR §122.26(b)(16), or designated under 40 CFR §122.26(a)(1)(v).

- f. **Operator of Small MS4:** An operator is the governmental entity (e.g., city, county, special district) that owns the storm sewer system or has direct responsibility for the functioning of the system. For the purposes of this permit, the operator cannot be a private contractor.

- g. **Small Municipal Separate Storm Sewer System (Small MS4):** All separate storm sewers that:
 - i. Meet the definition of an MS4 provided in Schedule D, Condition 3(e) above.
 - ii. Are not defined as a “medium” or “large” municipal separate storm sewer system pursuant to 40 CFR §126.26(b)(4) and (b)(7), or designated under 40 CFR §126.26(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 sewer in very discrete areas, such as individual buildings.

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**Schedule F
NPDES GENERAL CONDITIONS**

SECTION A. STANDARD CONDITIONS

1. Duty to Comply
The permittee must comply with all applicable conditions of this permit. Any permit non-compliance constitutes a violation of Oregon Revised Statutes (ORS) 468B.025 and is grounds for enforcement action; permit termination, suspension or modification; or denial of a permit renewal application.
2. Penalties for Violations of Permit Conditions
ORS 468.140 allows the Director to impose civil penalties up to \$10,000 per day for violation of a term, condition, or requirement of a permit. In addition, a person who unlawfully pollutes water as specified in ORS 468.943 or ORS 468.946 is subject to criminal prosecution.
3. Duty to Mitigate
The permittee must take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment. In addition, upon request of the Department, the permittee must correct any adverse impact on the environment or human health resulting from non-compliance with this permit, including any accelerated or additional monitoring necessary to determine the nature and impact of the non-complying discharge.
4. Duty to Reapply
If any or all of the permittees wish to continue the discharge of storm water regulated by this permit after the permit expiration date, the permittee(s) must apply to have the permit renewed. The application must be submitted at least 180 days before the expiration date of this permit.

The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions
This permit may be modified, suspended, revoked and reissued, or terminated with respect to a permittee for cause including, but not limited to, the following:
 - a. The violation of any term, condition, or requirement of this permit, a rule, or a statute;
 - b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts; or
 - c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
 - d. The filing of a request by any or all of the permittees for a permit modification or a notification of planned changes or anticipated non-compliance does not stay any permit condition.
6. Toxic Pollutants
The permittees must comply with any applicable effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants in storm water within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
7. Property Rights
The issuance of this permit does not convey any property rights of any sort or any exclusive privileges.
8. Permit Reference
Except for effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

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SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance
The permittee must at all times properly operate and maintain all MS4 facilities and systems of treatment and control (and related appurtenances) within the permittee's jurisdiction 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.
2. Removed Substances
Solids and other pollutants removed in the course of maintaining the MS4 must be recycled, reused and/or disposed of in such a manner as to prevent pollutants entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling
Sampling and measurements taken as required herein must be representative of the monitored activity. All samples must be taken at the monitoring points specified in this permit. Monitoring points must not be changed without notification to and the approval of the Department.
2. Monitoring Procedures
Monitoring must be conducted according to test procedures approved under 40 CFR §136, unless other test procedures have been specified in this permit or subsequent permit actions.
3. Penalties of Tampering
The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit must, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both.
4. Additional Monitoring by the Permittee
If a permittee monitors any pollutant specified in Schedule B at any sample point specified in Schedule B of this permit more frequently than required by this permit, using test procedures approved under 40 CFR §136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the annual report required by Schedule B. The increased frequency must also be indicated.
5. Retention of Records
The permittee must 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 permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Department at any time.
6. Content of Records
Records of monitoring information must include:
 - a. The date, exact place, time and methods of sampling or measurements;
 - b. The name(s) of the individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The name(s) of the individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.

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7. Inspection and Entry

The permittee must allow the Department, or an authorized representative upon the presentation of credentials, to:

- a. 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;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
- d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by State Law, any substances or parameters at any location within the MS4.

SECTION D. REPORTING REQUIREMENTS

1. Anticipated Non-compliance

The permittee(s) must give advance notice to the Department of any planned changes in the permitted facilities or activities which may result in non-compliance with permit requirements.

2. Transfers

This permit may be transferred to a new permittee(s) provided the transferee(s) acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit will be transferred to a third party without prior written approval from the Director or designated representative. The permittee must notify the Department when a transfer of property interest takes place which results in a change of permittee(s).

3. Compliance Schedule

Reports of compliance or non-compliance 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. Any reports of non-compliance must include the cause of non-compliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

4. Duty to Provide Information

The permittee must furnish to the Department, within a reasonable period of time, any information which the Department may request to determine compliance with this permit. The permittee must 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 in a permit application, or submitted incorrect information in a permit application or any report to the Department, it must promptly submit such facts or information.

5. Signatory Requirements

All applications, reports or information submitted to the Department must be signed and certified in accordance with 40 CFR §122.22.

6. Falsification of Reports

A person who supplies the Department with false information, or omits material or required information, as specified in ORS 468.953 is subject to criminal prosecution

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Chapter 2 - Stormwater Public Education and Outreach Program

2.1 Requirements

The Stormwater Phase II Final Rule, published in December 1999, lists the following information as the regulatory requirements for public education. This Regional Stormwater Program *Guide* is intended to meet these EPA regulations and provide a template for meeting the Phase II permit the Oregon Department of Environmental Quality issues to Rogue Valley jurisdictions. The following guidance section from the Phase II Rule provides additional details on the preceding regulations.

Regulations	40 CFR 122.34(b)(1) Public education and outreach on stormwater impacts (i) 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.
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Guidance	40 CFR 122.34(b)(1) Public education and outreach on stormwater impacts You may use stormwater educational materials provided by your state, tribal, EPA, environmental, public interest or trade organizations, or other MS4s. The public education program should inform individuals and households about the steps they can take to reduce stormwater pollution, such as ensuring proper septic system maintenance, ensuring the proper use and disposal of landscape and garden chemicals including fertilizers and pesticides, protecting and restoring riparian vegetation, and properly disposing of used motor oil or household hazardous wastes. EPA recommends that the program inform individuals and groups how to become involved in local stream and beach restoration activities as well as activities that are coordinated by youth service and conservation corps or other citizen groups. EPA recommends that the public education program be tailored, using a mix of locally appropriate strategies, to target specific audiences and communities. Examples of strategies include distributing brochures or fact sheets, sponsoring speaking engagements before community groups, providing public service announcements, implementing educational programs targeted at school age children, and conducting community-based projects such as storm drain stenciling, and watershed and beach cleanups.
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Guidance	<p>40 CFR 122.34(b)(1) Public education and outreach on stormwater impacts</p> <p>In addition, EPA recommends that some of the materials or outreach programs be directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant stormwater impacts. For example, providing information to restaurants on the impact of grease clogging storm drains and to garages on the impact of oil discharges. You are encouraged to tailor your outreach program to address the viewpoints and concerns of all communities, particularly minority and disadvantaged communities, as well as any special concerns relating to children.</p>
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2.2 Benefits: Why this Program is Important

Successful implementation of the overall stormwater management program depends on more than just the actions of the municipality’s staff – it depends on the everyday actions of the people who live and work within the municipality. Each community is comprised of different target audiences. Audiences important to the success of a stormwater public education program include: 1) the residential community, 2) commercial/business community, 3) industrial sector, and 4) the development community. Unfortunately, not everyone in these audiences knows and understands the impact of their actions on the quality and quantity of stormwater runoff. Each audience has varying attitudes, perceptions, and levels of awareness that influence their behaviors.

An effective way to influence attitudes, change perceptions, provide accurate information, and modify behavior is through a public education and outreach program. Through education and outreach, target audiences gain a greater understanding of water quality impacts from stormwater discharges and the steps necessary to reduce stormwater pollution. As a result, members of these target audiences may help with the implementation of a stormwater management program by providing valuable resources and support (e.g., financial support, volunteer time, equipment). Benefits from an effective public education and outreach program can include:

- Reductions in the discharge of stormwater pollutants to water bodies and improved overall water quality.
- Increased compliance with the program, minimizing costs incurred for implementation of other minimum measures (e.g., less frequent stormwater system maintenance, fewer illicit discharges and connections).
- An educated public passing this information on to others, reducing the burden associated with conducting all educational activities.
- Greater opportunities to leverage resources among community partners willing to participate in program implementation.

2.3 Regional Guide for Stormwater Public Education and Outreach

The steps for developing an effective public education program include:

- Understanding each target audience
- Developing messages that will result in practices that do not pollute stormwater on part of target audience
- Distributing messages in an appropriate format using each target audience's existing communication channels

Addressing each of these steps is necessary when developing outreach and education materials and activities. The first action is to develop an education and outreach strategy that is specific to the issues in the local community. This stormwater education and outreach strategy is developed in order to select and prepare for implementation of additional education and outreach BMPs.

After developing the outreach strategy, the next step is to identify appropriate BMPs to implement the strategy. Note that depending on the community and outreach strategy developed, more than one BMP may be necessary in order to effectively implement the strategy. Consider one or more of the following BMPs to implement the outreach strategy:

- Develop and distribute a brochure or equivalent outreach materials to inform the general public about stormwater issues and of the hazards associated with illicit discharges and improper disposal of waste.
- Develop and distribute a stormwater brochure.
- Organize storm drain stenciling projects.
- Promote water quality education with school districts.
- Work with volunteer groups on stormwater education projects.
- Create a stormwater speaker's bureau.
- Develop stormwater public service announcements.
- Create a stormwater display.
- Create a stormwater web site.

This *Regional Guide* includes the public education BMPs listed above as examples of common public education activities. It is also acceptable to select and implement a different, but equivalent, BMP from those identified above. This may be necessary when an alternative idea for an educational BMP is a better fit for a particular community. If an alternative BMP is selected, include in the stormwater management plan a brief discussion on why the chosen BMP is equivalent to the other BMPs listed above.

2.3.1 Develop a Stormwater Education and Outreach Strategy

The stormwater outreach strategy is a required BMP. The outreach strategy will identify one or more additional BMPs to be implemented. These additional BMPs that could be implemented in the outreach strategy are described in Appendix 2B.

BMP 2A: Develop and implement a stormwater education and outreach strategy that examines target audiences. Include in the strategy information on the hazards associated with illicit discharges and improper disposal of waste.

Measurable Goal: Develop a stormwater education and outreach strategy for implementing appropriate BMPs during the permit term. *(Establish specific goals in the individual plan for each jurisdiction.)*

An effective education and outreach program begins with a comprehensive education and outreach strategy. The strategy focuses on identifying target audiences, including what they value and how they communicate. This information directly relates to determining the other education and outreach BMPs that are most appropriate for target audiences. Provided below is a description of how to develop an education and outreach strategy. It is a two-step approach that begins with characterizing target audiences and then crafting the strategy itself.

Step 1. Characterize Target Audiences

Specific groups within the community may have the potential to contribute pollutants to stormwater. If so, document characteristics about these groups for use in developing and distributing educational materials. For example, restaurants can generate significant quantities of grease which, if not properly disposed of, can pollute stormwater runoff. There may be other potential partners to help in implementing the education and outreach program. For example, a local restaurant association may be able to efficiently pass information to its members on proper stormwater practices. Information about each target audience plays an important role in tailoring educational materials. Some questions to consider when identifying target audiences are included in Appendix 2C.

In order to characterize the target audience, it is necessary to identify target audience categories, describe the major water quality concerns of the target audience, and identify potential partner organizations. The following bullets provide more information on these activities:

- Identify categories of target audiences that have the greatest potential to impact the storm drainage system.

Although some generalized educational materials are suitable for the general population, tailored educational materials for sub-groups of the

general population are also necessary to improve effectiveness. These sub-groups can share similar characteristics such as attitudes, perceptions, motivations, socio-economic standing, language, education, and age. Many stormwater educational programs focus on homeowners, developers, business owners, students, and government employees. It is also possible to further identify sub-groups to create even more specific target audiences. For example, the sub-group of homeowners breaks down further into auto repair do-it-yourselfers, gardeners, home repair do-it-yourselfers, homeowners on septic systems, and riparian landowners. These sub-groups are target audiences, and their characteristics drive the planning and implementation of the public education and outreach program.

- Identify target audience concerns using knowledge of the community and other sources of information.

Common methods of identifying target audience concerns include the use of focus groups, surveys, and interviews. These can be time and resource intensive undertakings. A quick and cost-effective way to identify target audience concerns is to use existing knowledge of the community and common sources of local information (e.g., newspapers, newsletters, meetings, community events, trade associations, yellow pages, fraternal organizations, chambers of commerce). By answering the following questions for each target audience, a rough characterization can be produced for use in developing and distributing educational materials.

Example Questions for Describing Target Audience Concerns

- What is the name of the target audience?
- How large is the audience?
- How do they receive their information about community issues?
- How do they communicate with each other?
- What organizations focus on serving them/meeting their needs?
- What organizations do they belong to?
- What do they value as a group?
- What is their attitude toward stormwater and water quality issues?

In addition to this information, contact information for each target audience is also necessary. This information is important for distributing educational materials. Contact information for target audiences may include the organizations and associations that regularly distribute information to specific target groups (i.e., fishing clubs, homeowner associations, neighborhood councils, business associations, Rogue Valley Civic League, realtors, Home Builders Assn., etc.). Typically, these groups are willing to assist in getting information out to their members or provide their mailing list for distribution of pre-approved information.

To reach a broader audience, consider using utility bill inserts, tax record databases, or postal carrier route distribution to specific postal codes. This type of database information is available from various municipal departments (e.g., property tax office, utilities) or from local organizations such as the chamber of commerce or other civic associations.

- Identify potential partner organizations.

In addition to target audiences who will receive educational materials, identify organizations that have the capacity to assist with education and outreach efforts. Consider organizations that currently have volunteerism or community service as part of their mission (e.g., Boy and Girl Scout troops, Rogue Valley Civic League, and Rotary, Kiwanis, and Lions clubs), that focus on environmental protection (e.g., school environmental clubs, Bear Creek Watershed Education Partners (BCWEP), North Mountain Park, Jefferson Nature Center, Oregon Stewardship, Salmon Watch), or work to improve the community's quality of life (e.g., neighborhood groups, church groups, environmental organizations).

Many of these organizations, including individual businesses, conduct regular or annual community service projects. They are often looking for projects that members or employees would enjoy working on. Consider contacting these organizations to begin establishing partnerships and collaborative efforts. Suggest activities, such as storm drain stenciling and stream cleanups that would be mutually beneficial to both the municipality and the partner organization.

Step 2. Develop Education and Outreach Strategy

Using information about the storm drainage system and target audiences, develop an education and outreach strategy to help implement the overall program. The strategy identifies a variety of information, including the driving force (i.e., key problems caused by stormwater associated with the target audience); the key message(s); the objective (e.g., raise awareness, educate, or motivate action); the format for delivering the message; the distribution method; and the responsible parties and/or partners. There are no requirements related to the format of the strategy. The strategy may consist of a comprehensive document or it may be a completed version of the table shell provided in Appendix 2B.

In order to develop the education and outreach strategy it is necessary to identify, using the target audience characterization completed in step 1 above, key stormwater issues and educational materials and distribution methods. Additional information on these activities is found below:

- Identify key problems caused by stormwater and potential solutions.

The goal of this minimum measure is to inform target audiences about the impacts of stormwater on water quality and motivate them to implement solutions. To achieve this goal, education and outreach materials must

contain information about stormwater problems affecting water quality in the community and potential solutions.

Without sampling and analysis, it is appropriate to make general assumptions about the pollutants impacting stormwater runoff based on the types of land uses found within the community. For example, areas experiencing new and re-development may contribute significant amounts of sediment to the storm drainage system. Elevated levels of nutrients from lawn care, pet wastes, and improper connections with the sanitary system are often associated with residential areas.

For more specific information about water quality problems due to stormwater impacts, review monitoring data from the Oregon State Department of Environmental Quality (see <http://www.deq.state.or.us/wq/>) collected to develop 305(b) water quality assessment reports and 303(d) impaired water body listings for the Total Maximum Daily Loads (TMDL) Program. Also, contact local watershed councils, schools and the Rogue Valley Council of Governments who conduct volunteer water quality monitoring to determine if their data characterize stormwater pollutants.

Once a better understanding of the key problems associated with stormwater is developed, identify the solutions to be promoted in educational materials for various target audiences. Solutions must be technically, legally, economically, and socially feasible. Otherwise, implementation of these solutions by target audiences is unlikely. Remember, the messages used to “sell” each solution must focus on the benefits to the target audience – not necessarily the benefits to water quality – to be effective. Although there must be an emphasis on the connection between behavior and water quality, educational materials must promote factors such as cost-savings, good publicity, legal consequences, or friendly competition that serve as the target audience’s primary motivation.

- Develop educational materials and plan distribution methods.

Organizations within Oregon and around the country have developed a wide range of educational materials that address stormwater pollution. Their materials often focus on stormwater as a non-point source, but the problems, solutions, and messages still apply in the context of a stormwater program. To avoid duplication of efforts, identify existing educational resources that contain appropriate messages and use appropriate formats for the target audiences listed in the education and outreach strategy. Contact the organizations responsible for producing these materials to inquire about adopting and adapting these materials. Ask about licensing fees associated with using photographs or specific requirements for crediting funding agencies. The appendices to this chapter contain several examples of existing educational materials that can be used for stormwater educational purposes.

Using the target audience characterization, determine the best mechanisms for distributing educational materials to each target audience. Where possible, take advantage of existing communication channels and “piggyback” the distribution of stormwater educational materials. The goal is to have target audiences hear the educational message and adopt practices that do not pollute stormwater; creative distribution is key to having a target audience “hear” and respond to a message.

2.3.2 Stormwater Brochure for the General Public

BMP 2B: Develop and distribute a brochure or equivalent program to inform the general public about stormwater issues and of the hazards associated with illicit discharges and improper disposal of waste.

Measurable Goal: Distribute the brochure to residences and businesses served by the storm drain system. (*Establish specific goals in the individual plan for each jurisdiction.*)

Develop and distribute a general brochure on stormwater. The purpose of this brochure is to address how stormwater can impact water quality and the steps that people can take to reduce stormwater pollution (e.g., do not dump to storm drains). This brochure does not need to be tailored to each specific community. In fact, there are many examples of stormwater outreach materials available from other cities and states for adaptation and/or adoption. One element of the illicit discharge detection and elimination minimum measure (Chapter 4) is to “inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.” This BMP fulfills this element.

An example of a public educational brochure on stormwater issues and hazards of illegal dumping is included in Appendix 2A. This brochure, from Eugene, Oregon (<http://www.ci.eugene.or.us/pw/storm/generalinfo.htm>), focuses on stormwater management in Eugene, but the language could be easily adapted to address a local water body or ground water. The brochure describes stormwater and its impacts, and lists some of the problems and solutions, or “things you can do,” to help protect water quality.

Additional examples of public education brochures are available online at:

- *Do You Know Where the Water In Your Storm Drain Goes?* Orange County Urban Stormwater Pollution Prevention Program.
http://www.sanjuancapistrano.org/media/PolPrev_StormWater.pdf
- *Stormwater Outreach Materials and Reference Documents – EPA*
<http://cfpub1.epa.gov/npdes/stormwatermonth.cfm>
- *The Center for Watershed Protection’s stormwater managers site.*
<http://www.stormwatercenter.net>

- *Denver Regional Council of Governments*. Excellent regional program with abundant links and resources for outreach. Denver, CO. http://www.drcog.org/reg_growth/water/StormWater.htm
- *City of Eugene, Oregon Stormwater Program*. <http://www.ci.eugene.or.us/pw/storm/index.htm>
- *The Regional Coalition for Clean Rivers and Streams*. Portland, Oregon metropolitan area. <http://www.cleanriversandstreams.org>
- *Think Blue. Easy Solutions for Keeping Our Creeks, Bays, and Ocean Clean*. City of San Diego. http://thinkbluesd.org/brochures/ThinkBlue_Brochure.pdf
- *Managing Stormwater: Changes and Challenges in Carrollton*. City of Carrollton. <http://www.cityofcarrollton.com/images1/envquality/pdf/SWManage.pdf>
- *Stormwater Pollution: Keeping Our Creeks Clean Starts with You*. City of Carrollton. <http://www.cityofcarrollton.com/images1/envquality/pdf/SWPollution.pdf>

Additional Distribution Methods:

There are many opportunities to “piggyback” the distribution of educational materials onto the distribution of others such as newspapers, newsletters, and community events. Take advantage of these existing communication channels for distributing materials and messages in an effective and cost-efficient manner. Consider distributing materials in the following ways:

- Make materials available at city offices and selected facilities (e.g., park offices, libraries, schools).
- Distribute information through various community, association and organization newsletters, as inserts in your local newspaper, through utility bills as inserts, or other methods developed under BMP 2B.
- Participate in and distribute stormwater material during appropriate public events (e.g., Earth Day events, county fairs, stream clean-ups).

Exposing target audiences to a message on a regular basis can raise awareness. A combination of formats and distribution channels to reach each target audience is beneficial. A feedback mechanism can be developed for evaluating the effectiveness of the materials and the changes in target audiences’ level of awareness regarding stormwater.

2.3.3 Targeted Stormwater Brochures

BMB 2C: Develop and distribute stormwater brochures that address a variety of different target audiences.

Measurable Goal: Distribute targeted brochures according to the education and outreach strategy for each target audience. *(Establish specific goals in the individual plan for each jurisdiction.)*

Appendix 2D presents an example of a targeted stormwater outreach brochure for homeowners. Other brochures target restaurants, automobile repair shops, government agencies, the construction industry, and other businesses (see <http://www.cleanwaterservices.org> for a list of all the brochures). Each brochure describes specific practices for protecting water quality as well as practices to avoid.

Brochures targeted and written specifically for the audience are often more effective than general brochures. The stormwater education and outreach strategy (BMP 2A) will provide direction on target audiences and issues to consider when developing targeted brochures.

Target audiences include residents, businesses, industries, and developers. Consider addressing topics such as pet waste management, pollution prevention tips for landscaping, proper disposal of household hazardous waste, pesticide use, do-it-yourself auto maintenance, car washing, and/or pavement deicing.

2.3.4 Storm Drain Stenciling

BMP 2D: Plan and conduct storm drain stenciling projects using “Do Not Dump – Drains to Stream” or an equivalent message on storm drain inlets draining to the system.

Measurable Goal: Stencil all storm drain inlets within the storm drain system boundary. *(Establish specific goals in the individual plan for each jurisdiction.)*

Stenciling storm drains with messages such as “Do Not Dump – Drains to Stream” or “Do Not Dump – Drains to Ground Water” have proven very effective in many jurisdictions. Some residents still do not know that material placed in storm drains is not treated at a wastewater treatment plant before reaching a river or infiltrating into ground water. These permanent messages on storm drains serve as constant reminders and teaching tools for everyone who sees them.

There are several options to consider in terms of what type of stencils to use and how to get the job done. First is to consider enlisting the aid of volunteer organizations. Second is to decide on the method of applying the messages. To apply the “no dumping” messages, use either actual stencils that require paint or signs and emblems out of plastic and metal

that permanently affix. Labor for stenciling can come from either municipal employees or volunteers. Set a goal to complete a certain amount of storm drain stenciling by the end of the first permit term. Using the storm sewer system map completed for the Illicit Discharge Detection and Elimination minimum measure (described in Chapter 4), prioritize storm drain inlets according to potential risk (e.g., inlets with a history of illegal dumping; inlets located near industries with outdoor, uncovered operations; and inlets located near areas with high rates of development) and begin stenciling projects in those areas.

Prior to initiating stenciling projects, conduct targeted education in the surrounding neighborhoods. Brochures explaining the storm drain stenciling project will notify households of the activity and its purpose. Distribute these brochures either via mail or find volunteers to deliver it door-to-door.

To order stencils from the Oregon Department of Environmental Quality call (800) 452-4011. Stencils and logistical information is available from Earthwater Stencils' website: <http://www.earthwater-stencils.com/index.htm>

2.3.5 Promote Water Quality Education with School Districts

BMP 2E: Contact school districts to discuss opportunities to integrate water quality educational materials into the classroom and provide educational materials when requested by schools.

Measurable Goal: Contact school districts within the storm drain system boundary to discuss water quality educational opportunities in the classroom. *(Establish specific goals in the individual plan for each jurisdiction.)*

For this BMP, contact all schools districts within the storm drain system and offer to distribute appropriate water quality educational materials. If feasible, offer staff from a department involved in stormwater management to teach some of the material or organize alternative educational efforts such as tours of wastewater treatment plants or stream restoration visits.

The Oregon Department of Environmental Quality lists Classroom Curriculum Guides (K-12) that could be distributed to local schools. See the web site <http://www.deq.state.or.us/programs/education.htm> for more information. DEQ also holds workshops for teachers on Project WET, Water Education for Teachers. Additional information can be found on DEQ's web site.

Below are three examples of educational programs specifically developed for schools:

Bear Creek Watershed Education Partners (BCWEP)

Communities and schools in the Bear Creek watershed in southwest Oregon have banded together to form a membership organization that offers participants the opportunity to learn from each other and a forum for discussing environmental education issues. BCWEP develops funding proposals that provide support for a variety of outdoor education activities. For more information, see <http://www.bcwep.org/>

Boise's Environmental Presentations to Schools

The city of Boise, ID, Environmental Division staff teach environmental programs in Boise public schools focusing on the elementary grades. Presenters provide visuals, hands-on activities, materials for students to keep and supplemental teaching materials, if requested. Each presentation is interactive and can accommodate a variety of grade levels. One hour presentations on ground water protection and stormwater protection, along with other topics, have been created. For more information, see http://www.cityofboise.org/public_works/education/ or contact the Boise City Public Works Department.

EPA's Water Sourcebooks

EPA's Water Sourcebooks are also available as an educational program. The Water Sourcebooks contain 324 activities for grades K-12 divided into four sections: K-2, 3-5, 5-8, and 9-12. Each section is divided into five chapters: Introduction to Water, Drinking Water and Wastewater Treatment, Surface Water Resources, Ground Water Resources, and Wetlands and Coastal Waters. The program is available on the web for printing and use by educators. <http://www.epa.gov/ogwdw000/kids/wsb/index.html>

2.3.6 Work with Volunteer Groups on Stormwater Education Projects

BMP 2F: Contact volunteer organizations to discuss opportunities to integrate stormwater into existing education projects.

Measurable Goal: Contact several volunteer organizations to discuss and promote stormwater education. *(Establish specific goals in the individual plan for each jurisdiction.)*

Many volunteer organizations within the storm drainage system may already conduct water quality related educational programs. Where these organizations exist, they may be willing to incorporate stormwater issues into their programs and activities to help meet this minimum measure.

Begin by researching the various volunteer programs and organizations that focus on the boundaries of the storm drainage system and/or the watershed and identify ways to integrate stormwater issues into these existing volunteer opportunities.

Existing volunteer programs and organizations that may be willing to take on stormwater issues include school organizations, civic associations, and environmental organizations. After developing a comprehensive list of these volunteer programs and organizations, contact the volunteer coordinators and discuss how to incorporate stormwater related activities with ongoing activities and programs. Document these existing programs and organizations along with information related to the potential for integrating stormwater issues. If volunteer programs and organizations agree to address stormwater issues, provide these groups with information regarding stormwater management and effective stormwater controls.

2.3.7 Develop a Stormwater Speakers Bureau

BMP 2G: Develop and promote a stormwater speakers bureau that gives presentations on stormwater issues throughout the community.

Measurable Goal: Develop a speakers bureau and promote the use of this speakers bureau by contacting several groups each year. *(Establish specific goals in the individual plan for each jurisdiction.)*

Recruiting a team of stormwater management advocates from target audiences is one way to educate stakeholders and to distribute stormwater educational messages at a low-cost. Speakers bureaus are an effective way to get out information on stormwater management and have the message come from a representative of each target audience. All that is needed to implement this BMP are presentation materials on stormwater management and a group of willing volunteers who like to speak in public.

In order to implement this BMP, develop presentation materials and actively recruit volunteers to join the speaker's bureau. Offer the services of the speaker's bureau to schools, civic organizations, and/or corporate events.

An example of a speakers bureau developed by a city in Colorado can be found online at <http://www.greenwoodvillage.com/cityman/speakers.html>.

2.3.8 Create Stormwater Public Service Announcements

BMP 2H: Broadcast stormwater public service announcements (PSAs) through newspapers, television, or radio and run the announcements at appropriate frequent intervals to ensure target audiences are exposed to the message.

Measurable Goal: Create a stormwater PSA, and run this PSA so the population within the jurisdiction receives the information several times over the course of a year. *(Establish specific goals in the individual plan for each jurisdiction.)*

Most people within communities receive their information from mass media sources such as newspapers, television, and radio. While these

forms of outreach tend to be more expensive than printed materials, they can reach a wide audience and have a stronger, more lasting impact.

Design public service announcements (PSAs) for mass media sources such as newspaper, television, or radio. To have an impact, audiences need exposure to PSAs over a long-period of time and at regular intervals. Many communities have already designed and used PSAs related to stormwater and make these PSAs available to other communities to use either for free or at a minimal cost.

The frequency of PSA ads is up to each jurisdiction, however, in order to make sure that the PSA is received by an appropriate number of people, use estimates of the audience reached by that media to calculate a total number of people reached by the PSAs. For example, radio stations have estimates for the number of listeners at various times of the day and newspapers have the total numbers of subscribers. The PSAs should run enough times so that each person within the jurisdiction will view the PSA an average of three times over the course of a year.

Oregon Association of Clean Water Agencies has a series of newspaper and television advertisements available to local governments. The ads come on a CD ROM in a format that can be customized. See the web site www.oracwa.org for more information on ordering the materials.

2.3.9 Design a Stormwater Display

BMP 2I: Display a stormwater exhibit at various community locations and events (e.g., county fairs, city events).

Measurable Goal: Develop a stormwater display and use this display at various events several times per year. (*Establish specific goals in the individual plan for each jurisdiction.*)

Buildings and events that have regular traffic and/or attract a large number of people provide an opportunity for stormwater education. Free-standing educational displays are intended to communicate information in an easy-to-understand format using photographs, maps, and hands-on activities. Educational displays convey information to a broad audience due to their mobile nature, and they are easily adapted for different audiences and/or venues. In some communities, educational displays in libraries or city hall become semi-permanent or permanent exhibits. Mobile displays also travel from event to event, such as festivals and fairs, or rotate from location to location, such as schools and nature centers.

In order to design and develop an educational display on stormwater issues, include messages for members of each target audience, provide information on stormwater problems and solutions, and use a combination of images and text to convey information. In addition to developing the display, use the information contained in the education and outreach strategy (BMP 2A) to identify the most effective places and/or events to set-up the display. Send the display to at least one location/event that

focuses on each specific target audience during each permit year. Also, use the display as a mechanism for distributing the other stormwater information, such as brochures.

2.3.10 Create a Stormwater Web Site

BMP 2J: Create a stormwater website that contains educational information for a variety of target audiences.

Measurable Goal: Complete a stormwater web site section on an existing web page, or create a new web site. Updated regularly, as appropriate. *(Establish specific goals in the individual plan for each jurisdiction.)*

Many target audiences have access to the Internet through home, work and/or school. Websites serve as a powerful educational tool given the increased access to computers and the Internet. Electronic information also facilitates involvement in other BMPs and community service projects (e.g., reporting of illegal dumping, registering for storm drain stenciling activities). Websites function as a public notification tool, aiding implementation of the Public Involvement and Participation minimum measure described in Chapter 3. In addition, using a website as an educational resource reduces costs by decreasing funds needed to print and distribute educational materials.

Design and develop a stormwater website that contains educational information on stormwater and information on the jurisdiction's stormwater program. Include the website address on other forms of outreach, such as brochures and displays, to ensure that the community knows where to find additional information about stormwater.

Provided below are links to four stormwater websites for Portland, Oregon, Las Vegas, Nevada, Sacramento, California, and the Rogue Valley, Oregon. These websites provide examples and different ways to format information.

The Regional Coalition for Clean Rivers and Streams.
Portland, Oregon metropolitan area.

<http://www.cleanriversandstreams.org>

Las Vegas Stormwater

<http://www.lvstormwater.com/>

Sacramento Stormwater Management Program

<http://www.sacto.org/cleanwater/>

Rogue Valley Council of Governments Water Resources Program
Stormwater page.

http://www.rvcog.org/MN.asp?pg=WR_Stormwater

2.4 Resources

Las Vegas Education examples

<http://www.lvstormwater.com/education.html>

Puget Sound Public Education Info

http://www.wa.gov/puget_sound/Programs/Education.htm

Oregon Dept. of Environmental Quality public education

<http://www.deq.state.or.us/programs/education.htm>

City of Boise Public Works Education Program

http://www.cityofboise.org/public_works/education

Water Education Foundation

<http://www.water-ed.org/store/default.asp>

The Terrene Institute

<http://www.terrene.org/index.htm>

Earthwater Stencils

<http://www.earthwater-stencils.com/index.htm>

Getting In Step: A Guide to Effective Outreach in Your Watershed

<http://www.epa.gov/owow/watershed/outreach/documents/getnstep.pdf>

EPA National Menu of BMPs

http://www.epa.gov/npdes/menuofbmps/pub_ed.htm

Appendices

Appendix 2A – Example Stormwater Brochure

Appendix 2B – Education and Outreach Strategy Development Template

Appendix 2C – Questions to Help Identify Target Audiences

Appendix 2D – Example Targeted Stormwater Brochure

Appendix 2A – Example Stormwater Outreach Brochure

CITY OF EUGENE STORMWATER MANAGEMENT PROGRAM



General Information

What is Stormwater and How Does it Affect Our Lives?

"Stormwater" is water that flows across the land -- and it is not limited to what falls from the sky. It includes water that runs off any hard surface, from roads to roofs, or even sun-baked fields. This "runoff" is NOT treated before it enters the storm drainage system, which leads directly to nearby waterways. That means any pollution collected by the runoff is carried into local streams, creeks, and rivers, causing trouble for marine life, plant life, wildlife, and people -- in short, ALL life is impacted by stormwater pollution.

How Does Stormwater Affect Eugene's Water Quality?

In eastern Eugene, storm drains empty into the Mill Race and the Willamette River. In western Eugene, storm drains flow into Amazon Creek which leads north to Fern Ridge Reservoir. Fern Ridge discharges to the Long Tom River which ultimately reaches the Willamette River downstream. The stormwater collection system includes all publicly maintained pipes, culverts, gutters, catch basins, ditches, channels, ponds, wetlands and related waterways.

The problem comes when water flows across the land, picks up pollutants and carries them into local waterways via Eugene's stormwater system. In Eugene, storm drains flow directly, untreated, to local creeks, ponds, wetlands and rivers. And because these pollutants can come right back to us through the water cycle (evaporation, transpiration, storage, precipitation), when we protect Eugene's stormwater, we also protect the overall quality of water for Oregon and the nation!



What's Being Done to Protect Eugene's Waterways?

In the past, stormwater management in Eugene focused on flood control. Considering that Eugene's average annual rainfall is 54 inches per year, this is an important area. But as a result of federal mandates and local policy, the City now balances flood control with water quality improvements.

Eugene's City Council adopted a Comprehensive Stormwater Management Plan and complementing stormwater user rates in November 1993. Both the Plan and the rates enable the City to integrate flood control measures with federal mandates while protecting related wetlands and natural resources within Eugene city limits. The [Comprehensive Stormwater Management Plan](#) consists of five program elements which address these measures:

- Planning and Administration
- Capital Projects
- Operations and Maintenance
- Enforcement, Inspection and Monitoring
- Public Communication and Education

How is the Stormwater Program Financed?

Eugene citizens have paid stormwater user fees since the 1960s. The fees help the City operate and maintain the stormwater system. In November 1994, the fee became a separate line item on customers' Eugene Water and Electric Board (EWEB) utility bills. At that time, the basis of the stormwater fee changed from "water meter size" to "impervious surface." Impervious (or non-porous) surfaces are areas such as rooftops, driveways, parking lots and patios. The more impervious surface a parcel has, the greater the amount of stormwater runoff. Any pollutant the runoff collects as it runs over these surfaces is ultimately carried into local streams, wetlands and rivers. The greater the runoff, the greater the impact on the stormwater system.

How are the Stormwater User Fee Categories Defined?

The stormwater rate structure includes separate user categories for "small" and "medium" residential customers. All other users are considered "general" customers for both residential and commercial/industrial. Single-family homes and duplexes are categorized by the size of the "building footprint," which is the first floor plus the garage area. See [Stormwater User Fees](#) for specific rate information.

Can I Get a Reduction to My Stormwater User Fees?

Both a formal and informal appeals process is available for customers who request a review of their stormwater fees. For residential accounts, staff can review the building footprint and may make an adjustment to the customer category. For large residential accounts, staff can also review the calculation of the impervious area of a customer's property and may then adjust the impervious surface fee.

If customers can document that a constructed system, such as a drywell, is in place that contains part or all of the stormwater runoff from their site, a reduction in the impervious surface component may be approved. Systems that spread the flow across the surface of a site, or detain it for later discharge, do not qualify for a reduction. The street-related and administrative components are not adjustable. Contact the [Stormwater Utility Customer Service Office](#) at (541) 682-4900 for more details.

How Do My Stormwater User Fees Help Local Water Quality?

They are used to:

- Maintain more than 33 miles of ditches and drainage channels
- Maintain 180 miles of storm drain pipes
- Support staff who respond to spills, follow up on complaints and can impose civil penalties up to \$500 per day to violators responsible for improper connections and illegal discharges into the City's stormwater system
- Clean more than 6,000 catch basins, stormwater inlets and outlets each year
- Provide leaf pick-up services in the fall to eliminate storm drain blockage and localized flooding
- Sweep and flush streets, which includes spreading and collecting sand (for re-use in construction projects) during ice storms.
- Perform smoke-testing to determine damaged storm drain lines, repair and replace them. This reduces leakage from groundwater into the storm lines and also turns up cross-connections that still exist from pre-1950's Eugene when the stormwater and sanitary piped systems were one and the same.
- Test stormwater quality at six in-stream and in-pipe monitoring stations in addition to "grab sampling."
- Fund the [Eugene Stream Team](#) volunteer program that organizes stream and wetland clean-up events, coordinates storm drain stencil parties ("Dump No Waste - Drains to Stream"), holds pollution monitoring workshops and works with citizens and businesses who "adopt" a wetland or stream site.

- Assist local TV and radio sponsors and other agencies that hold "Amazon Appreciation Day" each June -- a community-wide event in which volunteers gather to remove litter from Amazon Creek, a major floodway that travels through the center of Eugene.
- Fund public education projects such as the [SPLASH](#) ("Stormwater Pollution: Learn and Share") school curriculum for grades K-8, classroom presentations with "Lily, the Pacific green tree frog" (the SPLASH program mascot), fact sheets and business outreach materials.
- Produce and distribute the "Stormwater Connections" newsletter to city residents annually in the spring and fall.

What Can I Do to Help Improve Eugene's Water Quality?

If you wouldn't want to swim in it, drink it or eat it, don't let it enter Eugene's waterways. Polluted runoff and careless dumping threaten the quality of water in Eugene's streams and wetlands every day. The only thing that should go in Eugene's stormwater system is *clean water*.

Do your part to keep Eugene's waterways clean – don't dump anything down the gutter, storm drain, or stormwater drainage swale (ditch).



Appendix 2B – Education and Outreach Strategy Development Template

Driving force: (list stormwater problems to be addressed by educational material)

Target Audience: (list sub-group of the general population that has the potential to impact stormwater quality)

Messages: (list messages that contain “hooks” to get target audience to respond)

Objective	Format/Distribution	Schedule (quarters)				Responsible Party
List desired outcome of educational effort	<ul style="list-style-type: none"> Describe type of educational material and how it will be distributed 					List departments, organizations, etc., responsible for material development and distribution

Example of Education and Outreach Strategy

Driving force: Nutrients, organic matter, and oil and grease

Target Audience: Homeowners

Messages:

- Protecting our watershed today will protect our quality of life tomorrow.
- Preventing pollution at the storm drain will save you money.
- Swimming with the “first flush” is hazardous to your health!

Objective	Format/Distribution	Schedule (quarters)				Responsible Party
Make audience aware that their day-to-day activities affect the resource	<ul style="list-style-type: none"> Submit articles in local newspapers 		x	x	x	Public Works Department
	<ul style="list-style-type: none"> Submit articles in homeowner association newsletters 			x	x	Public Works Department
	<ul style="list-style-type: none"> Develop and air PSAs featuring the 10 Did You Know? Questions about the watershed 		x			RVCOG
	<ul style="list-style-type: none"> Mail brochure to all riparian residents with the 10 Did you know questions 			x		RVCOG

Objective	Format/Distribution	Schedule quarters			Responsible Party
Educate the audience on the causes of water quality impacts and what actions they can take to minimize the impacts.	Distribute Riffles and Runs Newsletter to residents	x			RVCOG
	Make Presentations to homeowner associations and schools and distribute give-aways		x		Local Garden Club
	Distribute watershed placemat		x		RVCOG
	Continue to print articles in local papers and related publications	x	x	x	Public Works Department
	Conduct Watershed fair				RVCOG
	Distribute calendars to residents				Public Works Department
	Develop targeted brochure on land-use decision making and maintaining riparian buffers				Soil and Water Conservation District and Planning Department
Sponsor the Bear Creek Players at community events				Community Foundation	

Objective	Format/Distribution	Schedule quarters			Responsible Party
Promote involvement through participation of activities	Hold landscaping workshops				Soil and Water Conservation District, OSU Cooperative Extension, RVCOG
	Hold community meetings to promote participation in land-use decisions				Watershed Council and Planning Department
	Recruit homeowner associations to become stream stewards				RVCOG

Appendix 2C – Questions to Help Identify Target Audiences

Who Are We Trying to Educate?	How Large is the Audience?	How Do They Receive Information?	What Organizations Focus on Them?	How Will Educational Materials be Distributed to this Audience?
Municipal Employees	<p>How many departments/agencies address stormwater-related issues in their responsibilities?</p> <p>How many employees are there in these departments?</p>	<p>What publications do employees regularly receive (e.g., new employee orientation guide, employee newsletter, paycheck)?</p> <p>What is the community website? If none, can one be created, or can you link to an existing site?</p> <p>Where are central information sources located at each government facility?</p> <p>When do staff meetings take place?</p>	<p>What groups do local government employees belong to (e.g., unions, local watershed organizations, churches, special committees, nature centers, neighborhood groups)?</p>	

Who Are We Trying to Educate?	How Large is the Audience?	How Do They Receive Information?	What Organizations Focus on Them?	How Will Educational Materials be Distributed to this Audience?
Residents	<p>What is the total population of your community?</p> <p>How many households are located within your community?</p>	<p>What is the most popular newspaper in your community?</p> <p>What newsletters do residents receive and how often?</p> <p>What libraries do people visit?</p> <p>What churches do people attend?</p> <p>Are there programs in place to reach new residents that move to your community?</p>	<p>What groups exist that target homeowners (e.g., homeowners associations, block clubs, neighborhood development associations, recreational groups)?</p>	
Schools	<p>How many schools are located in the community?</p> <p>How many are elementary schools? High schools? Colleges and/or universities?</p> <p>What is the approximate student population at each of these schools?</p>	<p>Which schools have newspapers and how often do they go out?</p> <p>How often does the student body gather for assemblies?</p> <p>When are guest speakers invited to visit the schools?</p>	<p>What groups might students belong to at all levels (e.g., boy/girl scouts, 4-H Club, Junior Achievement, student councils, school environmental clubs, local chapters of environmental organizations, nature centers)?</p>	

Who Are We Trying to Educate?	How Large is the Audience?	How Do They Receive Information?	What Organizations Focus on Them?	How Will Educational Materials be Distributed to this Audience?
Businesses	How many businesses are located within your community?	<p>What newspapers and other periodicals do business owners subscribe to?</p> <p>What local programs/organization work to recruit and retain new businesses in your community?</p>	What groups or associations might businesses belong to or communicate with businesses (e.g., chamber of commerce, trade associations, rotary club, community foundations, small business associations)?	
Developers	<p>How many developers and contractors work within your community?</p> <p>How many developers have submitted building permit requests?</p>	<p>Where do developers go to get information on the community's development requirements?</p> <p>What newsletters specifically target developers in your area?</p> <p>What newspapers and other periodicals do developers subscribe to?</p>	What groups or associations might developers belong to or communicate with developers (e.g., Home Builders Association, chamber of commerce, trade associations, rotary club, community foundations, small business associations)?	

Appendix 2D – Example Targeted Stormwater Brochure

Example of a targeted (homeowner) brochure from Clean Water Services in Washington County, Oregon. Taken from: <http://www.cleanwaterservices.org>

It's So Easy... Stream-Friendly Home and Yard Care

That's Right! Choosing "alternative" home and yard care methods is easy, affordable and better for our streams, wetlands, and rivers. They cost less and are less work, too! As water runs downhill, it picks up pollutants such as oil, grease, pesticides, fertilizers, and pet feces. These wash into waterways and impact the water quality. Home and yard care doesn't have to harm the water. You'll find tips and recipes in this brochure that are "less toxic" to streams, wetlands and rivers.

Roof Treatments

- **Problem:**
Chemicals that kill roof moss and lichen typically contain copper, zinc and iron sulfate metals that eventually wash into water.
- **Solution:**
Use alternatives to chemical treatment to help protect our water.
- **Prevention:**
 - Keep debris and leaves off the roof. They hold moisture, promoting fungal growth and damage.
 - Non-organic roofing materials resist moss growth.
- **If Treatment is Needed:**
 - Use products that are less-toxic and designed to protect the environment.
 - Use minimal concentrations as recommended on the product label.
 - Disconnect downspouts from gutters when applying liquid treatments. The runoff will filter through the soil and break down, instead of going to the nearest stream.
 - Treat roofs only in dry weather to allow treatment to soak into the roof.
 - Before you hire a roof treatment professional, ask what they use and how they handle runoff.
 - After treatment, monitor the runoff. Reconnect downspouts after at least 3 rainfalls, or when there is no visible chemical residue or sheen.
- For more information, please download our "[Safe Roof Moss Control](#)" fact sheet.

Pressure Washing

- **Problem:**
Pressure washing your home, deck, sidewalk, driveway and vehicles can wash pollutants into storm drains and ditches that lead to waterways.
- **Solution:**
Make your cleaning activities more stream friendly by using the following tips:
 - Sweep sidewalks and driveways, and put the sweepings in the garbage to keep

- pollutants and litter out of waterways.
- Use automatic car washes that recycle the water and properly dispose of detergents.
- If you must use a cleaner for pressure washing, try this less toxic recipe:
 - 2 cups mild laundry detergent
 - 1/2 cup vinegar
 - 1/4 cup lemon juice
- Water pressure alone often removes the dirt and grime.
- Before you pressure wash, figure out how to keep paint flakes, grease, and other pollutants from washing into storm drains, ditches or waterways.
- Collect and properly dispose of these pollutants, especially outdoor paint which might contain lead that is poisonous to plants, animals and children.
- If you wash your car at home, park it on grass to allow pollutants to filter through the soil.
- If you pressure wash, direct the spray toward grassy or planted areas.

Composting

- **Problem:**
When yard debris washes into streams and wetlands, the excess decaying material can reduce the dissolved oxygen needed by aquatic life.
Leaves and yard debris can also clog drainage and cause flooding.
- **Solution:**
Compost yard debris and kitchen scraps into organic fertilizer.
All you need is a few minutes a week and three square feet of yard.
Use the following tips to turn a mountain into a molehill.
 - Composting receptacles or "machines" are easy to use and maintain.
They contain odors and speed up the decomposition process.
For a list of vendors, call Metro at 503-234-3000.
 - Keep your compost pile on level ground to hold materials in place and keep out animal scavengers.
 - Keep fresh composting away from creeks or wetlands to prevent nutrients and bacteria from leaching into the water.
 - For quick composting with minimal odor, start with a mixture of browns (dried up plant material) and greens (kitchen scraps and grass).
 - A good starting recipe includes:
 - 3 parts dry leaves (Browns)
 - 2 parts fresh garden weeds and grass clippings
 - 1 part food scraps (Greens)
 - 2 parts water (or beer) added periodically
 - Never put meat scraps or bones in compost. (They produce odors and attract scavengers.)
 - Store kitchen scraps in the freezer to prevent odors and save trips to the compost pile.
 - Add eggshells, paper, coffee grounds and filters to enrich your compost.
 - Put all yard debris in the compost pile.
 - Break up large materials for faster decomposition.

Lawn and Garden Care

- **Problem:**
Herbicides, pesticides, and chemical fertilizers leach into our waterways and change water chemistry.
They add nutrients that cause algae growth and harm stream life from plants to insects, amphibians, birds, fish and mammals.
People don't like the look and odor of polluted water, either!

- **Solution:**
Use non-toxic recipes and methods to help reduce excess chemicals and nutrients in our local streams, wetlands, and rivers.

- **General Tips**
 - **Plant Natives**
Use native plants, trees and shrubs in your yard.
They've adapted to the area and need less water and maintenance.
Decorative native plants available in local garden centers include:
 - Shrubs
 - Snowberry (*Symphoricarpos albus*, *S. mollis*)
 - Red Huckleberry (*Vaccinium parvifolium*)
 - Oregon Grape (*Mahonia nervosa*)
 - Sword Fern (*Polystichum munitum*)
 - Wildflowers
 - Columbine (*Aquilegia formosa*)
 - Aster (*Aster chilensis* ssp. *Hallii*, *A. subspicatus*)
 - Lupine (*Lupinus latifolius*, *L. polyphyllus*)

 - **Pull Weeds**
Pull weeds when they first appear to keep them from spreading.
This saves time and energy, and reduces the use of chemicals.

 - **Watch Soil pH**
Use a simple test kit to check the pH of your soil.
Ideal pH reduces the need to fertilize and helps plants absorb the nutrients they need.

 - **Water Just Enough**
Water about one inch per week for a healthy lawn.
Over watering your lawn encourages shallow root growth, promotes weeds and washes essential nutrients from the soil.
The best time to water is early morning.

 - **Park That Gas Mower**
A gas-powered lawn mower can pollute as much as a car.
Modern push mowers are less expensive to own, operate, and maintain.
They're much better for the environment, and provide good exercise.
Or, use plants and grasses that need less mowing.

 - **Use Homemade Pest Control and Fertilizer**
Make your own less-toxic pest control and fertilizers.
Here are some simple recipes made with easy-to find ingredients.

Fertilizer Recipe

Mix in a 20-gallon, hose-end sprayer. Use every 3 weeks in morning within 2 days of mowing.

- 1 can beer
- 1 cup ammonia
- 1/2 cup dish soap (phosphorus free)
- 1/2 cup lawn food
- 1/2 cup molasses or corn syrup

Feed your plants with compost, too!

Organic Weed Control Recipe

Mix in a hand pump sprayer. Use only on dry days. Spray only on weeds.

- 1 cup dish soap (phosphorus free)
- 1 cup ammonia
- 4 tsp. instant tea

Organic Insect Control Recipe

Mix in 20-gallon, hose-end sprayer. Best when applied in the evening after 7 p.m.

- 1 cup dish soap (phosphorus free)
- 1/2 cup chewing tobacco tea (make by brewing 3 fingers per gallon of water)
- 2 tbsp. witch hazel
- 4 tsp. instant tea

Can be sprayed on all plants

Eco-lawn Recipe

Consider this lawn seed recipe for less watering, mowing, fertilizer and pesticides. It will save time, energy, and money. You'll love the results!

- Perennial ryegrass "Elka" or hard fescue 80%
- Common white yarrow 5 to 10%
- Strawberry clover 5 to 10%
- English daisy 20%
- Roman chamomile 3%

For "no mow" landscaping consider native wildflower mixes or forest groundcover

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Chapter 3 - Stormwater Public Involvement and Participation Program

3.1 Requirements

The Stormwater Phase II Final Rule, published in December 1999, lists the following information as the regulatory requirements for public involvement/participation. This Regional Stormwater Program *Guide* is intended to meet these EPA regulations and provide a template for meeting the Phase II permit the Oregon Department of Environmental Quality issues to Rogue Valley jurisdictions. The following guidance section from the Phase II Rule provides additional details on the preceding regulations.

Regulations	<p>40 CFR 122.34(b)(2) Public involvement/participation</p> <p>(i) You must, at a minimum, comply with state, tribal and local public notice requirements when implementing a public involvement/participation program</p>
Guidance	<p>40 CFR 122.34(b)(3) Public involvement/participation</p> <p>EPA recommends that the public be included in developing, implementing, and reviewing your stormwater management program and that the public participation process should make efforts to reach out and engage all economic and ethnic groups. Opportunities for members of the public to participate in program development and implementation include serving as citizen representatives on a local stormwater management panel, attending public hearings, working as citizen volunteers to educate other individuals about the program, assisting in program coordination with other pre-existing programs, or participating in volunteer monitoring efforts. (Citizens should obtain approval where necessary for lawful access to monitoring sites.)</p>

3.2 Benefits: Why this Measure is Important

Public involvement/participation activities can gain much needed public support for stormwater management program implementation. As mentioned in the previous chapter, the success of the overall program relies on changes in the public's attitudes and behaviors. Early and frequent public involvement in stormwater management increases awareness and broadens public support. By providing interested members of the public (also referred to as stakeholders) with the opportunity to participate in the design of the stormwater program, the potential for legal challenges decreases and stakeholders' sense of program ownership increases.

In addition to changing stakeholders' attitudes, opportunities to participate also play an important role in education and behavior modification. Volunteer programs that allow people to monitor water quality in streams, stencil storm drains, or clean trash from streambanks illustrate the connection between everyday actions and water quality while providing people with a sense of accomplishment. They see that they are truly a part of the solution. Stakeholders also help provide access to additional funding sources, expertise, and other important resources (e.g., equipment, facilities, and media outlets). Public education programs are further described in Chapter 2.

3.3 Regional Guide for Stormwater Public Involvement/Participation

Involve the public in both the development and implementation of the stormwater program. Public notice requirements are the minimum element of this minimum measure, consisting of the following steps:

- Public review/public meetings, including local newspaper advertisements
- News releases

There are several BMPs listed below for public involvement. Others may be added at the discretion of each jurisdiction.

Public Involvement and Participation Already Completed

A significant amount of public input and involvement has been included in the development of this *Regional Guide*. The Rogue Valley Council of Governments (RVCOG), under a contract with local jurisdictions, has facilitated several stormwater presentations for the region. Two presentations were given in the region during 2003 and another is scheduled in the Spring of 2004. The three Open Houses are intended to educate the public about the regional effort for developing Stormwater Management Plans to meet the NPDES Phase II requirements. The meetings were held (or will be held) at three different locations in order to reach a broad audience. Participants learned about the regional effort to develop plans for effective stormwater management, and how the resulting programs will help protect our streams and wetlands. Topics included: impacts of stormwater, methods for managing stormwater runoff, benefits of stormwater management, regulatory requirements, and municipal plans and programs. The Open Houses were as follows:

Monday, November 17, 2003; 4pm-7pm in Ashland (20 attendees)

Thursday, January 22, 2004; 4pm-7pm in Medford (25 attendees)

Spring 2004 (meeting date and location to be determined)

RVCOG participates in a bi-monthly community television program “Regional Focus” which educates the public on local issues. On November 10, 2003 the show focused on stormwater and the regional effort for developing Stormwater Management Plans to meet the NPDES Phase II requirements. The show was recorded and repeated 8-10 times over the month. The show covered topics such as:

- The dynamics of stormwater runoff
- The importance and benefits of stormwater management
- Stormwater pollution prevention
- What the public can do if they see a problem

Additionally, public involvement and participation regarding stormwater management issues have taken place at local City Council and County Commission meetings during the development of this *Guide*.

3.3.1 Public Review/Public Meetings

BMP 3A: Hold public meetings and solicit public review of the stormwater management plan.

Measurable Goal: Hold public meetings and publish public notices per and established plan. (*Establish specific goals in the individual plan for each jurisdiction.*)

Follow all local and state public notice requirements to ensure that the public has an opportunity to participate in the program. Local public notice requirements vary, but will probably consist of public meetings and publishing notices in local newspapers.

Planning and conducting a public meeting will consist of the following main steps:

Step 1. Determine the appropriate type of public meeting format

There are many things to consider when planning a public meeting, including format, time, location, agenda, and facilitator. Not all public meeting formats are alike, depending on the goal of the meeting and the items on the agenda. Since the goal of this meeting is to first inform and then to obtain stakeholder input, formats such as workshops and/or open houses are most appropriate. Give stakeholders attending the meeting an overview of the stormwater program and then transition into a format (e.g., workgroups) conducive to sharing ideas and information.

Be sensitive to the factors that can influence stakeholder participation, such as the date and time of the meeting, the actual meeting site, and advertising for the meeting. Appendix 3A contains a checklist to assist in planning a public meeting.

Also consider the factors that will affect participation during the meeting. Presentation materials should avoid excessive use of acronyms, technical terminology, and large amounts of text. Be sure that the agenda allots enough time for people to ask questions and provide feedback. Keep in mind that not all people feel comfortable speaking in public, so consider having a public comment form available for each participant and/or have staff available for one-on-one discussions.

Step 2. Announce the meetings

Ensure that announcements for the public meeting reach all stakeholders within the community, and that each category of stakeholder (i.e., similar to target audiences identified for public education and outreach) is represented during the public meeting.

Use the education and outreach strategy and the target audiences identified in Chapter 2 to ensure that announcements go out to all interested parties. Create and distribute the meeting announcement to local newspapers or through other appropriate mechanisms.

Step 3. Conduct meeting and solicit stakeholder input

Be sure the agenda includes enough time for people to ask questions and provide feedback. Someone should have the responsibility of recording comments from the public and the responses they receive. Not all people feel comfortable speaking in public, so include a public comment form for participants to fill out. If possible, have staff available for one-on-one discussions. In addition, ask for participants to fill out an evaluation form to determine if this was an effective mechanism to reach people.

Step 4. Perform meeting follow-up activities

Follow-up activities are just as important as planning. Essential follow-up activities include preparing a summary of the questions and answers discussed at the meeting, generating a participants' contact list (for inclusion in a mailing list), and compiling public comment forms received via mail or fax. Review the information on the meeting evaluation forms for use in planning future public meetings. The types of information collected through the public meeting will help determine who was/wasn't represented during the meeting, what the perceptions and attitudes are of those who attended and commented, and how best to reach stakeholders in the future.

Use stakeholder input to develop and/or modify the stormwater program. Stakeholder input may influence the type of BMPs selected for each minimum measure and/or the measurable goals developed to track implementation progress. Make meeting follow-up information available to the public, either through newspapers, websites, or a mailing. This will demonstrate to stakeholders that their input is taken seriously and that it has influence. This may have a positive impact on whether they continue to participate.

3.3.2 Distribute News Releases

BMP 3B: Develop a news release for local newspapers in order to solicit interest to cover the new stormwater program as a feature story.

Measurable Goal: A news release story on the jurisdiction's stormwater program to be prepared and distributed to local papers/publications. *(Establish specific goals in the individual plan for each jurisdiction.)*

To help encourage additional local coverage on the development of the stormwater program, create and distribute a new release for use by local papers. Include in the news release an overview of the new stormwater program, activities that will be conducted, and how the public can obtain more information.

3.3.3 Stormwater Advisory Team (SWAT)

BMP 3C: Hold meetings with a stormwater advisory team (SWAT).

Measurable Goal: Organize and convene a stormwater advisory team and hold meetings with the SWAT as appropriate. *(Establish specific goals in the individual plan for each jurisdiction.)*

As discussed at the beginning of Chapter 1, a stormwater advisory team (SWAT) was organized to solicit input on the development and implementation of this *Regional Guide* and for preparation of individual stormwater program plans of the Rogue Valley jurisdictions. The SWAT is expected to continue its meetings on a periodic basis.

To supplement activities of the SWAT, consider including representatives of businesses, industries, conservation groups, residential and civic associations, and other interested stakeholders. Work, as needed, with these stakeholders to discuss program development and implementation. This will help develop support for the local stormwater programs.

3.3.4 Governed Body Meetings

BMP 3D: Involve the public at regular and special meetings of City Councils, the County Commission, and other governing jurisdictions.

Measurable Goal: Provide regular and special notices to the public for governed body meetings that involve stormwater management issues. *(Establish specific goals in the individual plan for each jurisdiction.)*

This BMP can help build support for a local stormwater management program and provide valuable input in designing and implementing the program. See the meeting consideration criteria described above in BMP 3A for additional coordination details.

3.4 Resources

Adopt-A-Stream

<http://www.streamkeeper.org/>

EPA National Menu of BMPs, Public Involvement/Participation

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/pdf/final/sec-2.pdf>

Appendices

Appendix 3A – Public Meeting Planning Checklist

Appendix 3A – Public Meeting Planning Checklist

<p style="text-align: center;">Phase II Stormwater Management Program Public Meeting Planning Checklist (Insert Date) (Insert Time) (Insert Jurisdiction) (Insert Meeting Facility Name, Address, Contact, and Phone Number)</p>		
What Do We Need To Do?	Who is Responsible?	When Do We Need to Have This Done?
Secure Meeting Site		As soon as potential dates are decided. Must have this information before producing announcements.
Invitations/Announcements-Producing		6 weeks before meeting
Invitations/Announcements - Mailing (electronically)		At least 4 weeks before meeting
Agenda – Producing		Need to start working on agenda as soon as possible
Agenda - Mailing (electronically)		2 weeks before meeting
Banquet Event Orders- • Audio Visual Equipment Needs • Room Set-up Confirmed		2 weeks before meeting
Meeting Packets or Individual Handouts including the following items: • Agenda • Presentation Materials • Background Information • Worksheets • Public Comment Forms • Contact Information for Submitting Additional Comments		1-2 weeks before meeting
On-site Registration Information		Determined 1-2 weeks before meeting
On-site Note Taking		Determined 1-2 weeks before meeting

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Chapter 4 - Illicit Discharge Detection and Elimination Program

4.1 Requirements

The Stormwater Phase II Final Rule, published in December 1999, lists the following regulations for illicit discharge detection and elimination. This Regional Stormwater Program *Guide* is intended to meet these EPA regulations and provide a template for meeting the Phase II permit the Oregon Department of Environmental Quality issues to Rogue Valley jurisdictions. The following guidance section from the Phase II Rule provides additional details on the preceding regulations.

<p>Regulations</p>	<p>40 CFR 122.34(b)(3) Illicit discharge detection and elimination.</p> <p>(i) You must develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at Sec. 122.26(b)(2)) into your small MS4.</p> <p>(ii) You must:</p> <p>(A) Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;</p> <p>(B) To the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-stormwater discharges into your storm sewer system and implement appropriate enforcement procedures and actions;</p> <p>(C) Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to your system; and</p> <p>(D) Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.</p>
<p>Guidance</p>	<p>40 CFR 122.34(b)(3) Illicit discharge detection and elimination.</p> <p>EPA recommends that the plan to detect and address illicit discharges include the following four components: procedures for locating priority areas likely to have illicit discharges; procedures for tracing the source of an illicit discharge; procedures for removing the source of the discharge; and procedures for program evaluation and assessment. EPA recommends visually screening outfalls during dry weather and conducting field tests of selected pollutants as part of the procedures for locating priority areas. Illicit discharge education actions may include storm drain stenciling, a program to promote, publicize, and facilitate public reporting of illicit connections or discharges, and distribution of outreach materials.</p>

What is an “illicit discharge?”

An illicit discharge is anything entering a storm drain system discharging to surface water that is not composed entirely of stormwater. Often times, illicit discharges are the result of illegal activity. For example, dumping materials into a storm drain or connecting a wastewater pipe into the storm drain system are both prohibited under various state and local laws, and result in an illicit discharge.

The best way to prevent illicit discharges is to prevent material from entering the storm drain system. This is done through education, enforcing dumping ordinances and controlling spills.

In some limited cases, discharges not composed entirely of stormwater (but potentially containing small amounts of other substances) are allowed into the storm sewer system. These are termed “non-stormwater discharges” and are addressed in Section 4.1.1.

Illicit discharges should not be allowed to enter a storm drain system because municipal separate storm drain systems are not typically designed to accept or treat such wastes. Untreated illicit discharges to the storm drain system can contribute pollutants to rivers, streams, lakes, and ground water. Although this *Guide* focuses on surface water, illicit discharges to surface waters can also impact ground water.

In the Rogue Valley, some examples of illicit discharges include:

- Fruit packing wash water
- Sanitary wastewater from improper or leaking sewage systems
- Surface flow and irrigation drainage from feed lots and hobby farms
- Automobile wastes from commercial car washes or improper oil disposal
- Spills on roadways or parking lots
- Trash and solid waste dumping in drainage ways

An illicit discharge can be either an illegal connection of non-stormwater to the storm drain or the discharge or dumping of a pollutant. Making connections for anything but stormwater to a storm drain system is illegal. Also, spills and other non-stormwater pollutants running off and entering a storm drain constitute an illicit discharge. Illicit discharges often result from one of these illegal activities (illegal connections or dumping/spills).

Discharges from jurisdictions include wastes and wastewater from non-stormwater “illicit” discharges. An illicit discharge in the Rogue Valley can occur:

1. During dry weather, when there should be no flow in the storm drain.
2. During dry weather, when an allowable flow, such as irrigation water runoff is occurring.
3. During wet weather.

It will be easiest to detect illicit discharges during dry weather, so this program is focused on detecting discharges during that time period.

4.1.1 Non-stormwater Discharges

EPA's stormwater regulations allow two types of discharges to storm drain system that are not composed entirely of stormwater: discharges under an existing NPDES permit and discharges due to fire fighting activities (which need only be addressed where they are identified as significant sources of pollutants to surface waters). The following list of non-stormwater discharges only need to be addressed if the Phase II community identifies them as significant contributors of pollutants to the storm drain system:

- Water line flushing
- Landscape irrigation
- Diverted stream flows
- Rising ground waters
- Uncontaminated ground water infiltration
- Uncontaminated pumped ground water
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensation
- Irrigation water
- Springs
- Water from crawl space pumps
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands
- Dechlorinated swimming pool discharges
- Street wash water

Significant contributor criteria

For the above-cited non-stormwater discharges, EPA's presumption is that these discharges are not impairing water quality. However, in some limited circumstances, the sources cited above could cause a water quality problem and would need to be addressed. These non-stormwater discharges would be considered significant contributors of pollutants to a

water body, and would need to be addressed, if they are, singly or cumulatively:

- Identified in a Total Maximum Daily Load (TMDL) as a source of pollutants to an impaired water body, or
- Identified by EPA or DEQ as a source of impairment to receiving waters.

4.2 Benefits: Why this Program is Important

There are many benefits of controlling illicit discharges. The example cited below from Michigan found that the elimination of illicit discharges to separate storm sewers caused a measurable improvement in the water quality of the Washtenaw County storm sewers and the Huron River (Washtenaw County Statutory Drainage Board, 1987, as cited in EPA Phase II Final Regulations).

Another study in Houston, Texas found that controlling illicit discharges has significantly improved the water quality of Buffalo Bayou. Houston estimated that illicit flows from 132 sources had a flow rate as high as 500 gallons/minute. Sources of the illicit discharges included broken and plugged sanitary sewer lines flowing into storm drain systems, illicit connections from sanitary lines, and floor drain connections (Glanton, Garrett and Goloby, 1992, *The Illicit Connection: Is it the problem? Wat. Env. Tech.* 4(9):63-8 as cited in EPA Phase II Final Regulations).

Illicit Discharge Example Case Studies

Two examples of studies documenting the impacts of illicit discharges are from Washtenaw County, Michigan and Inner Grays Harbor, Washington (as cited in EPA, 1993). They are summarized below.

Washtenaw County, Michigan

The Ann Arbor and Ypsilanti water quality projects inspected 660 businesses, homes, and other buildings and identified 14 percent of the buildings as having improper storm sewer drain connections. The program assessment revealed that, on average, 60 percent of automobile-related businesses, including service stations, automobile dealerships, car washes, body shops, and light industrial facilities, had illicit connections to the storm sewer drains. The program assessment also showed that a majority of the illicit discharges to the storm sewer system resulted from improper plumbing and connections, which had been approved by the municipality when installed.

Inner Grays Harbor, Washington

An inspection of urban storm sewer outfalls draining into Inner Grays Harbor indicated that 32 percent of these outfalls had dry weather flows. Of these flows, 21 percent were determined to have elevated pollutant levels.

4.3 Regional Guide for Illicit Discharge Detection and Elimination

The *Regional Guide* for illicit discharge detection and elimination has the following components:

- Development of a storm sewer system map (4.3.1)
- An ordinance to prohibit non-stormwater discharges (4.3.2)
- A plan to detect and address non-stormwater discharges (4.3.3)
- Conduct field inspections (4.3.4)
- A spill response plan (4.3.5)
- A plan for enforcement actions (4.3.6)
- Train municipal staff on spill and illicit discharge BMPs (4.3.7)

Begin by assessing the existing conditions for your storm drain system and developing an overall plan to address illicit discharges to the system. The assessment will include the development of a storm sewer system map and the screening of outfalls for illicit discharges. The overall plan will include the illicit discharge plan, spill response plan, enforcement plan, and an ordinance to prohibit illicit discharges. Training of staff will likely take place concurrent with the assessment and planning efforts. Finally, develop a record keeping system to ensure areas that have more illicit discharges are identified and the total numbers of illicit discharges and spills are tracked, along with the outcome of each.

The Phase II regulations require the jurisdiction to “inform public employees, business, and the general public of hazards associated with illegal discharges and improper disposal of waste.” (40 CFR 122.34(b)(3)(ii)(D)). This requirement is addressed in both Chapter 2 (Public Education) and Chapter 7 (Pollution Prevention in Municipal Operations).

All the BMPs in this chapter, BMPs 4A – 4G, are required.

4.3.1 Storm Sewer System Map

BMP 4A: Create a storm sewer system map showing all known storm drain outfalls to receiving waters.

Measurable Goal: Map and field-verify the location of all known outfalls and receiving waters. (*Establish specific goals in the individual plan for each jurisdiction.*)

If one does not already exist, a storm sewer system map showing, at a minimum, locations of all outfalls and the names and locations of all waters that receive a discharge from those outfalls is needed. The mapping of storm sewer pipe or storm drain inlet locations is not required,

although it is probably desirable for most cities in the long-term to assist with maintenance.

1. Collect existing information

The first step is to collect all existing information about the storm drainage system and discharges (outfalls) to receiving waters. This information may already be available from various city and county government agencies, such as public works or planning agencies. Many cities already have a map of their storm drain system, and information on receiving waters is readily available from various agencies such as the U.S. Geological Survey.

2. Determine the appropriate specifications for the map

Once existing data are collected, a storm drainage system map is developed to display the information. Decisions on what type of information to place on the map include piping location, sizing, man holes, service laterals, and outfalls. Another decision to be made is on the scale of the map. A scale between 1:9,600 and 1:24,000 is appropriate for many small jurisdictions.

The location of outfalls and receiving waters is essential in the creation of a storm drainage system map. Maps enhanced using other features are more useful tools. Additional features include storm sewer pipes, inlets, stormwater detention basins, streets, political boundaries and major land uses. Drainage areas for each outfall are useful when attempting to pinpoint the contributing area for an illicit discharge. The map developed for this BMP will also help in other program areas, such as proper operation and maintenance of the storm drainage system.

There is no requirement relating to format. Either paper or electronic maps are acceptable, as long as it is compatible with existing mapping efforts.

If hydraulic modeling is conducted (for example, to address drainage problems or pollutant loadings), then additional data such as pipe sizes, invert elevations, materials, pipe lengths, detention system operation (stage/volume/discharge), manhole location and lid elevations may be needed to support this activity.

3. Plan out the mapping effort

The mapping effort can take up to five years to complete. The majority of the mapping effort will take place over the last three years of the first permit term. The mapping for BMP 4A and the outfall inspections for BMP 4D can be combined to save time spent in the field.

Make field visits to outfall locations during dry weather. During wet weather, some outfalls become submerged which impedes access to outfall locations.

Identify each outfall on the map using an outfall identification number scheme such as a sequential numbering system or one that identifies the city quadrant or nearby street. Where existing systems to uniquely identify storm drains are in place, extend this identification system to include outfalls.

4. Map outfall and receiving water locations using field surveys

There are three primary purposes of the field surveys: 1) to verify the mapped locations of outfalls and the receiving waters they discharge into, 2) to identify any outfalls in the field missed in the mapping effort, and 3) to identify any potential illicit discharges from the outfall.

Using a standard form, field survey crews verify the location of outfalls and receiving waters, and identify any illicit discharges observed. Consider taking photos of and establishing GPS coordinates for each outfall. An example of a visual outfall inspection form is included in Chapter 7. This form, which can be used for both municipal maintenance activities and dry weather discharge identification, asks for general information on the outfall, end-of-pipe information (including the physical condition of the pipe), and visual observations on flows out of the pipe and sediment or debris accumulation.

A sample portion of an outfall map is included in Appendix 4A.

4.3.2 Ordinance to Prohibit Non-Stormwater Discharges

BMP 4B: Develop and enforce an ordinance prohibiting illicit discharges and illegal dumping and authorizing enforcement actions, including on private property.

Measurable Goal: If not already in place, adopt an ordinance that prohibits illicit discharges to the storm drain system. *(Establish specific goals in the individual plan for each jurisdiction.)*

First, assess whether the required legal authority to prohibit non-stormwater discharges to the storm drainage system currently exists. Look to existing ordinances or municipal codes to identify this legal authority. If adequate legal authority prohibiting illicit discharges does not exist, an ordinance can be drafted based on the example ordinance provided in Appendix 4B (from the City of Boise's stormwater ordinance).

The model ordinance in Appendix 4B includes authority for all three of the ordinances required by EPA's Phase II regulations: ordinances to control illicit discharges, construction site runoff, and post-construction runoff. It may be easier to combine all three ordinances into a single ordinance like the example in Appendix 4B if legal authority does not currently exist.

The key elements of an illicit discharge ordinance include, at a minimum.

- Prohibitions on illegal dumping or discharges to the storm drainage system.
- Prohibitions on illicit connections from sanitary sewers to the storm drainage system.
- Authority to inspect properties for illicit discharges.
- Penalties and enforcement options.

Additional elements in an ordinance could include requirements for the property owner to pay for the cost of abatement and a requirement to notify the city or county of any spill or illicit discharge.

Local Ordinance Activity: The City of Rogue River, with assistance from RVCOG, has recently adopted a comprehensive stormwater ordinance addressing a wide range of water quality and quantity issues. The City of Phoenix, Oregon and RVCOG are in the process of developing a comprehensive stormwater ordinance using the Rogue River ordinance as a model. This ordinance could be developed for regional application.

Another model ordinance specifically for illicit discharges, and other examples of local ordinances, are available from the Stormwater Center (<http://www.stormwatercenter.net>).

4.3.3 Detect and Address Non-Stormwater Discharges

BMP 4C: Develop an illicit discharge detection plan that includes, at a minimum, the following components:

1. Identification of priority areas for assessment
2. Field assessment activities
3. Characterize any discharges found
4. Procedures to trace an illicit discharge
5. Procedures to remove an illicit discharge

Measurable Goal: Develop a plan to detect illicit discharges, incorporating the components above. (*Establish specific goals in the individual plan for each jurisdiction.*)

Illicit discharge detection plan

The primary component of this minimum measure is to develop an illicit discharge detection plan to find, identify and eliminate unknown pollutant discharges to the storm drainage system. The purpose of this plan is to identify priority areas within the storm drainage system that are believed to be more susceptible to illicit discharges, describe field assessment activities, determine when a discharge is found whether it is illicit, and describe procedures to trace the discharge back to its source and eliminate the discharge. The five major components of an illicit discharge detection plan are described below:

1. Identification of Priority Areas for Assessment

Define priority areas

The first step in developing an illicit discharge detection plan is to define priority areas for investigation. In the first permit term, the outfalls represent priority areas, and are inspected and assessed for dry weather discharges while field crews map the outfall locations. After the initial five-year permit term, priority areas are defined according to the risk for illicit discharges. An example of how priority areas could be defined is included below.

Example:

Criteria to define priority areas could consist of the following:

- Level 1 areas contain materials from industries or other businesses that have the greatest potential negative effect on stormwater quality. Focus on the following:
 - Significant hazardous materials
 - Materials from industrial/manufacturing facilities
 - Large quantities of material, especially near receiving waters
- Level 2 areas have the highest number of illicit discharge incidents from past reports. These are the areas most likely to have future incidents.
- Level 3 areas are all other lower priority areas.

Past experience and knowledge of the surrounding land use are effective indicators to determine which areas of the storm drain system fall into each of these three levels.

2. Field Assessment Activities

Once priority areas are determined, the next step is to develop a plan for inspecting outfalls that contains guidance on scheduling assessment activities and appropriate procedures. Field assessment activities to identify dry weather flows are contingent upon dry weather. Other factors influencing non-stormwater contributions to the storm drainage system include time of day when residential use of the sanitary sewer system is greatest and increased wastewater flows during periods of the year when a specific industry is especially busy. Effective field assessment plans reflect these temporal factors and schedule field assessment activities accordingly. Field assessment requirements are further described in BMP 4F.

3. Characterize Any Discharges Found

If a discharge is found, then a decision must be made as to whether this discharge is illicit, not contaminated, or a non-stormwater discharge identified in Section 4.1.1.

To determine if the discharge is illicit, follow one or more of the following procedures to characterize the pollutants in the discharge.

- First, visual tests of the suspected illicit discharge can be the quickest and simplest method to identify whether a discharge is illicit or not (see Appendix 4C for example). These visual tests evaluate odor, color, turbidity, floatable matter, lack of normal vegetation and damage to the storm drainage system such as deposits and stains.
- Second, simple field measurements, such as those obtained by using a pH meter, could be employed as another rudimentary evaluation tool. An abnormally high or low pH can indicate that the discharge is illicit.
- Third, grab sampling and laboratory analysis of the suspected illicit discharge may be necessary to determine the pollutant types and pollutant concentrations contained in the discharge. This discharge sampling is intended to help identify the contaminants and possible source of the discharge. A comparison of sampling results to typical stormwater runoff may be useful to indicate the relative pollutant concentrations in the discharge and the possible contributing source(s).

If the discharge appears to be contaminated, then field crews should note and report this according to the enforcement plan (BMP 4E) and established operating procedures. As part of the enforcement plan and operating procedures, there may be circumstances where the illicit discharge poses a significant public health or environmental threat or threat to the conveyance system so that field crews may need to contain the discharge. If so, then sand bags, booms, absorbents, or other mechanisms should be used to quickly contain the discharge. Any contaminated material, including used absorbents, should be disposed of according to local requirements.

After the discharge has been contained, or if the flow is too large to contain, then the next step is to identify the source of the discharge.

4. Procedures to Trace an Illicit Discharge

Once an illicit discharge is identified through inspections or another process, then the source of this discharge must be identified in order to stop it. The following steps could be followed to try to identify a source of pollution found in the storm drain system:

- Visual inspections of surface area,
- Visual inspections of storm drain system, and/or
- More detailed inspection procedures.

First, make a visual inspection of the surrounding land area and storm drain system to identify potential contributing sources. Field staff are looking for obvious sources of surface runoff and any potential contributing sources as they make this visual inspection.

If the source cannot be quickly identified on the surface, trace the discharge upstream in the storm drain system by opening manholes to determine if the illicit discharge is flowing in that manhole. Following the discharge up the storm drain line narrows the contributing area and allows for a more focused visual inspection of the surface area.

If the source cannot be identified through either inspection of the surface or the storm drain system, then more detailed inspection procedures may be necessary. Equipment such as a mobile video camera, if available to the jurisdiction, could be used to assist in the tracing of illicit discharges. For example, some communities own a remotely operated video camera system to TV sanitary sewers for cracks and inflow/infiltration that are compatible with investigating storm drains. Dye testing is also a useful technique for tracing possible sources.

5. Procedures to Remove an Illicit Discharge

The procedure necessary for removing the source of an illicit discharge varies depending on the severity and nature of the event. Procedures consist of the steps described below.

- **Notification of appropriate authorities:** Depending on the severity of the discharge, the first action is to notify the appropriate authorities. For example, for hazardous or toxic spills or discharges, in most cases the fire department must be notified. Municipal staff usually address minor spills with absorbent. Develop a clear set of procedures for whom to call for different types of spills.
- **Notification of property owner:** After the appropriate authorities are notified, notify the property owner of the discharge, the corrective action necessary, and an appropriate timeframe for eliminating the discharge. Contact the property owner or operator first in person or by telephone, and then follow up in writing. Provide some guidance or information to homeowners on how to eliminate the discharge; this could include information on financial assistance. Follow-up inspections are necessary to ensure that the property owner took the appropriate action to eliminate the discharge.
- **Escalating enforcement and legal actions if discharge is not eliminated:** The use of appropriate enforcement actions may be necessary if the property owner does not take the required actions necessary to eliminate the discharge. These actions are described for BMP 4F.

4.3.4 Conduct Field Inspections

BMP 4D: Visually inspect for illicit discharges during dry weather at all known outfalls that discharge to surface waters (in conjunction with BMP 4A)

Measurable Goal: Visually inspect known outfalls for illicit discharges. *(Establish specific goals in the individual plan for each jurisdiction.)*

While field staff are mapping the location of outfalls for BMP 4A, the field staff can also be inspecting outfalls for any signs of illicit discharges. The visual assessment criteria in Appendix 4C can be used to assist field staff with the typical visual signs associated with illicit discharges.

Field inspection activities consist of visiting outfall locations using the system map and recording visual observations at each outfall within a priority area. For accessible outfalls, mark the outfall once it is located and complete the field inspection form (see Chapter 7 for a copy of the form). If an outfall is not accessible, field crews must use the system map and identify the nearest point to access the system. Locate the storm sewer manhole closest to the outfall and remove the cover to identify signs of dry-weather flow, such as odor or residue.

The goal is to inspect all outfalls at least once over the 5-year permit term. Some outfalls may need to be inspected more often.

If an indication of an illicit discharge exists, it should be reported and the steps in BMP 4C followed to identify and eliminate the source of the discharge.

4.3.5 Spill Response Plan

BMP 4E: Develop and implement a spill response plan

Measurable Goal: Develop a spill response plan that includes coordination with DEQ's Spill Response Team. *(Establish specific goals in the individual plan for each jurisdiction.)*

A written spill response plan is needed to identify appropriate actions when a spill occurs. Include in the plan, for different kinds of spills, who should be contacted and what the municipality will do in response. The plan also needs to include recordkeeping and reporting requirements so that each spill, the response, and its outcome are tracked.

DEQ's Emergency Spill Response Program, which will be an integral part of a spill response plan, is described below.

4.3.5.1 DEQ's Emergency Spill Response

An effective spill response plan includes information on DEQ's Emergency Spill Response Program, along with any local spill response

issues. Under state law, DEQ must be notified when any amount of regulated waste or hazardous material that poses an imminent threat to life, health or the environment is released to the air, land or water, or whenever oil is spilled on land or to waters of the state. The spiller is always responsible for reporting a spill. Failure to report a spill in a timely manner may result in enforcement actions.

What types of emergency incidents should be reported? Typical types of emergency incidents include oil spills, hazardous materials releases, clandestine drug labs, abandoned drums and cylinders, illegal “midnight” dumping, leaking storage tanks, and fish kills.

How is spill notification made? If oil or hazardous materials are spilled to state waters, the spiller must notify both federal and state spill response agencies. The appropriate phone numbers to call are listed in the box below. A DEQ spill responder will normally call the reporting party back to gather more information. DEQ will then determine its response actions.

Spill Reporting Numbers

For oil spills call both:

National Response Center 1-800-424-8802

Oregon Emergency Management (503) 378-2911

For all other materials, call your Regional DEQ Office:

DEQ Headquarters Office - Portland 1-800-452-4011

DEQ Local Office - Medford (541) 776-6010

Toll free in Oregon: (877) 823-3216

When calling, try to have the following information available:

- Where is the spill?
- What spilled?
- How much spilled? How concentrated is the spilled material?
- Who spilled the material?
- Is anyone cleaning up the spill?
- Are there resource damages?
- Who is reporting the spill?
- How can DEQ get back to you?

4.3.5.2 Spills/Emergency Response

A spill response plan usually includes a standard set of procedures on how to handle spills and emergencies into the storm drain system. Include these procedures in the stormwater management program and make them

available to municipal staff. The phone numbers of appropriate emergency responders and who to call in specific situations for the general public is also a necessary part of the spill plan.

An example of an illicit discharge/spill form is attached in Appendix 4D. This form aids in tracking the location, type of discharge, impacted water body, cleanup procedures used, and action taken.

As an illustration, an example emergency response/reporting protocol is presented below for two possible situations.

Material Discharged into Storm Drain

(This could include petroleum products or unidentified material being discharged into or out of the storm drain to the river, a ditch, pond, or catch basin)

<u>Contact</u>	<u>Working Hours</u>	<u>Off Hours</u>
Fire Department	911	911
Health District	###-####	###-####
Stormwater program staff	###-####	###-####
National Response Center	1-800-424-8802	1-800-424-8802
Oregon Emergency Mgmt.	(503) 378-2911	(503) 378-2911
DEQ Regional Office	###-####	###-####

Storm Drain Plugged

<u>Contact</u>	<u>Working Hours</u>	<u>Off Hours</u>
Public Works Maintenance	###-####	###-####

4.3.6 Plan for Enforcement Actions

BMP 4F: Develop and implement an enforcement plan to ensure compliance with local ordinances. This enforcement plan will be used for illicit discharges, construction site discharges, and post-construction discharges.

Measurable Goal: Develop and implement an enforcement plan. *(Establish specific goals in the individual plan for each jurisdiction.)*

The enforcement plan developed for this BMP addresses how to handle non-compliance with local ordinances and discharges from illicit sources, construction sites, and post-construction BMPs. Develop the plan so that it is specific enough to give inspectors guidance on the typical penalty for each situation. An example enforcement plan is provided in Appendix 4E.

Escalating Enforcement Actions

There are various enforcement and legal actions available to ensure compliance with local ordinances; however, the specific action taken

depends on legal authority and the severity of the discharge. In general, enforcement actions escalate to the next level if they have not been resolved in an appropriate timeframe. The different levels of enforcement actions include:

- **Warning:** A verbal or written notice to the owner of the identified illicit discharge. This warning gives the owner an appropriate timeframe to fix the problem and notify the owner of potential penalties if the discharge is not eliminated by this time.
- **Administrative Action:** A formal action; also called a notice of violation, order to abate, or cease and desist order. The administrative action requires elimination of the discharge but does not assess any fines or penalties. Similar to a warning, the action specifies a timeframe to correct the problem.
- **Administrative Action with Fine and/or Cost Recovery:** An administrative action with a financial penalty assessed against the owner. Also, this could include the recovery of cleanup and abatement costs.
- **Legal Action:** Any action that brings the owner into the court system, including a formal citation or civil/criminal actions.

The enforcement plan developed should be flexible but specific enough to give detailed guidance to inspectors on the level of penalty to assess. The enforcement plan must include a range of administrative penalties available under the local ordinance.

Some example guidelines to use in developing an enforcement plan are listed in Appendix 4E.

4.3.7 Train Municipal Staff on Spill and Illicit Discharge BMPs

BMP 4G: Provide training or coordinate with existing training efforts to educate relevant staff on proper BMPs for spills and illicit discharges.

Measurable Goal: Train relevant staff and re-train as needed. *(Establish specific goals in the individual plan for each jurisdiction.)*

Provide training to relevant municipal staff, such as field maintenance crews, illicit discharge inspectors, and other first responders, on the proper BMPs to use for spills and illicit discharges. Include in the training who to call for different types of spills.

This training could be combined with other training of municipal staff conducted in Chapter 7.

4.4 Resources

The following are resources and references for additional information to assist cities in developing and implementing the model illicit discharge program.

EPA's Menu of BMPs for stormwater Phase II

<http://www.epa.gov/npdes/menuofbmps/illicit.htm>

LA County Model Illicit Discharge Program

http://ladpw.org/wmd/NPDES/ICID_TC.cfm

EPA. 1993. Investigation of Inappropriate Pollutant Entries into Storm Drainage Systems: A User's Guide. EPA/600/R-92/238.

M. Lalor and R. Pitt, Use of Tracers to Identify Sources of Contamination in Dry Weather Flow IN: Watershed Protection Techniques. 3(1): 585-592

Rouge River, Michigan Illicit Discharge Program

<http://www.wcdoe.org/rougeriver/techttop/illicit/index.html>

Appendices

Appendix 4A – Sample Outfall Map

Appendix 4B – Sample Stormwater Ordinance

Appendix 4C – Visual Tests of Possible Contaminants in Dry Weather Flows

Appendix 4D – Sample Illicit Discharge Identification Form

Appendix 4E – Sample Enforcement Plan

Appendix 4B – Sample Stormwater Ordinance

(City of Boise stormwater management and discharge control ordinance)

NOTE: This ordinance will need to be modified by a Rogue Valley jurisdiction to specifically cite the stormwater manual used. The DEQ should be referenced instead of EPA (since EPA issues the NPDES permit in Idaho), and Oregon should be referenced instead of Idaho. Legal staff or the DEQ have not reviewed this example ordinance.

Chapter 8-15

City of Boise Storm Water Management and Discharge Control Ordinance

Sections:

8-15-01 Title, Purpose, and General Provisions

8-15-02 Discharge Regulations and Requirements

8-15-03 Stormwater Management Plans and Comprehensive Drainage Plans

8-15-04 Inspection and Enforcement

Section 8-15-01 Title, Purpose and General Provisions

8-15-01.1 Title.

This ordinance shall be known as the "City of Boise Storm Water Management and Discharge Control Ordinance" and may be so cited.

8-15-01.2 Purpose and Intent

The purpose and intent of this Ordinance is to:

- A. Protect and enhance the water quality of our watercourses, water bodies, ground water and wetlands in a manner pursuant to and consistent with the Clean Water Act.
- B. Control non-storm water discharges to storm drain systems and reduce pollutants in storm water discharges.
- C. Provide design, construction and maintenance criteria for permanent and temporary on-site storm water management facilities to control storm water runoff.
- D. Encourage the recharge of ground water, where appropriate, and prevent the degradation of ground water quality.

8-15-01.3 Definitions

The terms as used in this Ordinance shall have the following meanings:

- A. Authorized Enforcement Agent. The Director of Public Works and/or any individual designated by the Director of Public Works as an Authorized Enforcement Agent.
- B. Best Management Practices ("BMPs"). Physical, structural and/or managerial practices that, when used singly or in combination, control site run-off, spillage and leaks, waste disposal and drainage from raw material storage and prevent or reduce the discharge of pollutants directly or indirectly to waters of the state or U.S. BMPs may include schedules of activities, prohibition of practices, design standards, educational activities and treatment requirements.
- C. Clean Water Act (CWA). Federal Water Pollution Control Act enacted by Public Law 92-500 as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; 33 USC 1251 et seq.
- D. Comprehensive Drainage Plan. A storm water management plan that covers all current and anticipated development on a site greater than 1 acre and sites planned for phased development.
- E. Development. Any construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any structure within the jurisdiction of the City of Boise as well as any manmade change or alteration to the landscape, including but not limited to, mining, drilling, dredging, grading, paving, excavating and filling.
- F. Director of Public Works. The Director of the Boise City Public Works Department.
- G. Illicit Connection. Any physical connection to a publicly maintained storm drain system composed of non-storm water which has not been permitted by the public entity responsible for the operation and maintenance of the system.
- H. Illicit Discharge. Any discharge to a storm drain system that is not composed entirely of storm water except discharges pursuant to a NPDES permit, discharges resulting from fire fighting activities, and discharges further exempted in Section 2.6 of this Ordinance.
- I. Impervious Surface. A surface which prevents or retards the penetration of water into the ground, including, but not limited to, roofs, sidewalks, patios, driveways, parking lots, concrete and asphalt paving, gravel, compacted native surfaces and earthen materials, and oiled, macadam, or other surfaces which similarly impede the natural infiltration of storm water.
- J. Local Agency. One or more of the agencies involved with providing review, approval, or oversight of the site's (a) activities; (b) pollution prevention controls; or (c) storm water discharge.
- K. Major Modification. An alteration to an existing or planned storm water drainage facility that does one or more of the following: changes the

volume, surface area, depth, capacity, inflow rates, outflow rates or level of treatment by 5 percent or more; changes the treatment process; adds more than one thousand (1000) square feet of impervious surface; or increases the tributary impervious drainage area to an individual drainage facility component by more than 10 percent.

L. Municipal Separate Storm Sewer System (MS4). Includes, but is not limited to, those facilities located within the City and owned or operated by a public entity by which storm water may be collected and conveyed to waters of the United States, including any roads with drainage systems, public streets, inlets, curbs, gutters, piped storm drains and retention or detention basins, which are not part of a Publicly Owned Treatment Works ("POTW") as defined at 40 CFR Section 122.2.

M. Municipal Stormwater Permit. An area-wide NPDES permit issued to a government agency or agencies for the discharge of storm water from a storm drain system.

N. National Pollutant Discharge Elimination System (NPDES) Permit. A storm water discharge permit issued by the U.S. EPA, Region X, in compliance with the federal Clean Water Act.

O. Non-Storm Water Discharge. See "illicit discharge."

P. Person. Any individual, firm, association, club, organization, corporation, partnership, business trust, company or other entity which is recognized by law as the subject of rights or duties.

Q. Pollutant. Objects including, but not limited to, dredged soil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, silt, cellar dirt, industrial, municipal and agricultural waste, gases entrained in water, paints, oil and other automotive fluids, soil, rubbish, trash, debris, refuse, fecal coliform, fecal streptococcus, enterococcus, heavy metals, hazardous waste, road sanding materials, yard waste from commercial landscaping operations, animal waste, materials that result from the process of constructing a building or structure, and nauseous or offensive matter of any kind, which, when discharged to water in excessive quantities, cause or contribute to water pollution.

R. Pollution. The degradation of the physical, thermal, chemical, biological or radioactive properties of the waters of the state or U.S.; the discharge of any pollutant into the waters of the state or U.S., which will or is likely to create a nuisance or to render such waters harmful, detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, recreational, aesthetic, or other beneficial uses.

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

T. Redevelopment. A project for which a building permit is required that proposes to add, replace and/or alter impervious surfaces affecting the existing drainage system, other than routine maintenance, resurfacing, or repair. A project which meets the criteria of a major modification as defined in this section shall be considered a redevelopment.

U. Stormwater. Surface runoff and drainage associated with rain storm events and snow melt.

V. Storm Water BMP Guidebook. A reference document prepared by the Boise City Public Works Department which contains information and recommendations regarding the use of Best Management Practices during and after construction.

W. Storm Water Management. The process of collection, conveyance, storage, treatment, and disposal of storm water to ensure control of the magnitude and frequency of runoff to minimize the hazards associated with flooding and the impact on water quality caused by manmade changes to the land.

X. Storm Water Management Design Manual. The design standards manual prepared by the Boise City Public Works Department which provides design, performance, and review criteria for storm water management practices.

Y. Storm Water Management Plan. Details of the drainage system, structures, BMPs, concepts and techniques that will be used to control storm water, including drawings, engineering calculations, computer analyses, maintenance and operations procedures, and all other supporting documentation.

Z. U.S. EPA. United States Environmental Protection Agency.

AA. Variance. A modification of the requirements of the Ordinance.

8-15-01.4 Applicability

This ordinance shall apply to all activities which may potentially affect the municipal separate storm drain system, any private storm drain system or any body of water within the City of Boise. Additionally, permanent and temporary storm water management controls and facilities, constructed as part of any activities listed in this section, which are located within the Boise City limits, are also subject to this ordinance. The storm water management standards shall apply to industrial, commercial, institutional, and multifamily residential development, as well as subdivision projects with private access.

8-15-01.5 Regulatory Consistency

This Ordinance shall be construed to assure consistency with the requirements of the federal Clean Water Act and acts amendatory thereof or supplementary thereto, applicable implementing regulations, and the NPDES municipal stormwater permit and any amendments, revisions or

reissuance thereof. No permit or approval issued pursuant to this Ordinance shall relieve a person of the responsibility to secure permits and approvals required for activities regulated by any other applicable rule, code, act, permit or ordinance.

8-15-01.6 Severability

If any provision, clause, sentence, or paragraph of this Ordinance or the application thereof to any person, establishment, or circumstance shall be held invalid, such invalidity shall not affect the other provisions or application of this Ordinance which can be given effect without the invalid provision or application, and to this end, the provisions of this Ordinance are hereby declared to be severable.

Section 8-15-02 Discharge Regulations and Requirements

An intentional non-storm water discharge to any storm drain system, including both the municipal storm drain system and private storm drain systems, is a violation of this ordinance unless exempted by provisions 8-15-02.6 and 8-15-02.7 of this ordinance.

8-15-02.1 General Requirements and Prohibitions

A. Any person engaged in activities which will or may result in pollutants entering a storm drain system shall undertake reasonable measures to reduce such pollutants. Examples of such activities include, but are not limited to, use and disposal of household chemicals such as pesticides and fertilizers; and ownership and use of facilities which may be a source of pollutants such as parking lots, gasoline stations, industrial facilities, and retail establishments.

B No person shall throw, deposit, leave, maintain, keep, or permit to be thrown, deposited, placed, left or maintained, any refuse, rubbish, garbage, or other discarded or abandoned objects, articles, and accumulations, in or upon any street, alley, sidewalk, storm drain inlet, catch basin, conduit or other drainage structures, parking area, or upon any public or private plot of land so that the same might be or become a pollutant, except where such pollutant is being temporarily stored in properly contained waste receptacles or is part of a well defined compost system.

C. No person shall cause or permit any dumpster, solid waste bin, or similar container to leak such that any pollutant is discharged into any street, alley, sidewalk, storm drain, inlet, catch basin, conduit or other drainage structures, business place, or upon any public or private plot of land in the City.

D. The occupant or tenant, the owner, lessee, or proprietor of any real property in the City where there is located a paved sidewalk or parking area shall maintain said paved surface free of dirt or litter to the extent reasonable and practicable and provide an adequate means for the disposal of refuse, rubbish, garbage, or other articles so as to prevent such matter from entering a storm drain system. Sweepings from said sidewalk shall

not be swept or otherwise made or allowed to go into the gutter or roadway, but shall be disposed of in receptacles maintained on said real property.

E. No person shall throw or deposit any pollutant in any fountain, pond, lake, stream, or any other body of water in a park or elsewhere within the City, except as otherwise permitted under local, state or federal law.

8-15-02.2 Illicit Connections

It is prohibited to establish, use, maintain or continue illicit drainage connections to the municipal separate storm drain system, or to commence or continue any illicit discharges to the municipal separate storm drain system.

8-15-02.3 Parking Lots and Similar Structures

Persons owning or operating a paved parking lot, gas station pavement, paved private street or road, or similar structure, shall clean and maintain those structures in a manner that does not result in discharge of pollutants to a storm drain system.

8-15-02.4 Outdoor Storage Areas – Commercial and Industrial Facilities

In outdoor areas, no person shall store grease, oil or other hazardous substances in a manner that will or may result in such substances entering a storm drain system. In outdoor areas, no person shall store motor vehicles, machine parts, or other objects in a manner that may leak grease, oil, or other hazardous substances to a storm drain system. To prevent the discharge of hazardous substances to the municipal separate storm drain system, the City may require the installation of a spill containment system. Spill containment systems may consist of a system of dikes, walls, barriers, berms, or other devices as required. No person shall operate a spill containment system such that it allows incompatible liquids to mix and thereby create a hazardous condition.

8-15-02.5 Construction Sites

Any person performing construction work in the City of Boise shall comply with the provisions of this Ordinance and shall provide erosion and sediment controls that effectively prevent discharges of pollutants to a storm drain system. The Director of Public Works may establish standards and guidelines implementing BMPs designed to provide erosion and sediment control from construction sites.

8-15-02.6 Discharge of Pollutants

Discharges from the following activities will not be considered a source of pollutants to waters of the state or U.S. when properly managed: water line flushing and other discharges from potable water sources, landscape irrigation and lawn watering, irrigation water, diverted stream flows, rising ground waters, ground water infiltration to separate storm drains,

uncontaminated pumped ground water, foundation and footing drains, roof drains, water from crawl space pumps, residential air conditioning condensation, springs, individual residential and non-profit group car washes, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges or flows from fire fighting activities and training. Accordingly, discharges from such activities are not subject to this prohibition. With written concurrence of the U.S. EPA, the City may exempt in writing other non-storm water discharges which are not a source of pollutants to the waters of the state or U.S.

8-15-02.7 Discharge Pursuant to NPDES Permit

The prohibition of discharges shall not apply to any discharge regulated under a NPDES permit issued and administered by the EPA, provided that the discharger is in full compliance with all requirements of the permit and other applicable laws or regulations.

8-15-02.8 Discharge in Violation of Permit

Any discharge that would cause a violation of a NPDES municipal stormwater permit and any amendments, revisions or reissuance thereof, either separately considered or when combined with other discharges, is prohibited. Liability for any such discharge shall be the responsibility of the person(s) causing or responsible for the discharge, and the City shall seek to have such persons defend, indemnify and hold harmless the City in any administrative or judicial enforcement action against the permit holder relating to such discharge as provided by applicable rules of law.

8-15-02.9 Compliance with General Permits.

Any industrial discharger, discharger associated with construction activity, or other discharger subject to any NPDES permit issued by the U.S. EPA, shall comply with all provisions of such permits, including notification to and cooperation with local entities as required by federal regulations. Proof of compliance with said NPDES General Permits may be required in a form acceptable to the Director of Public Works prior to issuance of any grading, building or occupancy permits.

8-15-02.10 Notification of Spills

All persons in charge of a facility or responsible for emergency response for a facility are responsible to train facility personnel, maintain records of such training and maintain notification procedures to assure that immediate notification is provided to the City Public Works Department upon becoming aware of any suspected, confirmed or unconfirmed release of material, pollutants or waste creating a risk of discharge into the municipal separate storm drain system. As soon as any person in charge of a facility or responsible for emergency response for a facility has such knowledge, such person shall take all necessary steps to ensure the containment and clean up of such release and shall notify the City Public Works Department of the occurrence no later than the next business day.

The notification requirements of this section are in addition to any other notification requirements set forth in federal, state or local regulations and/or laws.

Section 8-15-03 Storm Water Management Plans and Comprehensive Drainage Plans

8-15-03.1 Requirements

To minimize the discharge and transport of pollutants to storm drain systems and prevent the deterioration of water quality, certain new developments and redevelopment projects will be required to submit for approval a storm water management plan or a comprehensive drainage plan to control the quality, volume and rate of storm water runoff. The 2000 Boise City Storm Water Management Design Manual establishes standards and guidelines for implementing BMPs and storm water management plans and is incorporated by reference and made part of this ordinance. The Boise City Storm Water BMP Guidebook may also be used to implement BMPs during and after construction; however, where a conflict exists between the Design Manual and the Guidebook, the Design Manual shall be the overriding authority.

A. Storm water management plans or comprehensive drainage plans are required for industrial, commercial, and institutional developments which require a building permit and multifamily residential developments that are not part of a larger subdivision project, as well as subdivision projects that have private access, which also require a building permit.

B. Redevelopment projects may be required to submit complete storm water management plans or operation and maintenance plans if they meet the criteria found in the Boise City Storm Water Design Manual.

C. Storm water management plans and comprehensive drainage plans shall provide for the following:

1. Prevention of any direct discharge of untreated storm water, either on or off-site.
2. Prevention of increased post-development discharge rates.
3. Removal of a minimum amount, determined by the percentage of impervious parcel area, of annual total suspended solids generated from development or redevelopment runoff prior to any off-site discharge.
4. Continuation of BMPs for appropriate periods of time.
5. Protection of ground water from instances of development runoff infiltration.

D. Storm water management plans and comprehensive drainage plans shall be developed in accordance with the Boise City Storm Water Management Design Manual or equivalent, and shall include:

1. Site evaluation.
2. Drainage system report.
3. Peak flow rates and runoff volume calculations.
4. Safety requirements.
5. Grading plans.
6. Operation and maintenance plan.
7. All other necessary BMPs not covered in the areas listed above.

E. All drainage system reports, peak flow rates and runoff volume calculations, safety requirements, and grading plans shall be certified by a licensed professional authorized by the state of Idaho to perform such functions.

F. Drainage plans that are conceptual only, without engineering specifications, shall not be considered as comprehensive drainage plans.

G. Drainage systems shall have the following minimum requirements:

1. Designed to provide primary conveyance for runoff from a 50 year frequency storm on sites with less than 15 percent slope or a 100 year frequency storm on sites with greater than 15 percent slope.
2. Designed to provide secondary conveyance for runoff for all flows up to the 100 year frequency storm, within defined rights of way or drainage easements.
3. Designed to prevent an increase of peak flows at any location for the 2, 10, 25 and 100 year frequency storm which could cause increased inundation of any building or roadway surface.
4. Achievement of peak flow regulation by on-site discharge, off-site discharge with permission or participation in an approved Regional Storm Water Management facility.

H. The Boise City Council reserves the right to amend, modify and/or add requirements to the Boise City Storm Water Management Design Manual.

8-15-03.2 Submission and Review Process

A. Storm water management plans and comprehensive drainage plans shall be submitted at the time building plans are submitted. The plans shall be submitted to the Building Department with a permit fee in an amount provided for in a fee schedule adopted by the Boise City Council. The plans shall be reviewed by the Boise City Public Works Department for their compliance with the Boise City Storm Water Management Design Manual and other applicable rules and standards. Plans developed to meet federal or state requirements may be submitted, and will be approved if they substantially conform to the requirements of this Ordinance. Where physical submission of plans would be too cumbersome, the Boise City

Public Works Department may waive the requirement for physical submission when granted full access to review the on-site plans.

1. No plan shall be approved that increases the peak level of storm water runoff from impervious areas, unless the plan identifies measures to control and limit runoff to peak levels no greater than would occur from the site if left in its natural, undeveloped condition.
2. No development or use of land which requires a grading permit, involves more than 500 square feet of impervious surface, or would create more than 500 square feet of impervious surface shall be permitted without an approved storm water management plan or comprehensive drainage plan.
3. No building permit or certificate of occupancy shall be issued without an approved storm water management plan if required under this section.

B. The City shall be notified of the commencement of any development covered by a comprehensive drainage plan and the owner or responsible person shall be required to provide engineering certification that the development is in conformity with the previously approved comprehensive drainage plan.

C. Any modifications to comprehensive drainage plans shall be submitted to the Boise City Public Works Department for approval, provided, however, for comprehensive drainage plans approved pursuant to this Ordinance as amended, only major modifications must be submitted for approval. All modifications to singular storm water management plans must be submitted to the Boise City Public Works Department with a request for approval and a new storm water management plan shall be submitted upon request of the Boise City Public Works Department.

D. Approval of the storm water management plan or comprehensive drainage plan does not relieve the owner or responsible party from the duty to ensure the systems and their safety measures function as designed.

E. Approval may be suspended or revoked at any time if conditions are not as stated or shown in the approved application or implementation of the plan is not proceeding in the approved manner.

F. Approval of a storm water management plan or a comprehensive drainage plan may be suspended if the project is not completed within a two year period or development has ceased for a period of more than two years; however, a one year extension may be granted upon a written request which provides the reason(s) for the delay or cessation of development and specifies a time frame for completion or commencement of development.

G. If suspension or revocation of approval is necessary, the owner will receive notice of this decision and may appeal to the Public Works

Commission. A written request for appeal and hearing must be made within ten days from the notice of suspension or revocation.

H. If approval is suspended or revoked, the owner shall be required to submit a new plan for approval, with the requisite fee, prior to starting or continuing the planned project or development.

I. If undue hardship would result from strict application of the requirements of this ordinance, a person may request a variance.

1. The variance request must be submitted in writing to the Boise City Public Works Department with a fee in an amount provided for in a fee schedule adopted by the Boise City Council.
2. The person requesting a variance shall state in detail the reason for the request and provide supporting documentation.
3. If a request for variance is denied by the Boise City Public Works Department, the denial may be appealed to the Public Works Commission within ten days of notice of denial. The Commission shall provide the aggrieved party with a hearing date and an opportunity to present argument in favor of the variance request. The Commission will not accept additional supporting documentation if the information was reasonably available at the time the request for variance was made and could have been submitted to the Public Works Department.
4. A variance shall not be considered a right or special privilege.

J. Approval of any plans by the Boise City Public Works Department shall not create a liability on the part of or cause of action against the City or any officer or employee thereof regarding the plan or its operation.

8-15-03.3 Maintenance of Storm Water Facilities

A. Storm water facilities shall be maintained by the owner or other responsible party and shall be repaired and/or replaced by such person when such facilities are no longer functioning as designed.

B. Disposal of waste from maintenance of facilities shall be conducted in accordance with applicable federal, state and local laws and regulations.

C. Records of installation and maintenance and repair shall be retained by the owner or other responsible party for a period of five years and shall be made available to the Public Works Department upon request.

D. Any failure to maintain facilities or correct problems with facilities after receiving due notice from the City may result in criminal or civil penalties and the City may perform corrective or maintenance work which shall be at the owner's expense.

Section 8-15-04 Inspection and Enforcement

8-15-04.1 Inspections

A. Storm water systems shall be inspected by the Boise City Public Works Department during and after construction to assure consistency with the approved storm water management plan.

B. All storm water systems shall be subject to the authority of the on-site detention inspection program of the Boise City Public Works Department to ensure compliance with this Ordinance and may be inspected when deemed necessary.

C. The owner or other responsible party shall make annual inspections of the facilities and maintain records of such inspections for a period of five years.

D. Whenever necessary to make an inspection to enforce any of the provisions of this Ordinance, or whenever an Authorized Enforcement Agent has reasonable cause to believe that there exists in any building or upon any premises any condition which may constitute a violation of the provisions of this Ordinance, the agent may enter such building or premises at all reasonable times to inspect the same or perform any duty imposed upon the agent by this Ordinance; provided that (1) if such building or premises is occupied, he or she first shall present proper credentials and request entry; and (2) if such building or premises is unoccupied, he or she first shall make a reasonable effort to locate the owner or other persons having charge or control of the building or premises and request entry.

E. The property owner or occupant has the right to refuse entry but, in the event such entry is refused, the agent is hereby empowered to seek assistance from any court of competent jurisdiction in obtaining such entry and performing such inspection.

F. Routine or area inspections shall be based upon such reasonable selection processes as may be deemed necessary to carry out the objectives of this ordinance, including but not limited to, random sampling and/or sampling in areas with evidence of storm water pollution, illicit discharges, or similar factors.

18-15-04.2 Sampling

With the consent of the owner or occupant or with Court consent, any Authorized Enforcement Agent may establish on any property such devices as are necessary to conduct sampling or metering operations. During all inspections as provided herein, the agent may take any samples deemed necessary to aid in the pursuit of the inquiry or to record the on-site activities, provided that owners or occupants shall be entitled to split samples.

18-15-04.3 Testing and Monitoring

A. Whenever the Director of Public Works or his designee determines that any person engaged in any activity and/or owning or operating any facility may cause or contribute to storm water pollution or illicit discharges to the storm water system, the Director of Public Works or his designee may, by written notice, order that such person undertake such monitoring activities and/or analyses and furnish such reports as the Director of Public Works or his designee may recommend. The written notice shall be served either in person or by certified or registered mail, return receipt requested, and shall set forth the basis for such order and shall particularly describe the monitoring activities and/or analyses and reports required. The burden to be borne by the owner or operator, including costs of these activities, analyses and reports, shall bear a reasonable relationship to the need for the monitoring, analyses and reports and the benefits to be obtained. The recipient of such order shall undertake and provide the monitoring, analyses and reports within the time frames set forth in the order.

B. Within 20 days of the date of receipt of the order notice, the recipient shall respond personally or in writing advising the City of the recipients position with respect to the Order's requirements. Thereafter, the recipient shall be given the opportunity to meet with the Public Works Director or his designee to review the Order's requirements and revise the Order as the Public Works Director or his designee deem necessary. Within 10 days of such meeting, the Public Works Director or his designee shall issue a final written order. Final Orders of the Public Works Director or his designee may be appealed to the Public Works Commission by the filing of a written appeal with the Public Works Department within 10 days of receipt of the final Order. The appeal notice shall set forth the particular Order requirements or issues being appealed. The Public Works Commission shall hear the appeal at its earliest practical date and may either firm, revoke or modify the Order. The decision of the Public Works Commission shall be final.

C. In the event the owner or operator of a facility fails to conduct the monitoring and/or analyses and furnish the reports required by the Order in the time frames set forth therein, the City may cause such monitoring and/or analyses to occur and assess all costs incurred, including reasonable administrative costs and attorney's fees, to the facility owner or operator. The City may pursue judicial action to enforce the Order and recover all costs incurred.

8-15-04.4. Violations Constituting Misdemeanors

The knowing violation of any provision of this Ordinance, or knowing failure to comply with any of the mandatory requirements of this Ordinance shall constitute a misdemeanor.

8-15-04.5 Continuing Violation

Unless otherwise provided, a person, firm, corporation or organization shall be deemed guilty of a separate offense for each and every day during any portion of which a violation of this Ordinance is committed, continued or permitted by the person, firm, corporation or organization and shall be punishable accordingly, as herein provided.

8-15-04.6 Concealment

Causing, permitting, aiding, abetting or concealing a violation of any provision of this Ordinance shall constitute a violation of such provision.

8-15-04.7 Acts Resulting in Violation of Federal Clean Water Act.

Any person who violates any provision of this Ordinance, any provision of any permit issued pursuant to this Ordinance, or who discharges waste or wastewater which causes pollution, or who violates any cease and desist order, prohibition, or effluent limitation, also may be in violation of the federal Clean Water Act and may be subject to the sanctions of that Act including civil and criminal penalties.

8-15-04.8 Violations Deemed a Public Nuisance

A. In addition to the penalties hereinbefore provided, any condition caused or permitted to exist in violation of any of the provisions of this Chapter shall be considered a threat to the public health, safety, welfare and the environment, may be declared and deemed a nuisance by the Director of Public Works or his designee, and may be summarily abated and/or restored by the City and/or civil action taken to abate, enjoin or otherwise compel the cessation of such nuisance.

B. The cost of such abatement and restoration shall be borne by the owner of the property and the cost thereof shall be a lien upon and against the property and such lien shall continue in existence until the same shall be paid.

C. If any violation of this Ordinance constitutes a seasonal and recurrent nuisance, the Director of Public Works or his designee shall so declare. Thereafter such seasonal and recurrent nuisance shall be abated every year without the necessity of any further declaration.

D. In any administrative or civil proceeding under this Ordinance in which the City prevails, the City may be awarded all costs of investigation, administrative overhead, out-of-pocket expenses, costs of administrative hearings, costs of suit and reasonable attorneys' fees.

8-15-04.9 Civil Actions

In addition to any other remedies provided in this section, any violation of this section may be enforced by civil action brought by the City. In any such action, the City may seek, and the Court shall grant, as appropriate, any or all of the following remedies:

- A. A temporary and/or permanent injunction.
- B. Assessment of the violator for the costs of any investigation, inspection, or monitoring survey which led to the establishment of the violation, and for the reasonable costs of preparing and bringing legal action under this subsection.
- C. Costs incurred in removing, correcting, or terminating the adverse effects resulting from the violation.
- D. Compensatory damages for loss or destruction to water quality, wildlife, fish and aquatic life. Assessments under this subsection shall be paid to the City to be used exclusively for costs associated with monitoring and establishing storm water discharge pollution control systems and/or implementing or enforcing the provisions of this Ordinance.

8-15-04.10 Administrative Enforcement Powers

In addition to the other enforcement powers and remedies established by this ordinance, any Authorized Enforcement Agent has the authority to utilize the following administrative remedies.

A. Cease and Desist Orders. When an Authorized Enforcement Agent finds that a discharge has taken place or is likely to take place in violation of this Ordinance, the agent may issue an order to cease and desist such discharge, or practice, or operation likely to cause such discharge and direct that those persons not complying shall: (a) comply with the requirement; (b) comply with a time schedule for compliance, and/or (c) take appropriate remedial or preventive action to prevent the violation from recurring.

B. Notice to Clean. Whenever an Authorized Enforcement Agent finds any oil, earth dirt, grass, weeds, dead trees, tin cans, rubbish, refuse, waste or any other material of any kind, in or upon the sidewalk abutting or adjoining any parcel of land, or upon any parcel of land or grounds or in close proximity to any open drain or ditch channel, which may result in an increase in pollutants entering the storm drain system or a nonstorm water discharge to the storm drain system, he or she may give notice to remove and lawfully dispose of such material in any manner that he or she reasonably may provide. The recipient of such notice shall undertake the activities as described in the notice within the time frames set forth therein.

In the event the owner or operator of a facility fails to conduct the activities as described in the notice, the Director of Public Works or his designee may cause such required activities as described in the notice to be performed, and the cost thereof shall be assessed and invoiced to the owner of the property. If the invoice is not paid within sixty (60) days, a lien shall be placed upon and against the property.

8-15-04.11 Nonexclusively of Remedies

Remedies under this Ordinance are in addition to and do not supersede or limit any and all other remedies, civil or criminal. The remedies provided for herein shall be cumulative and not exclusive.

8-15-04.12 Appeal

Any person, firm, corporation or organization notified of non-compliance with this Ordinance or required to perform monitoring, analyses, reporting and/or corrective activities who is aggrieved by the decision of the Authorized Enforcement Agent may appeal such decision in writing to the Boise City Public Works Commission within 10 days following the effective date of the decision. Upon receipt of such request, the Public Works Commission shall request a report and recommendation from the Authorized Enforcement Agent and shall set the matter for administrative hearing at the earliest practical date. At said hearing, the Public Works Commission may hear additional evidence, and may revoke, affirm or modify the Authorized Enforcement Agent's decision. Such decision shall be final.

8-15-04.13 Disclaimer of Liability

The degree of protection required by this Ordinance is considered reasonable for regulatory purposes and is based on scientific, engineering and other relevant technical considerations. The standards set forth herein are minimum standards and this Ordinance does not imply that compliance will ensure that there will be no unauthorized discharge of pollutants into the waters of the United States. This Ordinance shall not create liability on the part of the City, any agent or employee thereof for any damages that result from reliance on this Chapter or any administrative decision lawfully made thereunder.

Appendix 4C – Visual Tests of Possible Contaminants in Dry Weather Flows

(From EPA. 1993. *Investigation of Inappropriate Pollutant Entries into Storm Drainage Systems: A User's Guide*. EPA/600/R-92/238.).

Odor - Most strong odors, especially gasoline, oils, and solvents, are likely associated with high responses on the toxicity screening test. Typical obvious odors include: gasoline, oil, sanitary wastewater, industrial chemicals, and decomposing organic wastes.

- *Sewage*: Smell associated with stale sanitary wastewater, especially in pools near outfall.
- *Sulfur* (“rotten eggs”): Industries that discharge sulfide compounds or organics (meat packers, canneries, dairies, etc.).
- *Rancid-sour*: Food preparation facilities (restaurants, hotels, etc.).
- *Oil and gas*: Petroleum refineries or many facilities associated with vehicle maintenance or petroleum product storage.

Color - Important indicator of inappropriate industrial sources. Industrial dry-weather discharges may be of any color, but dark colors, such as brown, gray, or black, are most common.

- *Yellow*: Chemical plants, textile, and tanning plants.
- *Brown*: Meat packers, printing plants, metal works, stone and concrete, fertilizers, and petroleum refining facilities.
- *Green*: Chemical plants, and textile facilities.
- *Red*: Meat packers.
- *Gray*: Dairies.

Turbidity - Often affected by the degree of gross contamination. Dry-weather industrial flows with moderate turbidity can be cloudy, while highly turbid flows can be opaque. High turbidity is often a characteristic of undiluted dry-weather industrial discharges.

- *Cloudy*: Sanitary wastewater, concrete or stone operations, fertilizer facilities, automotive dealers.
- *Opaque*: Food processors, lumber mills, metal operations, and pigment plants.

Floatable matter - A contaminated flow may contain floating solids or liquids directly related to industrial or sanitary wastewater pollution. Floatables of industrial origin may include animal fats, spoiled food, oils, solvents, sawdust, foams, packing materials, or fuel.

- *Oil sheen*: Petroleum refineries or storage facilities, and vehicle service facilities.

- *Sewage*: Sanitary wastewater.

Deposits and stains - Refer to any type of coating near the outfall and are usually of a dark color. Deposits and stains often will contain fragments of floatable substances. These situations are illustrated by the grayish-black deposits that contain fragments of animal flesh and hair which often are produced by leather tanneries, or the white crystalline powder which commonly coats outfalls due to nitrogenous fertilizer wastes.

- *Sediment*: Construction site erosion.
- *Oils*: Petroleum refineries or storage facilities and vehicle service facilities.

Vegetation - Vegetation surrounding an outfall may show the effects of industrial pollutants. Decaying organic materials coming from various food product wastes would cause an increase in plant life, while the discharge of chemical dyes and inorganic pigments from textile mills could noticeably decrease vegetation. It is important not to confuse the adverse effects of high stormwater flows on vegetation with highly toxic dry-weather intermittent flows.

- *Excessive growth*: Food product facilities.
- *Inhibited growth*: High stormwater flows, beverage facilities, printing plants, metal product facilities, drug manufacturing, petroleum facilities, vehicle service facilities and automobile dealers.

Damage to Outfall Structures - Another readily visible indication of industrial contamination. Cracking, deterioration, and spalling of concrete or peeling of surface paint, occurring at an outfall are usually caused by severely contaminated discharges, usually of industrial origin. These contaminants are usually very acidic or basic in nature. Primary metal industries have a strong potential for causing outfall structural damage because their batch dumps are highly acidic. Poor construction, hydraulic scour, and old age may also adversely affect the condition of the outfall structure.

- *Concrete cracking*: Industrial flows
- *Concrete spalling*: Industrial flows
- *Peeling paint*: Industrial flows
- *Metal corrosion*: Industrial flows

Appendix 4D – Sample Illicit Discharge Identification Form

(a) Illicit Discharge/Connection Reporting and Response

Date/Time: _____

Reported by: _____

Address: _____

Phone: _____

Location: _____

Storm Drain ID/Stream Name: _____

Material Type

- Hazardous
- Sediment
- Wastewater
- Oil/Grease
- Other _____
- Unknown
- Est. Quantity: _____

Observed Land Use

- Residential
- Commercial
- Industrial
- Public

Direct/Constructed Connections Found? ___ Yes ___ No

Description: _____

Source Investigation Conducted? ___ Yes ___ No Source Identified? ___ Yes ___ No

Source/Owner of Discharge/Connection:

Entered Storm Drain System/Receiving Waters? ___ Yes ___ No

(b) Action and Closure

Referred To: _____

Phone: _____

City: _____

Dept.: _____

Action Taken: _____

Date Closed: _____

Appendix 4E – Sample Enforcement Plan

Sample Enforcement Plan (from city of Sacramento’s Guidelines for Determining Administrative Penalties for Prohibited Non-Stormwater Discharges)

NOTE: The plan below is an example only, and may not exactly match current requirements in Oregon laws and regulations.

Cite and summarize legal authority

Section X.X of the city code prohibits the discharge of non-stormwater into the city’s storm drain system. This section also prohibits illegal dumping. Section X.X of the city code requires construction sites disturbing greater than one acre to comply with the Rogue Valley Stormwater Manual and prohibits discharges from these sites to the city’s storm drain system or to waters of the state. Section X.X of the city code authorizes various enforcement actions for violations of these sections, including the imposition of administrative penalties.

Amount of Administrative Penalty:

This guidance shall be used to determine the amount of an administrative penalty for violations of the city’s ordinances cited above. This guidance applies where there is not already a separate and distinct administrative penalty already described in city code, resolution, or guidance. Each day a violation continues or occurs constitutes a separate violation. Unless otherwise provided, administrative penalties may be imposed in any amount not less than one hundred dollars (\$100) nor more than ten thousand dollars (\$10,000) per violation. In determining the amount of the administrative penalty to be imposed, the city official shall consider factors including but not limited to:

- The seriousness of the violation.
- The responsible party’s efforts to correct the violation.
- The injury/damage, if any, suffered by any member of the public.
- The economic advantage the party gained by not complying with the ordinance.
- Any instances in which the responsible party has been in violation of the same or similar code provisions in the previous three years.
- The amount of staff time which was expended investigating or addressing the violation.
- The amount of administrative penalties which have been imposed in similar situations.

Levels of Violations

The amount of the administrative penalty shall be set according to one of the following four levels of violations:

Level A violations are violations that present a substantial probability that death or serious physical harm to the public at large or person(s) would result. Level A violations shall be subject to an administrative penalty of five thousand dollars (\$5,000) to ten thousand (\$10,000).

Level B violations are violations that either (1) present the threat, but not substantial probability, that serious physical harm to the public at large or person(s) would result; or (2) present circumstances that are likely to cause and/or do cause serious harm to public or private property; or (3) present a conscious and willful disregard of (i) a hearing examiner's order(s), or (ii) orders or notices of violation issued by an agency authorized to issue such orders or notices. Level B violations shall be subject to an administrative penalty of two thousand five hundred dollars (\$2,500) to four thousand nine hundred ninety-nine dollars (\$4,999).

Level C violations are violations that are violations that present circumstances that either (1) are likely to cause and/or do cause harm to public or private property, or (2) show repeated or continuous noncompliance with (i) a hearing examiner's order(s), or (ii) orders or notices of violation issued by an agency authorized to issue such orders or notices. Level C violations shall be subject to an administrative penalty of one thousand dollars (\$1,000) to two thousand four hundred ninety-nine dollars (\$2,499).

Level D violations are violations other than Level A, B, or C violations. Level D violations shall be subject to an administrative penalty of one hundred dollars (\$100) to nine hundred and ninety-nine dollars (\$999).

Guidelines for determining penalty amounts

The following guidelines are established for determining administrative penalty amounts.

Residential – Non-hazardous non-stormwater discharges

Non-hazardous materials include dirt/gravel/sand, vegetation, gray water, food waste, chlorinated pool water, and detergents.

Extenuating circumstances can include the responsible party was grossly negligent, failed to contain and clean up the prohibited material within the time frame prescribed by the city, attempted to mislead the city with incorrect information and/or refused to comply with the city's enforcement action(s).

First Violation:

Issuance of a notice of violation, cease and desist order and/or notice to clean and abate, but no imposition of administrative penalties. If the city

enforcement official determines that extenuating circumstances exist, then a minimum penalty of \$100, not to exceed \$999 (Level D) shall apply.

Second Violation:

Minimum penalty of \$100, not to exceed \$999 (Level D). Determination of the penalty amount within this range will be made based on consideration of the factors associated with the violation and comparison to similar administrative penalties issued previously.

Subsequent Violations:

If the city enforcement official has imposed an administrative penalty on the same responsible party for a violation of city code within the preceding three years, the maximum administrative penalty for subsequent violations may be increased to \$2,499 (Level C). The circumstances of the subsequent violations need not be similar to those of the previous violation(s). The maximum administrative penalty for subsequent violations may be increased to \$4,999 (Level B) if the city enforcement official determines that extenuating circumstances exist. Determination of the penalty amount within these ranges will be made based on consideration of the factors associated with the violation and comparison to similar administrative penalties issued previously.

Residential – Hazardous Non-Stormwater Discharges

Hazardous materials include oils, fuels, latex, oil or water based paint, stucco or concrete waste/wastewater, sewage, antifreeze, paint thinners, herbicides, pesticides, pool chemicals, cleaners, and solvents, acids.

First Violation:

Minimum penalty of \$200, not to exceed \$2,499 (Level C or D) for the first prohibited non-stormwater discharge identified as a hazardous material. Determination of the penalty amount within these ranges will be made based on consideration of the factors associated with the violation and comparison to similar administrative penalties issued previously.

Subsequent Violations:

If the city enforcement official has imposed an administrative penalty on the same responsible party for a violation of city code within the preceding three years, the maximum administrative penalty for subsequent violations may be increased to \$4,999 (Level B). The circumstances of the subsequent violations need not be similar to those of the previous violation(s). Determination of the penalty amount within these ranges will be made based on consideration of the factors associated with the violation and comparison to similar administrative penalties issued previously.

Business – Non-hazardous non-stormwater discharges

First Violation:

Issuance of a notice of violation, cease and desist order and/or notice to clean and abate, but no imposition of administrative penalties. If the City enforcement official determines that extenuating circumstances exist, then a minimum penalty of \$250, not to exceed \$999 (Level D) shall apply.

Second Violation:

Minimum penalty of \$250, not to exceed \$2,499 (Level C or D). Determination of the penalty amount within this range will be made based on consideration of the factors associated with the violation and comparison to similar administrative penalties issued previously.

Subsequent Violations:

If the city enforcement official has imposed an administrative penalty on the same responsible party for a violation of city code within the preceding three years, the maximum administrative penalty for subsequent violations may be increased to \$2,499 (Level C). The circumstances of the subsequent violations need not be similar to those of the previous violation(s). The maximum administrative penalty for subsequent violations may be increased to \$4,999 (Level B) if the city enforcement official determines that extenuating circumstances exist. Determination of the penalty amount within these ranges will be made based on consideration of the factors associated with the violation and comparison to similar administrative penalties issued previously.

Best Management Practices (BMPs):

The responsible party may, upon approval by the city enforcement officer, apply the administrative penalty amount toward the purchase of structural BMPs to eliminate any reasonable possibility of a future prohibited non-stormwater discharge.

Business – Hazardous non-stormwater discharges

First Violation:

Minimum penalty of \$500, not to exceed \$2,499 (Level C or D) for the first prohibited non-stormwater discharge identified as a hazardous material. If extenuating circumstances exist, then the maximum administrative penalty may be increased to \$4,999. Determination of the penalty amount within these ranges will be made based on consideration of the factors associated with the violation and comparison to similar administrative penalties issued previously.

Subsequent Violations:

If the city enforcement official has imposed an administrative penalty on the same responsible party for a violation of city code within the preceding three years, the maximum administrative penalty for subsequent violations may be increased to \$9,999 (Level A). The circumstances of the subsequent violations need not be similar to those of the previous violation(s). Determination of the penalty amount within these ranges will

be made based on consideration of the factors associated with the violation and comparison to similar administrative penalties issued previously.

Best Management Practices (BMPs):

The responsible party may, upon approval by the city enforcement officer, apply the administrative penalty amount toward the purchase of structural BMPs to eliminate any reasonable possibility of a future prohibited non-stormwater discharge.

Other Enforcement Actions: Cost Recovery

The imposition of administrative penalties for violations of city code X.X shall not prevent the city or any other authorized agency from exercising any additional enforcement authority authorized or provided in any law or regulation. The imposition of administrative penalties shall be in addition to the recovery of costs incurred by the city in cleaning up and abating a violation, or the recovery of costs granted to the city after prevailing in an administrative, civil or criminal proceeding.

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Chapter 5 - Construction Site Stormwater Runoff Control Program

5.1 Requirements

The Stormwater Phase II Final Rule, published in December 1999, lists the following regulations for construction site stormwater runoff control. This Regional Stormwater Program *Guide* is intended to meet these EPA regulations and provide a template for meeting the Phase II permit the Oregon Department of Environmental Quality issues to Rogue Valley jurisdictions. The following guidance section from the Phase II Rule provides additional details on the preceding regulations.

<p>Regulations</p>	<p>40 CFR 122.34(b)(4) Construction site stormwater runoff control</p> <p>(i) You must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre.</p> <p>Reduction of 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. If the NPDES permitting authority waives requirements for stormwater discharges associated with small construction activity in accordance with Sec. 122.26(b)(15)(i), you are not required to develop, implement, and/or enforce a program to reduce pollutant discharges from such sites.</p> <p>(ii) Your program must include the development and implementation of, at a minimum:</p> <p>(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 State, Tribal, or local law;</p> <p>(B) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices;</p> <p>(C) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;</p> <p>(D) Procedures for site plan review, which incorporate consideration of potential water quality impacts;</p>
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	<p>(E) Procedures for receipt and consideration of information submitted by the public, and</p> <p>(F) Procedures for site inspection and enforcement of control measures.</p>
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Guidance	<p>40 CFR 122.34(b)(4) Construction site stormwater runoff control</p> <p>Examples of sanctions to ensure compliance include non-monetary penalties, fines, bonding requirements and/or permit denials for non-compliance. EPA recommends that procedures for site plan review include the review of individual pre-construction site plans to ensure consistency with local sediment and erosion control requirements. Procedures for site inspections and enforcement of control measures could include steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving water quality. You are encouraged to provide appropriate educational and training measures for construction site operators. You may wish to require a stormwater pollution prevention plan for construction sites within your jurisdiction that discharge into your system. See Sec. 122.44(s) (NPDES permitting authorities' option to incorporate qualifying State, Tribal and local erosion and sediment control programs into NPDES permits for stormwater discharges from construction sites). Also see Sec. 122.35(b) (The NPDES permitting authority may recognize that another government entity, including the permitting authority, may be responsible for implementing one or more of the minimum measures on your behalf.)</p>
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5.1.1 DEQ's Statewide NPDES Construction Stormwater General Permit (1200-C)

Similar to private developers, cities and counties in Oregon are required to obtain a NPDES construction permit from DEQ for all soil disturbing activities (including grading, stump removal, demolition) of one or more acres. This NPDES construction permit is required if the project discharges stormwater to a receiving water (e.g., wetlands, creeks, unnamed creeks, rivers, marine waters, ditches, and estuaries) and/or storm drains that discharge to receiving water. If the construction owner plans on retaining all stormwater on site, but detention facilities need to be constructed to retain the stormwater, permit coverage is still required.

When the Phase II regulations became effective in December 2002, the five acre threshold fell to the current one acre threshold. A permit is required from any construction owner, including local governments. Construction operators who fall under these requirements will be required to submit an application to DEQ along with a Land Use Compatibility Statement and an Erosion and Sediment Control Plan. When the construction work is complete and the final stabilization of the site has

been achieved a Notice of Termination must be submitted. To obtain forms and more information on the application procedure and permit requirements for construction projects, see DEQ's guidance document, *NPDES Storm Water Regulations for Construction Projects (November 2002)*. A copy of the NPDES General Permit 1200-C for Construction Activities application form is found in Appendix 5A. For the latest information on stormwater permits, see DEQ's stormwater web site: <http://www.deq.state.or.us/wq/wqpermit/stormwaterhome.htm>

5.1.2 Relationship of the Statewide NPDES Construction Stormwater General Permit (1200-C) with the Phase II Construction Minimum Measure

The Statewide NPDES Construction Stormwater General Permit (1200-C), issued by DEQ and described in Section 1.2.6 and Section 5.1.1, applies to all construction activity disturbing at least one acre that has a discharge, meaning that the stormwater from that site enters a storm drain or a surface water body.

The Construction Minimum Measure, which this chapter addresses, only applies within the Phase II boundary described in Chapter 1, Section 1.2.3 and Section 1.4.2. Therefore, construction projects outside of a Phase II boundary will only need to apply for DEQ's Statewide (1200-C) Permit (if applicable) and comply with any local requirements, if they exist.

Construction projects within the Phase II boundary will need to apply for DEQ's Statewide NPDES Construction Stormwater General Permit and comply with the local construction program described in this chapter.

Jurisdictions can implement the state's 1200-C permit program locally, by Memorandum of Agreement, through coordination with the Oregon DEQ.

5.2 Benefits: Why this Program is Important

Construction sites with improper erosion and sediment controls have been shown to cause significant water quality impacts. These impacts are the result of both sediment discharged and the associated pollutants absorbed onto particles found with the sediment. Sediment discharges from construction sites smother aquatic habitat and spawning grounds for fish, fill reservoirs and channels, and increase the cost of filtration for water treatment plants.

EPA cites a number of studies documenting the impacts of construction site runoff. One study in Wisconsin found that before construction, runoff sampled from a commercial site had an average of 138 mg/L of total solids concentrations. Runoff sampled during construction, however, averaged more than 15,000 mg/L while post-construction runoff averaged only 200 mg/L.

The economic impacts of construction site erosion-related problems are difficult to quantify. A study by Paterson et al. in 1993 cited in Brown

and Caraco (1997) estimated the nation's total urban erosion-related problems cause between \$192 million and \$2.2 billion per year in damaged (in 1985 dollars). These economic impacts vary greatly depending on location and type of water body impacted.

5.3 Regional Guide for Construction Site Stormwater Runoff Control

The *Regional Guide* described below should be implemented in coordination with a *Stormwater Management Manual for the Rogue Valley*, or DEQ's *Erosion Prevention and Sediment Control Manual*, or other pertinent manuals or guidance documents, where adopted in ordinance by local governments. Such a *Manual* provides the technical standards with which construction site operators must comply, while the *Regional Guide* specifies the activities the jurisdictions will follow.

This *Regional Guide* addresses a local program to control erosion from construction sites. Construction operators for sites disturbing more than one acre are also required to apply for coverage under the NPDES Construction Stormwater General Permit (1200-C). DEQ oversees compliance with the NPDES Construction Permit while the community oversees compliance with its own local ordinances, permits, and stormwater program.

All BMPs in this chapter, BMPs 5A – 5F, are required.

5.3.1 Adopt an Erosion and Sediment Control Ordinance

BMP 5A: For permits or authorizations issued by the jurisdiction for construction operators disturbing at least 1 acre, require through an ordinance, erosion and sediment controls in compliance with an adopted stormwater management *Manual* or other guidance document. Jurisdictions may, at their discretion, require erosion and sediment controls for smaller sites based on local conditions and needs.

Measurable Goal: Adopt a final ordinance for erosion and sediment control using an appropriate manual or guidance document. (*Establish specific goals in the individual plan for each jurisdiction.*)

An ordinance to require erosion and sediment controls on construction sites is needed to ensure compliance. This ordinance typically requires construction operators to follow a guidance manual. An effective ordinance also includes penalties to ensure compliance. At a minimum, this ordinance applies to all construction activity disturbing at least one (1) acre. Incorporate these ordinance requirements into an existing grading permit process, requiring sites to submit erosion and sediment control plans and implement BMPs before a grading permit is issued.

A “model” ordinance, based on the city of Boise’s stormwater ordinance, is found in Appendix 4B (Illicit Discharge Chapter). This ordinance

covers the legal authority required for construction and post-construction control by requiring construction operators to follow a stormwater manual.

Include in the local ordinance a requirement that construction sites comply with an adopted stormwater management *Manual*. Such a *Manual* could either be prepared locally, regionally, or statewide. A regional *Manual* might be developed as the *Stormwater Management Manual for the Rogue Valley*. Alternately, by 2005, the Oregon DEQ plans to prepare a statewide *Erosion Prevention and Sediment Control Manual* for use by the construction industry and state and local inspectors. In any case, the details on the types of controls construction sites must implement should preferably be contained in the technical *Manual*, not in the ordinance.

The State Building Code can also provide the legal authority, however, in most cases it is probably better to have the legal authority specified in the local municipal code.

Stormwater Management Manual (*Manual*)

A specific Stormwater Management Manual (*Manual*) for the Rogue Valley has not been developed. If it were to be developed, it would need to provide the technical guidance to help municipalities implement this *Regional Guide*. The *Manual* should provide commonly accepted stormwater management practices which, if implemented, are presumed to protect water quality. Jurisdictions are usually allowed to develop technical manuals, but may need to demonstrate to DEQ that such manuals and stormwater management practices will protect water quality.

For purposes of this *Regional Guide*, it is assumed that a *Manual* will need to be developed, or reference will need to be made to other pertinent manuals or guidance documents. For simplicity at this time, we shall assume a new *Manual* is prepared for the Rogue Valley, or for a specific Rogue Valley jurisdiction.

We will also assume the *Manual* will consist of core elements applicable to new development and redevelopment projects in the Rogue Valley that discharge to surface waters or to UIC rule-authorized subsurface drainage systems. For the construction site stormwater runoff control measure, the main Core Elements would be: Preparation of a Stormwater Site Plan, and Construction Stormwater Pollution Prevention.

Construction Stormwater Pollution Prevention, should contain erosion and sediment control plan elements to prevent pollution resulting from erosion and sediment runoff during the construction phase. These elements would typically include the following items:

- | | |
|-------------------------|-----------------------------------|
| 1. Mark Clearing Limits | 2. Establish Construction Access |
| 3. Control Flow Rates | 4. Install Sediment Controls |
| 5. Stabilize Soils | 6. Protect Slopes |
| 7. Protect Drain Inlets | 8. Stabilize Channels and Outlets |

9. Control Pollutants

10. Control De-Watering

11. Maintain BMPs

12. Manage the Project

A chapter of the *Manual* should also provide guidance on planning, design, and implementation of stormwater management practices at construction sites. The *Manual* should include a series of source control BMPs and runoff conveyance and treatment BMPs for construction erosion and sediment control plans.

At the time of publication of this *Regional Guide*, a *Stormwater Management Manual for the Rogue Valley*, nor DEQ's *Erosion Prevention and Sediment Control Manual*, were yet developed. Check to see if such a manual has been developed. Additional possibilities include reference(s) to other manuals or guidance documents prepared by other applicable jurisdictions, states, or agencies.

Progressive enforcement plan

To ensure compliance with the erosion and sediment control ordinance, develop and follow an enforcement plan that includes enforcement of inadequate construction erosion and sediment controls. This enforcement plan is described in Chapter 4, Section 4.3.5. A single enforcement plan can be developed to address illicit discharges, construction erosion and sediment controls, and post-construction controls.

Include in the enforcement plan a description of the different levels of enforcement actions available to inspectors, such as warnings, administrative actions, and fines. In addition, include in the plan a description of the recommended level of enforcement response for first, second, and subsequent violations of the local erosion and sediment control ordinance provisions.

An effective mechanism for construction sites, if available, is a stop work order. Consistent violations of construction site erosion and sediment control requirements could prompt the inspector to issue a stop work order. This type of order usually brings a prompt response from the owner.

5.3.2 Train Plan Reviewers and Field Inspectors

BMP 5B: Provide training or coordinate with existing training efforts to educate plan reviewers and field inspectors in erosion and sediment control BMPs and requirements.

Measurable Goal: Train plan reviewers and inspectors; re-train as needed. (*Establish specific goals in the individual plan for each jurisdiction.*)

Sections 5.3.3 and 5.3.5 describe the process to review site plans for erosion and sediment controls and inspect construction sites for proper

BMP installation and maintenance. To help implement these activities, provide training to plan reviewers and field inspectors in developing and implementing an effective erosion and sediment control plan. This training can be developed in-house, or a variety of organizations offer training courses on construction site sediment and erosion control. Course information for a few of these trainings is available on the internet at the addresses below.

International Erosion Control Association

<http://www.ieca.org/public/articles/index.cfm?cat=24>

University of Washington's Engineering Professional Program

<http://www.engr.washington.edu/~uw-epp/Pepl/cec.html>

Whenever possible, coordinate the training for erosion and sediment control with training on post-construction stormwater management, as described in Chapter 6. This will ensure staff obtain training in both areas while promoting efficient use of resources.

This BMP requires plan reviewers and field inspectors to receive training, but does not specify exactly how this training should occur. Issues such as the type of training, length of training, and whether to require certification are left to each individual community to decide.

5.3.3 Review Site Plans for Erosion and Sediment (E&S) Controls

Note: This BMP should be conducted in coordination with BMP 6D.

BMP 5C: Review stormwater site plans prior to construction to ensure that they include adequate E&S controls and post-construction controls. This review is conducted to determine compliance with local ordinances and the adopted stormwater management *Manual*. Federal rules require that all construction sites greater than one disturbed acre be subject to plan review. Jurisdictions may, at their discretion, require plan review for smaller sites based on local conditions and needs.

Measurable Goal: Review all site plans subject to the local ordinance. (*Establish specific goals in the individual plan for each jurisdiction.*)

To ensure that construction sites include the required stormwater controls, review pre-construction site plans to ensure that they include appropriate erosion and sediment controls and post-construction controls in compliance with the local ordinance and the adopted stormwater management *Manual*. Combine this pre-construction review of E&S controls with the review of post-construction controls to streamline the review time and conserve resources.

EPA recommends that procedures for site plan review include the review of individual pre-construction site plans to ensure consistency with local sedimentation and erosion control requirements. The pre-construction site

plan review process needs to be integrated into the existing plan review process, either through the grading and building permit review process or a similar building review process, and address both E&S controls and post-construction controls. Use this review process to verify that the site contains appropriate and adequate E&S controls and post-construction controls before construction begins.

At a minimum, include review of all plans for construction sites disturbing at least one acre in the site plan review process. Factors to verify during the site plan review process include:

- Erosion and sediment controls consistent with the adopted stormwater management *Manual* are planned and clearly described on the plan.
- The plan meets all local erosion and sediment control requirements.
- The construction operator is aware of their responsibility for implementing and maintaining erosion and sediment controls and is aware of the penalties for failing to do so.
- Post-construction controls consistent with the adopted stormwater management *Manual* are planned and clearly described on the plan.
- The construction operator and landowner are aware of the responsibility for implementing and maintaining the post-construction controls, and are aware of the penalties for failing to do so.

A pre-construction site plan meeting between the City/County and the construction operator is a good way to ensure that both parties are comfortable with the plan and requirements.

5.3.4 Receive Information from the Public

BMP 5D: Publish a phone number, or equivalent system, to receive information from the public on construction site runoff issues. Set up a process to pass this information off to field inspectors.

Measurable Goal: Publish a phone number or equivalent system by a specified date. (*Establish specific goals in the individual plan for each jurisdiction.*)

To meet this requirement, list a phone number for “construction-related complaints” in the local government pages, published in brochures and listed on the jurisdictions web site, if available. Direct this phone number to the appropriate staff person, such as an administrative assistant for the public works department or a construction inspector.

Keep written logs of all complaints that include the date and time of the call, location of the construction site, and the nature of the complaint. Provide information on these complaints to the local construction inspectors by the end of the day; the goal is to have inspectors follow-up on each complaint within three days.

5.3.5 Inspect Construction Sites

BMP 5E: Inspect all construction sites during the construction period that are regulated by the ordinance adopted in BMP 5A.

Measurable Goal: Inspect all construction sites meeting the one-acre threshold criteria and not subject to a waiver. Inspection frequency will be based on prioritization criteria, however, all construction sites should be inspected at least once. *(Establish specific goals in the individual plan for each jurisdiction.)*

Once site plans receive approval for E&S controls, it is extremely important to ensure that E&S controls are properly installed and maintained, and that the site plan reflects changes made on-site (e.g., different types of controls used and changed location of controls). Frequent and consistent inspections are the key to ensuring proper installation and maintenance of E&S controls. The frequency for inspecting construction sites varies based on local conditions and priorities. At a minimum, inspect all construction sites at least once during the project period.

Set inspection priorities based upon local goals, resources, and known problem areas. These priority sites can be based on particular areas or the priority sites can be based on specific operators with past problems or larger construction sites. Suggested criteria for priority setting include:

- Construction sites on steep slopes or highly erodible areas
- Construction sites operated by contractors with past violations
- Construction sites disturbing more than five acres and/or
- Construction sites following rain events

Document the criteria used to set inspection priorities, and describe the frequency of inspection for these sites. The example inspection form provided in Appendix 5B can be completed when conducting site inspections to help inspectors determine what to look for.

The frequency of inspections will vary based on the priority of the site. Inspect each construction site at least once during the construction period. More frequent inspections may be required during wet weather and for sites identified as priorities.

Consider training other local inspectors, such as building or infrastructure inspectors, on proper erosion and sediment controls and requirements. These inspectors are often on construction sites for other inspection purposes, and could more cost-effectively perform E&S inspections rather than sending a separate E&S inspector to the site. Alternatively, designate a single inspector to be dedicated to E&S controls, and have that inspector visit sites to ensure compliance.

5.3.6 Provide Information on Training for Construction Operators

BMP 5F: Provide information on local training available to construction operators on how to install and maintain effective erosion and sediment control and how to comply with the requirements in the adopted stormwater management *Manual*.

Measurable Goal: Training information to be provided to local construction operators, as needed and/or as requested. (*Establish specific goals in the individual plan for each jurisdiction.*)

Local jurisdictions do not need to conduct this training for local construction operators, but should direct construction operators to available training resources if requested. This could be provided as a single page handout during the pre-construction meeting or as requested.

The training described in Section 5.3.2 also applies to local construction operators. In fact, many classes will include a mix of both municipal construction plan reviewers and inspectors, along with local construction operators.

5.4 Resources

This section includes resources and references for additional information to assist cities in developing and implementing the *Regional Guide*.

EPA's Menu of BMPs for stormwater Phase I

http://www.epa.gov/npdes/menuofbmps/con_site.htm

Stormwater Management Manual for Western Washington

<http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>

Stormwater Management Manual for Eastern Washington

http://www.ecy.wa.gov/programs/wq/stormwater/eastern_manual/index.html

Appendices

Appendix 5A – NPDES General Permit (1200-C) for Construction Activities – Application Form

Appendix 5B – Example Inspection Report

Appendix 5A – NPDES General Permit (1200-C) for Construction Activities – Application Form



**Please answer all questions. An incomplete application will not be processed.
 If the information requested is not applicable or not yet available, please indicate as such.**

A. REFERENCE INFORMATION

- A1 Enter the legal name of the applicant. Permit coverage will be issued to this entity. This is the person, business, public organization, or other entity responsible for assuring that erosion and sediment controls are in place and in working order through the life of the project. This must be the **legal** Oregon name (i.e., Acme Products, Inc.) or the **legal** representative of the company if it operates under an assumed business name (i.e., John Smith, dba Acme Products). The name must be a legal, active name registered with the Oregon Department of Commerce, Corporation Division in Salem at 503-378-4752 or <http://www.filinginoregon.com>, unless otherwise exempted by their rules.

To streamline administration and provide continuous permit coverage, the permit may be transferred from one party to another. For example, if a contractor feels that they will not be able to get a permit before the projected start date, the developer may apply for a permit and then transfer the permit over to the contractor. The transfer fee is \$60. Transfer forms are available from DEQ or at <http://www.deq.state.or.us/wq/wqpermit/PmtTfrAppl.pdf>.

- A2-4 Complete as indicated.
- A5 Enter invoicing information for annual compliance determination fee billing purposes if different from the Applicant in A1 (e.g., "Invoice To: Business Office – Accounts Payable").

B. PROJECT SITE INFORMATION

- B1-4 Complete as indicated.
- B5 Enter the latitude and longitude of the approximate center of the facility or site in degrees/minutes/seconds. Latitude and longitude can be obtained from DEQ's location finder web site at <http://deq12.deq.state.or.us/website/findloc/> or from United States Geological Survey (USGS) quadrangle topographic maps by calling toll-free at 1-888-ASK-USGS (1-888-275-8747). For obtaining latitude and longitude from USGS maps, instructions may be obtained from DEQ's web site at <http://www.deq.state.or.us/wq/wqpermit/LatLongInstr.pdf>.
- B6-7 Complete as indicated.
- B8 Complete as indicated. If storm water will discharge to municipally owned storm sewer, authorization from the municipality must accompany this application. This authorization may be in the form of a preliminary approval letter from the city or county. The authorization does not have to be addressed directly to DEQ. It may be a preliminary review document developed by the city or county indicating that the project is approved in concept.

C. EROSION AND SEDIMENT CONTROL PLAN

- C1 Complete as indicated. A detailed Erosion and Sediment Control Plan must be approved by DEQ before any activities may begin. Instructions on how to complete a plan may be found in DEQ's guidance document *NPDES Storm Water Regulations for Construction Activities* or at <http://www.deq.state.or.us/wq/wqpermit/Gen1200CGuidance.pdf>
- The plan must be submitted to DEQ at least thirty days before beginning any activities. Plan approval by DEQ will be in writing or by default (no response from DEQ thirty days after submitting plan). DEQ's agents may follow a different schedule.
- C2 Complete as indicated.

D. LAND USE COMPATIBILITY STATEMENT

- A Land Use Compatibility Statement (LUCS) must be signed by local planning department. If there are any conditions placed on the land use approval, the findings must be included. The LUCS form may be obtained from DEQ, found at <http://www.deq.state.or.us/pubs/permithandbook/lucs.htm>.

E. SIGNATURE

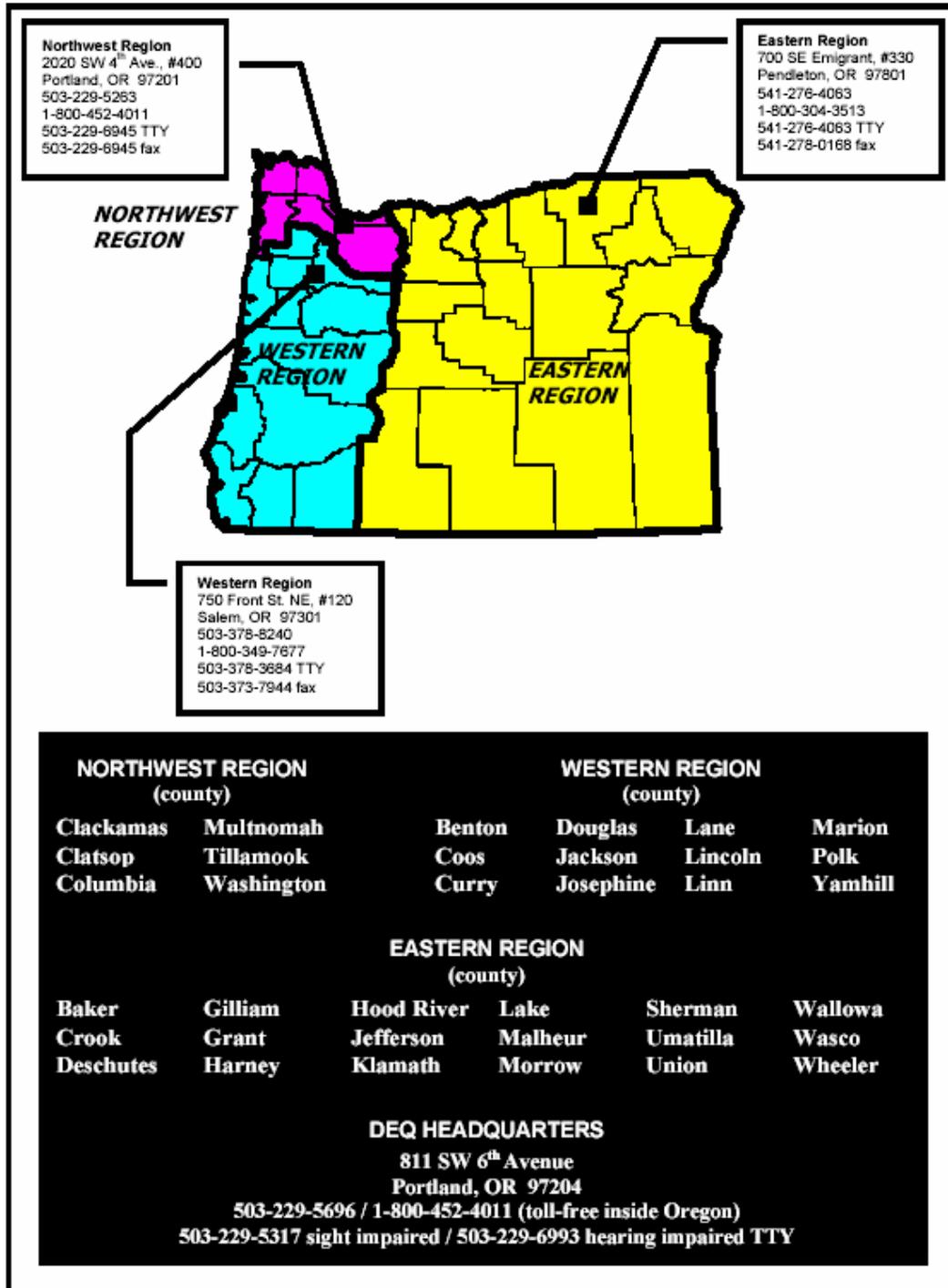
- The legally authorized representative must sign the application. Please see the application form for more information.

FEE AND APPLICATION SUBMITTAL

- The permit application fee total is \$670. The permittee will also be billed an annual compliance fee of \$330 in June for every year the permit is in effect. Please see the next page and the application form for the location to submit your fee and application.

DEQ MAIN REGIONAL OFFICES

If you have any questions, please contact the Water Quality Permit Coordinator in the DEQ regional office responsible for your county.



DEQ USE ONLY
Application #: _____
File #: _____
Mail ID #2/#9: _____
LLID/RM: _____
ACD Fee Paid: _____
DOC Conf: _____
Notes: _____

**APPLICATION FOR
NEW NPDES GENERAL PERMIT 1200-C**



Oregon Department of Environmental Quality

For construction activities, including clearing, grading, and excavation, that disturb 5 or more acres of land, or will disturb 5 or more acres over time as part of a common plan of development. (For 1 or more acres of disturbance starting 12/01/2002)

DEQ USE ONLY
Received: _____
Amount Received: _____
Check #: _____
Deposit #: _____
<input type="checkbox"/> IND <input type="checkbox"/> DOM <input type="checkbox"/> UIC: _____
Notes: _____

A. REFERENCE INFORMATION

<p>1. _____ Applicant (Owner, Developer, or General Contractor)</p> <p style="text-align: center;">_____ Contact Name</p> <p style="text-align: center;">_____ Address</p> <p style="text-align: center;">_____ City _____ State _____ Zip</p> <p style="text-align: center;">_____ Telephone _____ E-Mail Address</p>	<p>2. _____ Owner (if different from applicant)</p> <p style="text-align: center;">_____ Contact Name</p> <p style="text-align: center;">_____ Address</p> <p style="text-align: center;">_____ City _____ State _____ Zip</p> <p style="text-align: center;">_____ Telephone _____ E-Mail Address</p>
<p>3. _____ Architect/Engineering Firm</p> <p style="text-align: center;">_____ Project Manager</p> <p style="text-align: center;">_____ Address</p> <p style="text-align: center;">_____ City _____ State _____ Zip</p> <p style="text-align: center;">_____ Telephone _____ E-Mail Address</p>	<p>4. _____ Applicant's Designated Erosion and Sediment Control Inspector</p> <p style="text-align: center;">_____ Contact Name</p> <p style="text-align: center;">_____ Address</p> <p style="text-align: center;">_____ City _____ State _____ Zip</p> <p style="text-align: center;">_____ Telephone _____ E-Mail Address</p>
<p>5. Invoice to: _____ Billing Address: _____</p>	<p>Telephone #: _____ City, State, Zip Code: _____</p>

B. PROJECT INFORMATION

<p>1. Name of Project: _____</p>	<p>2. Proposed Start Date: _____</p>
<p>3. General Property Description</p> <p>Street Address: _____</p> <p>Cross Street: _____</p> <p>City: _____ Zip Code: _____</p> <p>County: _____</p>	<p>4. Legal Description</p> <p>Tax Lot No.: _____</p> <p>Section: _____ Township _____ Range _____</p> <p>Site Size (acres): _____</p> <p>Disturbed Area (acres): _____</p>

Name of Applicant: _____	Name of Project: _____
---------------------------------	-------------------------------

B. PROJECT INFORMATION
continued

<p>5. Site Location by Latitude and Longitude</p> <p>Latitude: _____ / _____ / _____ Degrees Minutes Seconds</p> <p>Longitude: _____ / _____ / _____ Degrees Minutes Seconds</p>	<p>6. Nature of the Construction Activity</p> <p><input type="checkbox"/> Single Family/Duplex Residential</p> <p><input type="checkbox"/> Commercial</p> <p><input type="checkbox"/> Industrial</p> <p><input type="checkbox"/> Subdivision, Number of Lots: _____</p> <p><input type="checkbox"/> Utilities: _____</p> <p><input type="checkbox"/> Other: _____</p>
--	---

<p>7. Existing Site Runoff</p> <p><input type="checkbox"/> Creek/Stream: _____</p> <p><input type="checkbox"/> Ditch: _____</p> <p><input type="checkbox"/> Municipal Storm Sewer or Drainage System</p> <p><input type="checkbox"/> Other: _____</p>	<p>8. Proposed Site Runoff</p> <p><input type="checkbox"/> Creek/Stream: _____</p> <p><input type="checkbox"/> Ditch: _____</p> <p><input type="checkbox"/> Municipal Storm Sewer or Drainage System (See Note)</p> <p><input type="checkbox"/> Other: _____</p> <p><i>Note: If storm water discharges to a municipally owned storm sewer, authorization from the municipality must accompany this application.</i></p>
---	---

C. EROSION AND SEDIMENT CONTROL PLAN

<p>1. Erosion and Sediment Control Plan Submittal</p> <p><input type="checkbox"/> Included with this application</p> <p><input type="checkbox"/> To be provided at a later date, approx. date: _____</p>	<p>2. Contact Name for Plan: _____</p> <p>Telephone: _____</p> <p>E-Mail: _____</p>
--	---

D. LAND USE COMPATIBILITY STATEMENT

Attach a complete Land Use Compatibility Statement (LUCS) signed by the local land use authority. The application will not be processed without evidence that the proposal is approved by the local land use authority and meets statewide planning goals.

E. SIGNATURE OF LEGALLY AUTHORIZED REPRESENTATIVE

The legally authorized representative must sign the application. Please see the following definitions (see 40 CFR 122.22 for more detail if needed). Also, please also provide the information requested in brackets [].

- ◆ **Corporation** — president, secretary, treasurer, vice-president, or any person who performs principal business functions; or a manager of one or more facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million that is authorized in accordance to corporate procedure to sign such documents
- ◆ **Partnership** — General partner [list of general partners, their addresses and telephone numbers]
- ◆ **Sole Proprietorship** — Owner(s) [each owner must sign the application]
- ◆ **City, County, State, Federal, or other Public Facility** — Principal executive officer or ranking elected official
- ◆ **Limited Liability Company** — Member [articles of organization]
- ◆ **Trusts** — Acting trustee [list of trustees, their addresses and telephone numbers]

I hereby certify that the information contained in this application is true and correct to the best of my knowledge and belief. In addition, I agree to pay all permit fees required by Oregon Administrative Rules 340-045. This includes a renewal application fee to renew the permit and a compliance determination fee invoiced annually by DEQ to maintain the permit.

<p>_____ Name of Legally Authorized Representative (Type or Print)</p>	<p>_____ Title</p>
<p>_____ Signature of Legally Authorized Representative</p>	<p>_____ Date</p>

Send this form, Land Use Compatibility Statement, and \$670 fee to the appropriate DEQ regional office:
Make your check payable to the Department of Environmental Quality

<p>DEQ Northwest Region 2020 SW 4th Ave., Suite 400 Portland, OR 97201-4987 503-229-5263 or 1-800-452-4011</p>	<p>DEQ Western Region 750 Front St. NE, Suite 120 Salem, OR 97301-1039 503-378-8240 or 1-800-349-7677</p>	<p>DEQ Eastern Region 700 SE Emigrant, Suite 330 Pendleton, OR 97801 541-276-4063 or 1-800-452-4011</p>
--	--	--

Appendix 5B – Example Inspection Report

Erosion and Sediment Control Inspection Checklist

Inspection Report

Sheet ___ of ___

Project Name: _____

File No. _____

Inspection Date: _____ Time: _____

Inspected by: _____

Stage of Construction

___ Pre-Construction Conference

___ Rough Grading

___ Finish Grading

___ Clearing and Grubbing

___ Building Construction

___ Final Stabilization

Inspection Checklist

Yes	No	NA	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have all denuded areas requiring temporary or permanent stabilization been stabilized? Seeded? yes/no Mulched? yes/no Graveled? yes/no
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are soil stock piles adequately stabilized with seeding and/or sediment trapping measures?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Does permanent vegetation provide adequate stabilization?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have sediment trapping facilities been constructed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	For perimeter sediment trapping measures, are earthen structures stabilized?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are sediment basins installed where needed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are finished cut and fill slopes adequately stabilized?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are on-site channels and outlets adequately stabilized?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Do all operational storm sewer inlets have adequate inlet protection?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are stormwater conveyance channels adequately stabilized with channel lining and/or outlet protection?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is in-stream construction conducted using measures to minimize channel damage?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are temporary stream crossings of non-erodible material installed where applicable?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is necessary restabilization of in-stream construction complete?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are utility trenches stabilized properly?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are soil and mud kept off public roadways at intersections with site access roads?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have all temporary control structures that are no longer needed been removed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have all control structure repairs and sediment removal been performed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are properties and waterways downstream from development adequately protected from erosion and sediment deposition due to increases in peak stormwater runoff?

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Chapter 6 - Post-Construction Stormwater Management Program

6.1 Requirements

The Stormwater Phase II Final Rule, published in December 1999, lists the following information as regulations for post-construction stormwater management. This Regional Stormwater Program *Guide* is intended to meet these EPA regulations and provide a template for meeting the Phase II permit the Oregon Department of Environmental Quality issues to Rogue Valley jurisdictions. The following guidance section from the Phase II Rule provides additional details on the preceding regulations.

<p>Regulations</p>	<p>40 CFR 122.34(b)(5) Post-construction stormwater management in new development and redevelopment</p> <p>(i) 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, that discharge into your small MS4. Your program must ensure that controls are in place that would prevent or minimize water quality impacts.</p> <p>(ii) You must:</p> <p>(A) Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community;</p> <p>(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</p> <p>(C) Ensure adequate long-term operation and maintenance of BMPs.</p>
<p>Guidance</p>	<p>40 CFR 122.34(b)(5) Post-construction stormwater management in new development and redevelopment</p> <p>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.</p> <p>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.</p>

<p>Guidance</p>	<p>40 CFR 122.34(b)(5) Post-construction stormwater management in new development and redevelopment</p> <p>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 stormwater 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.</p> <p>Non-structural BMPs are preventive 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.</p> <p>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. Stormwater technologies are constantly being improved, and EPA recommends that your requirements be responsive to these changes, developments or improvements in control technologies.</p>
------------------------	---

Inspections of existing post-construction controls

This minimum measure only applies to post-construction controls created for new projects, not older, existing post-construction BMPs. Phase II jurisdictions could choose to include inspections of these post-construction BMPs in their program if they wish. New post-construction controls will

be included in this program after they are subject to the plan review requirements described below in Section 6.3.4. Phase II jurisdictions do have responsibility for proper operation and maintenance of their own storm drain systems. This is addressed in Chapter 7, Pollution Prevention in Municipal Operations.

6.2 Benefits: Why this Program is Important

Development alters the natural landscape by increasing impervious surfaces and introducing pollutants, which are then transported in stormwater runoff. These land use changes impact stormwater in primarily two ways: by increasing stormwater flows (quantity) and the pollutants available to be transported in stormwater runoff (quality).

Increases in stormwater quantity can result in downstream flooding, streambank erosion, and decreases in infiltration or recharge of ground water. The impacts on water resources caused by increased impervious surfaces have been well documented, with a generally linear relationship between increased imperviousness and decreased water quality (Center for Watershed Protection, *The Importance of Imperviousness, Watershed Protection Techniques*, 1(3): 100-111).

Development also impacts water quality by introducing pollutant loads into stormwater runoff. Oils, grease, litter and toxic substances collect on impervious surfaces easing their entry into waters of the U.S. Studies have shown a direct correlation between total impervious area and instream aquatic habitat for salmonid species (C. May, E. Welch, R. Horner, J. Karr, and B. Mar. 1997. *Quality Indices for Urbanization Effects in Puget Sound Lowland Streams*. Water Resources Series Technical Report No. 154. Ecology Publication No. 98-04).

6.3 Regional Guide for Post-Construction Stormwater Management

The post-construction guide contains the following five main components, described below:

- Ordinance requiring post-construction controls (6.3.1)
- Develop a plan to address post-construction runoff (6.3.2)
- Training for plan reviewers and field inspectors (6.3.3)
- Site plan review for post-construction BMPs (6.3.4)
- Inspections of structural post-construction BMPs (6.3.5)

All the BMPs in this chapter, BMPs 6A – 6E, are required.

6.3.1 Ordinance Requiring Post-Construction Controls

BMP 6A: For permits or authorizations issued by the jurisdiction for construction operators disturbing at least 1 acre, require through an ordinance, the installation and proper maintenance of post-construction runoff controls in compliance with an adopted stormwater management *Manual* or other guidance document. Jurisdictions may, at their discretion, require post development stormwater controls for smaller sites based on local conditions and needs.

Measurable Goal: Adopt a final ordinance for post-construction runoff controls using an appropriate *Manual* or guidance document. (*Establish specific goals in the individual plan for each jurisdiction.*)

Combine the post-construction ordinance with the illicit discharge and construction ordinance, described in Chapters 4 and 5 respectively, into a single stormwater ordinance. An example of this type of ordinance is included in Appendix 4B. This ordinance largely requires local construction sites to comply with a local stormwater manual. After the ordinance is adopted, plan on evaluating the effectiveness of this ordinance during subsequent years of the permit.

EPA only requires the ordinance to “address post-construction runoff from new development and redevelopment projects” but does not say specifically what the ordinance must include. The ordinance could be as simple as requiring post-construction runoff to be no greater than pre-construction runoff, as required in the city of Portland’s code below.

Ensure that the ordinance addresses post-construction runoff from new developments and redevelopment projects that disturb more than one acre. The term “redevelopment” should refer to alterations of a property that change the “footprint” of a site or building and 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. (64 FR 68760)

A stormwater management *Manual* (noted below) should be adopted to provide the basic guidance on two key requirements in the post-construction minimum measure:

- Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for the community; and
- Ensure adequate long-term operation and maintenance of BMPs.

Stormwater Management Manual (*Manual*)

A specific Stormwater Management Manual (*Manual*) for the Rogue Valley has not been developed. If it were to be developed, it would need to provide the technical guidance to help municipalities implement this

Regional Guide. The *Manual* should provide commonly accepted stormwater management practices which, if implemented, are presumed to protect water quality. Jurisdictions are usually allowed to develop technical manuals, but may need to demonstrate to DEQ that such manuals and stormwater management practices will protect water quality.

For purposes of this *Regional Guide*, it is assumed that a *Manual* will need to be developed, or reference will need to be made to other pertinent manuals or guidance documents. For simplicity at this time, we shall assume a new *Manual* is prepared for the Rogue Valley, or for a specific Rogue Valley jurisdiction.

We will also assume the *Manual* will consist of core elements applicable to new development and redevelopment projects in the Rogue Valley that discharge to surface waters or to UIC rule-authorized subsurface drainage systems. For the post-construction stormwater runoff control measure, the main core elements would typically be: Preparation of a Stormwater Site Plan, Source Control of Pollution, Runoff Treatment, and Flow Control.

The *Manual* should provide guidance on planning, design, operation, and maintenance of water quality treatment and flow control BMPs for the variety of stormwater facilities applicable to the local area.

At the time of publication of this *Regional Guide*, a comprehensive local or regional stormwater management technical *Manual* was not developed. Check to see if such a manual has been developed. Additional possibilities include reference(s) to other manuals or guidance documents prepared by other applicable jurisdictions, states, or agencies.

6.3.1.1 City of Portland Stormwater Code

The city of Portland requires new development stormwater controls such that the quantity of stormwater leaving the site after development shall be equal to or less than the quantity of stormwater leaving the site before development, as much as is practicable, based on a number of criteria, per City Code (Chapter 17.38). A copy of relevant portions of this code is included in Appendix 6A.

6.3.1.2 City of Pasco Impervious Surfaces Ordinance

A second example of an ordinance is from the city of Pasco (Appendix 6B) which requires a building permit for the installation of any impervious surface improvements, except for single family residences and impervious surfaces covering less than 1,000 square feet. The ordinance requires the site to be “designed to drain, confine, and/or impound stormwater or site-generated water within the private property upon which the improvement is to be located” (Chapter 16.05).

6.3.2 Develop a Plan to Address Post-Construction Runoff

BMP 6B: Develop a plan to address post-construction stormwater runoff during the plan review, construction inspection, and post-construction maintenance inspection process.

Measurable Goal: Develop and adopt a post-construction runoff plan. *(Establish specific goals in the individual plan for each jurisdiction.)*

To develop a plan to address post-construction stormwater runoff, consider the key water quality and water quantity issues in your area. Incorporate existing flood management and stormwater planning strategies into the post-construction plan. Also, evaluate the existing plan review process to identify opportunities to integrate post-construction controls. For example, new developments under plan review provide an opportunity to reduce impervious surfaces or incorporate swales, drywells or other BMPs.

Where water quality impairments have been identified by DEQ within the jurisdiction, include strategies or BMPs in the post-construction plan targeted to reducing those pollutants.

Statewide Land Use Planning Program

Cities and counties under the Statewide Land Use Planning Program must ensure that any revisions to their comprehensive plan and development regulations include considerations for post-construction runoff. Pertinent language in many local jurisdiction's plans often includes text similar to the following: "...minimize the amount of pollution caused by stormwater runoff" with the following decision guideline "where increased stormwater runoff potential exists due to a proposed development, runoff management procedures should be a condition of approval."

6.3.3 Training for Plan Reviewers and Field Inspectors

BMP 6C: Provide training or coordinate with existing training efforts to educate construction plan reviewers and field inspectors on post-construction runoff control BMPs and maintenance standards.

Measurable Goal: Train plan reviewers and inspectors; re-train as needed. *(Establish specific goals in the individual plan for each jurisdiction.)*

Coordinate post-construction training for plan reviewers and field inspectors with BMP 5B, training for erosion and sediment control.

Potential sources for this training include the Center for Watershed Protection (<http://www.cwp.org>) or the NEMO Project – Nonpoint Education for Municipal Officials (<http://nemo.uconn.edu/index.htm>).

6.3.4 Site Plan Review for Post-Construction BMPs

Note: This BMP should be conducted in coordination with BMP 5C.

BMP 6D: In accordance with the plan developed in BMP 6B, review stormwater site plans prior to construction to ensure that they include post-construction controls in compliance with local ordinances and the adopted stormwater management *Manual*. Require submittal of information pertaining to the proper operation and maintenance of storm drain components and BMPs.

Measurable Goal: Review all site plans subject to the local ordinance. *(Establish specific goals in the individual plan for each jurisdiction.)*

The site plan review process, for both erosion and sediment control practices and post-construction control practices, is described in Section 5.3.3. Conduct both of these reviews at the same time to ensure that plans include all the practices necessary to meet the requirements of the adopted stormwater management *Manual*.

6.3.5 Inspections of Structural Post-Construction BMPs

BMP 6E: In accordance with the plan developed in BMP 6B, inspect priority structural post-construction BMPs for compliance with operation and maintenance (O&M) standards.

Measurable Goal: Inspect structural post-construction BMPs based on a frequency developed by the local jurisdiction as required to protect water quality. *(Establish specific goals in the individual plan for each jurisdiction.)*

Develop a program to ensure the long-term O&M of structural stormwater BMPs. This requirement only applies to new BMPs installed as part of new construction; existing BMPs installed prior to the effective date of the Phase II permit are not specifically addressed.

The post-construction O&M program includes the following components:

- Requirements for private property owners to maintain facilities
- Database of structural BMPs
- Inspection procedures, including a schedule for conducting inspections, and
- Inspection form

The adopted stormwater management *Manual* should contain information on BMP maintenance procedures.

6.3.5.1 Requirements for Private Property Owners to Maintain Facilities

Require all new stormwater detention/retention practices and stormwater quality devices to be maintained by the property owner. This can be accomplished by including a maintenance requirement in the local ordinance. In addition, residential owners could be required to sign a maintenance agreement before final permits are issued. This agreement could require the property owners to submit annual forms certifying that an inspection and any necessary maintenance have been completed.

An example of a residential agreement to maintain stormwater management facilities is included in Appendix 6C.

6.3.5.2 Database of Structural BMPs

To track the number and location of structural BMPs that the jurisdiction needs to inspect, develop a database. This database needs only to track new structural BMPs installed after the Phase II permit is issued, however, existing BMPs may also be tracked if considered a priority.

Suggested fields to consider in the development of a structural BMP database include:

- Property owner name and address
- Structural BMP
- BMP size
- Date of Last inspection by jurisdiction
- Compliance Status, and
- Notes

6.3.5.3 Inspection Procedures, Including a Schedule for Conducting Inspections

Not all structural BMPs need to be inspected. A subset of high priority BMPs could be inspected based on:

- The type of BMP (e.g., detention ponds, dry wells, and commercial stormwater device)
- The size of the BMP (e.g., ponds holding more than 1 acre-feet)
- The location of the BMP (e.g., near sensitive waters), and/or
- Past maintenance problems

Additional inspections could occur at random and by responding to complaints.

Base the inspection maintenance standards on the BMP maintenance requirements in the adopted stormwater management *Manual*.

6.3.5.4 Inspection Form

Inspectors must document the condition of BMPs and any maintenance requirements on a standard form. A simple new development inspection form for this purpose is included in Appendix 6D. A more specific new development inspection form could be created for individual types of BMPs, such as ponds or proprietary stormwater devices.

6.4 Resources

This section includes resources and references for additional information to assist cities and counties in developing and implementing the program.

EPA's Menu of BMPs for stormwater Phase II
<http://www.epa.gov/npdes/menuofbmps/post.htm>

Draft Stormwater Best Management Practices (BMP) Manual for Quality and Flow Control – City of Eugene, Oregon
<http://www.ci.eugene.or.us/PW/storm/bmp/index.htm>

2002 Stormwater Management Manual – City of Portland, Oregon
http://www.cleanrivers-pdx.org/tech_resources/2002_swmm.htm

Stormwater Management Manual for Western Washington
<http://www.ecy.wa.gov/programs/wq/stormwater/manual.html>

Stormwater Management Manual for Eastern Washington
http://www.ecy.wa.gov/programs/wq/stormwater/eastern_manual/index.html

Appendices

Appendix 6A – City of Portland Code for Stormwater Drainage and Water Quality

Appendix 6B – Pasco Impervious Surfaces Ordinance

Appendix 6C – Example Maintenance Agreement

Appendix 6D – New Development Inspection Form

Appendix 6A – City of Portland Code for Stormwater Drainage and Water Quality

Chapter 17.38 Drainage and Water Quality

- 17.38.010 Authority.
- 17.38.015 Rule Making
- 17.38.020 Purpose.
- 17.38.021 Protection of Drainageway Areas.
- 17.38.025 Stormwater Management Policies and Standards.
- 17.38.030 Definitions.
- 17.38.040 Stormwater Quality and Quantity Control Facilities Required.
- 17.38.041 Parking Lot Stormwater Requirements.
- 17.38.045 Enforcement.
- 17.38.050 Erosion Control Required.

Note

(New Chapter substituted by Ordinance No. 173330, effective June 4, 1999.)

17.38.010 Authority.

(Amended by Ordinance No. 174745, effective August 25, 2000.) The Director of Environmental Services is responsible for administering the requirements of this Chapter. The Director has the authority and responsibility to adopt rules, procedures, and forms to implement the provisions of this chapter and to maintain a Stormwater Management Manual.

17.38.015 Rule Making

- A. Public Review. Any rule adopted pursuant to this section shall require a public review process. Not less than thirty days before such public review process, notice shall be given by publication in a newspaper of general circulation. The Office of Neighborhood Involvement shall be notified at least 30 days in advance of the public review process. Such notice shall include the place, time, and purpose of the public review process and location at which copies of the full set of the proposed rules may be obtained.
- B. Adoption of Rules.
 - 1. During the public review, a designee of the Director shall hear testimony and receive written comments concerning the proposed rules. The Director shall review the recommendation of his or her designee, taking into consideration the comments received during the public review process and shall either adopt the proposal, modify or reject it.
 - 2. If a substantial modification is made to the rules submitted for public review, the Director may adopt the modification as Interim Rules or shall provide an additional public review prior to adoption.
 - 3. Unless otherwise stated, all rules shall be effective upon adoption by the Director and shall be filed in the Office of the Director.

C. Interim Rules.

1. Notwithstanding paragraphs 17.38.015 A. and B., an interim rule may be adopted without prior notice upon a finding that failure to act promptly will result in serious prejudice to the public interest or the interest of the affected parties. The rule should include the specific reasons for such prejudice.
2. Any rule adopted pursuant to this paragraph shall be effective for a period of not longer than 180 days.
3. After adoption, public notice of interim rules shall be given by publication in a newspaper of general circulation and notice sent to the Office of Neighborhood Involvement. Such notice shall include the location at which copies of the full set of the interim rules may be obtained.

D. Initial Rules. Notwithstanding sections 17.38.015 A.-C. above, the rules contained in the Stormwater Management Manual filed with the Council in conjunction with Ordinance No. 173330 may be adopted by the Director without further public review.

17.38.020 Purpose.

The purpose of this Chapter is to provide for the effective management of stormwater and drainage, and to maintain and improve water quality in the Watercourses and Water Bodies within the City of Portland as described in 17.38.025.

17.38.021 Protection of Drainageway Areas.

(Added by Ordinance No. 176561; amended by 176783, effective August 30, 2002.)

- A. Authority. The Director may require drainage reserves or tracts over seeps, springs and drainageways as necessary to preserve the functioning of these areas and to limit flooding impacts from natural and man made channels, ditches, seeps, spring, intermittent flow channels and other open linear depressions. Standards and criteria for imposing drainage reserves or tract requirements shall be adopted by administrative rule. Placement and/or sizing of drainage reserves does not relieve property owners of their responsibility to manage stormwater in a manner that complies with the duties of property owners under applicable law. Drainage reserve or tract requirements may be imposed during land use reviews, building permit review or other development process that require Bureau of Environmental Services review.
- B. Required Management of the Drainage Reserve. Storm drainage reserves or tracts shall remain in natural topographic condition. No private structures, culverts, excavations, or fills shall be constructed within drainage reserves or tracts unless authorized by the BES Chief Engineer. All changes must also comply with other zoning regulations as described in Title 33.

17.38.025 Stormwater Management Policies and Standards.

(Amended by Ordinance Nos. 174745, 176561, 176783 and 176955 effective October 9, 2002.)

- A. Stormwater shall be managed as close as is practicable to development, and stormwater management shall avoid a net negative impact on nearby streams, wetlands, groundwater, and other water bodies. All local, state, and federal permit requirements related to implementation of stormwater management facilities must be met by the owner/operator prior to facility use. Surface water discharges from on-site facilities shall be conveyed via an approved drainage facility.
- B. The quality of stormwater leaving the site after development shall be equal to or better than the quality of stormwater leaving the site before development, as much as is practicable, based on the following criteria:
 - 1. Water quality control facilities required for development shall be designed, installed and maintained in accordance with the Stormwater Management Manual, which is based on achieving at least 70% removal of the Total Suspended Solids (TSS) from the flow entering the facility for the design storm specified in the Stormwater Management Manual or Administrative Rules.
 - 2. Land use activities of particular concern as pollution sources shall be required to implement additional pollution controls including but not limited to, those management practices specified in the Stormwater Management Manual.
 - 3. Development in a watershed that drains to streams with established Total Maximum Daily Load limitations, as provided under the Federal Clean Water Act, Oregon Law, Administrative Rules and other legal mechanisms shall assure that water quality control facilities meet the requirements for pollutants of concern, as stated in the Stormwater Management Manual.
 - 4. Stormwater discharge, which is not practicable to fully treat as defined in sections 17.38.025 B.1.-3. and the Stormwater Management Manual, shall either: be treated in an off-site facility or be given the option of paying a stormwater off-site management fee. The Bureau will employ a methodology for calculating the fee that is based upon an average unit cost of on-site facilities where such facilities would be effective. The stormwater off-site management fee collected will be placed in a mitigation account to be used to mitigate the impacts that arise from off-site discharge of stormwater runoff. Information relating to sites that are paying fees will be evaluated in planning for capital improvement projects.
 - 5. Notwithstanding section 17.38.025 B.4., for any parcel created after the effective date of this Chapter, stormwater shall be fully treated on-site or within the original parcel from which the new parcel was created, or in a privately developed off-site facility with sufficient capacity, as determined by the Bureau.
- C. The quantity of stormwater leaving the site after development shall be equal to or less than the quantity of stormwater leaving the site before development, as much as is practicable, based on the following criteria:
 - 1. Development shall mitigate all project impervious surfaces through retention and on-site infiltration to the maximum extent practicable. Where on-site retention is not possible, development shall detain stormwater through a combination of provisions that prevent an

- increased rate of flow leaving a site during a range of storm frequencies as specified in the Stormwater Management Manual.
2. The Director may exempt areas of the city from the requirement of 17.38.025 C.1. if flow control is not needed or desirable and if:
 - a. Stormwater is discharged to a large waterbody directly through a private outfall, or
 - b. Stormwater is discharged to a waterbody directly through a separated public storm sewer having adequate capacity to convey the additional flow.
 3. Any development that contributes discharge to a tributary to the Willamette River, other than the Columbia Slough, shall design facilities such that the rate of flow discharging from water quantity control facilities for up to a two-year storm does not lengthen the period of time the channel sustains erosion causing flows, as determined by the Bureau.
 4. Facilities shall be designed to safely convey the less frequent, higher flows through or around facilities without damage.
 5. Stormwater quantity discharge which is not practicable to be managed as defined in 17.38.025 C.1. through 17.38.025 C.4. and the Stormwater Management Manual shall either: be managed in an off-site facility or be given the option of paying a stormwater off-site management fee. The Bureau will employ a methodology for calculating the fee that is based upon an average unit cost of on-site facilities where such facilities would be effective. The stormwater off-site management fee collected will be placed in a mitigation account to be used to mitigate the impacts that arise from off-site discharge of stormwater runoff. Information relating to sites that are paying fees will be evaluated in planning for capital improvement projects.
 6. Notwithstanding section 17.38.025 C.5., for any parcel created after the effective date of this chapter shall fully manage stormwater on-site or within the original parcel from which the new parcel was created, or in a privately developed off-site facility with sufficient capacity, as determined by the Bureau.
- D. All conveyance systems shall be analyzed designed and constructed for existing tributary off-site runoff and developed on-site runoff from the proposed project in compliance with the City's Sewer Design Manual. The general goal of these standards is to convey both on-site and off-site waters in a way that is protective of public health and safety and that minimizes environmental impacts in the downstream receiving system. The Director reserves the right to determine the appropriateness of combination facilities in meeting these standards.
- E. All disposal systems shall comply with the standards set forth in the SWMM. Public systems shall be reviewed and approved by BES in compliance with the sizing standards in the SWMM. Private onsite disposal systems shall comply with the guidance laid out in the SWMM, but shall be reviewed and approved of by BDS in compliance with the plumbing code regulations in 25.01.020.

17.38.030 Definitions.

(Amended by Ordinance Nos. 174745, 176561, and 176783, effective August 30, 2002.)

- A. "Approved Drainage System." A system approved by BES which, in general, shall adequately collect, convey, treat and or dispose of stormwater runoff or other site discharge.

Approved systems shall meet all requirements and specification laid out in this code or in any BES design guidance document plus any applicable plumbing code provisions relating to the piped portions of any system.

- B. "Capacity." The capacity of a stormwater system shall mean the flow volume or rate that a facility (e.g., pipe, pond, vault, swale, ditch, drywell, etc.) is designed to safely contain, receive, convey, treat or infiltrate stormwater that meets a specific performance standard. There are different performance standards for treatment, detention, conveyance, and disposal. Example: Public storm sewer pipes are required to convey the 10-year storm without surcharge, and the 25-year storm without damage to property or endangering human life or public health. Public infiltration sumps are required to infiltrate the 10-year storm with a safety factor of two. Combined sewers that overflow during a 25-year storm are not considered to have adequate capacity.
- C. "Combination Facilities." Systems that are designed to meet two or more of the multiple objectives of stormwater management.
- D. "Director." The Director of the Bureau of Environmental Services, or the Director's designee.
- E. "Disposal." The ultimate discharge point for the stormwater from a site. Disposal points can include drywells and sumps, soakage trenches, ditches, drainageways, rivers and streams, off-site storm pipes, and off-site combination sewers.
- F. "Drainageway." An open linear depression, whether constructed or natural, which functions for the collection and drainage of surface water. It may be permanently or temporarily inundated.
- G. "Impervious Surface." Any constructed surface that has a runoff coefficient greater than 0.8 (as defined in the Sewer Design Manual, Chart 10 "Runoff Coefficients"). Note: Decks which do not retain water are considered pervious.
- H. "Off-Site Stormwater Facility." Any stormwater management facility located outside the property boundaries of a specific development, but designed to reduce pollutants from and/or control stormwater flows from that development.
- I. "On-Site Stormwater Facility." Any stormwater management facility necessary to control stormwater within an individual development project and located within the project property boundaries.
- J. "Pollutants of Concern." Watershed-specific parameters identified by the Oregon Department of Environmental Quality (DEQ) as having a negative impact on the receiving water body.
- K. "Practicable." Available and capable of being done as determined by the Director, after taking into consideration cost, existing technology, and logistics in light of overall project purpose.
- L. "Public Works Project." Public Works Project means any development conducted or financed by a local, state, or federal governmental body and includes Local Improvements and Public Improvements as defined in Title 17, PUBLIC IMPROVEMENTS.

- M. "Redevelopment." Development that requires demolition or complete removal of existing structures or impervious surfaces at a site and replacement with new development. Maintenance activities such as top-layer grinding and repavement are not considered redevelopment. Interior remodeling projects are also not considered to be redevelopment. Utility trenches in streets are not considered redevelopment unless more than 50% of the street width is removed and re-paved.
- N. "Site Map." For purposes of this code section, a site map shall show the stormwater management facility location in relation to building structures or other permanent monuments on the site. The Site map shall depict location of sources of runoff entering the facility and the discharge point and type of receiving system for runoff leaving the facility.
- O. "Stormwater Management." The overall culmination of techniques used to reduce pollutants from, detain, and/or retain, and dispose of stormwater to best preserve or mimic the natural hydrologic cycle, to accomplish goals of reducing combined sewer overflows, or to incorporate sustainable building practices by reusing stormwater, on a development site. Public health and safety, aesthetics, maintainability, capacity of the existing infrastructure and sustainability are important characteristics of a site's stormwater management plan.
- P. "Stormwater Management Facility." A single technique used to treat, detain, and/or retain stormwater to best preserve or mimic the natural hydrologic cycle, or to fit within the capacity of existing infrastructure, on a development site.
- Q. "Tract." A tract is a section of land set aside from development during the Land Division phase of development. Tract as used in this code section shall be the definition of tract as described in Title 33 of the City Code.
- R. "Water Body." Rivers, streams, sloughs, drainages including intermittent streams and seeps, and ponds, lakes, aquifers, wetlands, and coastal waters.
- S. "Watercourse." Watercourse means a channel in which a flow of water occurs, either continuously or intermittently, and if the latter with some degree of regularity. Watercourses may be either natural or artificial.
- T. "Water Quality Control/Pollution Reduction Facility." Refers to any structure or drainageway or drainage device that is designed, constructed, and maintained to collect and filter, retain, or detain surface water runoff during and after a storm event for the purpose of maintaining or improving surface and/or groundwater quality. These facilities may include, but are not limited to, constructed wetlands, water quality swales, and ponds which are maintained as stormwater quality control facilities.
- U. "Water Quantity Control Facility." Refers to any structure or drainage device that is designed, constructed, and maintained to collect, retain, infiltrate, or detain surface water runoff during and after a storm event for the purpose of controlling post-development quantity leaving the development site. These facilities may include, but are not limited to, constructed wetlands, infiltration basins, and wet ponds which are maintained as stormwater quantity or quality control facilities.
- V. "Wetland." An area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a

prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include swamps, marshes, bogs, and similar areas except those constructed as water quality or quantity control facilities. Specific wetland designations shall be made by the Corps of Engineers and the Division of State Lands.

17.38.040 Stormwater Quality and Quantity Control Facilities Required.

(Amended by Ordinance Nos. 174745 and 176783, effective August 30, 2002.) No plat, site plan, building permit or public works project shall be approved unless the conditions of the plat, permit or plan approval requires installation of permanent stormwater quality and quantity control facilities designed according to standards or guidelines established by the Director of the Bureau of Environmental Services and as specified in the City of Portland's Stormwater Management Manual.

- A. Exemptions. The requirements of this Chapter for stormwater management do not apply to:
 - 1. Development for which an application for development approval is accepted by the permitting agency prior July 1, 1999 shall be subject to the requirements in place at the time of application.
 - 2. Development, whether public or private, that does not result in impervious surface coverage or results in coverage that is de minimus, such as fences, environmental enhancement projects, buried pipelines or cables, and utility lines.
 - 3. Transportation improvements which will not directly increase non-point source pollution or quantity of stormwater runoff once construction has been completed (i.e., pavement overlays).
 - 4. Impervious surface created by a water quality or water quantity control facility. Paved or compacted gravel facility access and maintenance roads that extend beyond the facility itself, are not exempted from treatment requirements.

- B. Appeals. Any permit applicant aggrieved by a decision, interpretation, or determination made pursuant to the administration of the Stormwater Management Manual may appeal such action in accordance with 17.38.040 B.1. and B.2.
 - 1. In order to provide for reasonable interpretation of the provisions of the Stormwater Management Manual, the Director shall establish an internal Administrative Appeals Committee and an External Appeals Board. The Commissioner in charge of the Bureau of Environmental Services shall appoint members of the External Appeals Board.
 - 2. Applicants shall file appeals in accordance with the appeals process procedures specified in the Stormwater Management Manual.

- C. Maintenance of Water Quality and Quantity Control Facilities.
 - 1. All new development, redevelopment, plats, site plans, building permits or public works projects, as a condition of approval, shall be required to submit an operation and maintenance plan for the required stormwater quality and quantity control facilities for review and approval by the Bureau of Environmental Services. A water quality or quantity control facility that receives stormwater runoff from a public right-of-way shall be a public facility, unless the right-of-way is not part of the city road maintenance system.

- a. The information required in an operation and maintenance plan shall satisfy the requirements in the Stormwater Management Manual (SWMM). Applicants are encouraged to use the O & M Plan template provided in the SWMM. The Plan shall include and not be limited to:
 - (1) Design plans of the specific facility and related parts, including design assumptions.
 - (2) A schedule for routine inspection, including post storm related inspections.
 - (3) A description of the various facility components, the observable trigger for maintenance, and the method of maintenance, including appropriate method of disposal of materials.
 - (4) The intended method of providing financing to cover future operations and maintenance.
 - (5) The party or parties responsible for maintenance of the facility including means of effecting contact, including contact means for emergency situations. The party may be an individual or an organization.
 - b. A maintenance log is required. The log shall provide a record of all site maintenance related activities. The log shall include the time and dates of facility inspections and specific maintenance activities. This log shall be available to City inspection staff upon request.
2. Failure to properly operate or maintain the water quality or quantity control facility according to the operation and maintenance plan may result in a civil penalty as specified in 17.38.045, Enforcement.
 3. A copy of the operation and maintenance plan shall be filed with the Bureau of Environmental Services. Staff may require a site map to be recorded and filed with the appropriate county Department of Assessment and Taxation.

17.38.041 Parking Lot Stormwater Requirements.

(Added by Ordinance No. 174745, effective August 25, 2000.) Stormwater runoff from parking lots must be managed in parking lot interior or perimeter landscaping to the extent required by the Stormwater Management Manual.

17.38.045 Enforcement.

- A. Enforcement. Persons who fail to comply with the provisions of this chapter and rules adopted hereunder may be subject to enforcement actions by the Director.
- B. Site Inspection. Authorized City representatives may inspect the Water Quality and Quantity Control Facilities to determine compliance with this Ordinance. The Control Facility owner shall allow and provide for free access for representatives of the Bureau of Environmental Services to enter upon the premises where the facility is located for the purpose of inspection or assuring compliance with this Chapter and the Stormwater Management Manual.

C. Conditions for entry.

1. The authorized City representative shall present appropriate credentials at the time of entry.
2. The purpose of the entry shall be for the purpose of inspection and ensure compliance with this Chapter and the Stormwater Management Manual of the Water Quality or Quantity Control Facility.
3. The entry shall be made at reasonable times during normal operating or business hours unless an emergency situation exists as determined by the Director.

D. Violations. A violation shall have occurred when any requirement of this Chapter or rules adopted hereunder has not been met; when a written request of the Director, made under authority of this Ordinance, is not met within the specified time; when any condition of an operations and maintenance plan or agreement issued under the authority of this chapter or rules is not met within a specified time, or when the facility through maintenance neglect or facility failure no longer operates as designed.

E. Remedies. Enforcement Mechanisms. In enforcing any of the requirements of this Chapter or rules adopted hereunder, the Director, or a duly authorized representative, may:

1. Take civil administrative actions, as set out in rules adopted under the authority of this chapter;
2. Issue compliance orders;
3. Institute an action before the Code Hearings Officer
4. Cause an appropriate action to be instituted in a court of competent jurisdiction; or
5. Take such other action as the Director, in the exercise of his or her discretion, deems appropriate.

F. Penalties. Violations of this chapter or rules adopted hereunder may result in assessment of civil penalties in an amount up to \$500 per day per violation.

1. Collection of penalties and costs. All civil penalties shall be deposited with the City Treasurer and credited to the Sewage Disposal Fund. Penalties and costs are payable upon receipt of the final order imposing penalties and costs. Penalties and costs under this chapter are a debt owing to the City and may be collected in the same manner as any other debt. The City may initiate appropriate legal action in any court of competent jurisdiction to enforce the provisions of any written settlement or final order of the Hearings Officer.

G. Appeals. Appeal of an enforcement action. Upon receipt of a final determination of an enforcement action, a person may appeal the determination to the Code Hearings Officer in accordance with the procedures set out at Chapter 22.10 of the Portland City Code provided that such appeal shall include a copy of the final determination that is the subject of the appeal, shall state the basis for the appeal, and shall be filed with the Code Hearings Officer and the Bureau of Environmental Services.

H. Nuisance. A violation of this Chapter shall constitute a nuisance. Summary abatement of such nuisances is authorized.

- I. Cost recovery. The Director may recover all reasonable costs incurred by the City which are attributable to or associated with the violations of this Chapter, including but not limited to the costs of administration, investigations, legal or enforcement activities, damages to or contamination of the sewer and stormwater systems; pollution of stormwater runoff to receiving waterbodies and any civil penalties assessed on the City which result from activities not in compliance with this chapter or rules adopted hereunder. The Director may also make a lien on the property or properties in accordance with the provisions of Chapter 22.06.
- J. Conflict. All other ordinances and parts of other ordinances inconsistent or conflicting with any part of this Ordinance are hereby repealed to extent of such inconsistency or conflict.
- K. Severability. If any provision, paragraph, word, Section or Chapter of this Ordinance is invalidated by any court of competent jurisdiction, the remaining provisions, paragraphs, words, Sections and Chapters shall not be affected and shall continue in full force and effect.

17.38.050 Erosion Control Required.

(Amended by Ordinance No. 173979, effective March 1, 2000.) All public works projects constructed within the City of Portland must comply with Title 10, Erosion and Sediment Control Regulations.

Appendix 6B – Pasco Impervious Surfaces Ordinance

From: <http://www.ci.pasco.wa.us/pmc/Title16.html>

Downloaded on January 21, 2002

TITLE 16 - BUILDINGS AND CONSTRUCTION

CHAPTER 16.05 - IMPERVIOUS SURFACES

Sections:

- 16.05.010 Purpose.
- 16.05.020 Impervious surfaces defined.
- 16.05.030 Permit required.
- 16.05.040 Exemptions.
- 16.05.050 Drainage requirements.

16.05.010 **PURPOSE.** The purpose of this chapter is to protect the public health, safety and general welfare of the citizens of the City of Pasco by regulating the surface drainage of private properties within the City through the use of a permit system. (Ord. 2465 Sec. 1 (part), 1983.)

16.05.020 **IMPERVIOUS SURFACES DEFINED.** For the purpose of this chapter, "impervious surfaces" shall mean any asphalt concrete, cement concrete, or other substance rolled, layed, poured, or otherwise installed to create a layer of material upon the ground which does not absorb water or through which water cannot drain into the underlying ground. (Ord. 3316 Sec. 4, 1998; Ord. 2465 Sec. 1 (part), 1983.)

6.05.030 **PERMIT REQUIRED.** It is unlawful for any person to install any impervious surface improvement upon private property within the City of Pasco without first obtaining a building permit authorizing such improvement from the Building Inspector, except as provided in Section 16.05.040 or as may be otherwise provided for within the Pasco Municipal Code. Application for such permits shall be made on forms supplied by the Community Development Department, shall include a site sketch depicting proposed direction of surface drainage and location of components or methods to be used to drain the impervious surface. (Ord. 2465 Sec. 1 (part), 1983.)

16.05.040 **EXEMPTIONS.** The provisions of this chapter shall not apply to impervious surfaces in either of the following instances:

(1) To be installed in conjunction with a new or existing single-family residence.

(2) The combined total of surface area, existing and proposed, will cover less than one thousand square feet. (Ord. 2465 Sec. 1 (part), 1983.)

16.05.050 **DRAINAGE REQUIREMENTS.** An impervious surface improvement shall be designed to drain, confine and/or impound stormwater or site-generated water within the private property upon which the improvement is to be located. The Building Inspector shall determine the adequacy of all plans and methods for the drainage or proposed impervious surface improvements. (Ord. 2465 Sec. 1 (part), 1983.)

Appendix 6C – Example Maintenance Agreement

AGREEMENT TO MAINTAIN STORMWATER FACILITIES AND TO IMPLEMENT A POLLUTION SOURCE CONTROL PLAN BY AND BETWEEN THE CITY OF _____ AND _____, AND ITS HEIRS, SUCCESSORS, OR ASSIGNS (HEREINAFTER “OWNER”)

(CORPORATE)

The upkeep and maintenance of stormwater facilities and the implementation of pollution source control best management practices (BMPs) is essential to the protection of water resources in the City of _____. All property owners are expected to conduct business in a manner that promotes environmental protection. This Agreement contains specific provisions with respect to maintenance of stormwater facilities and use of pollution source control BMPs. The authority to require maintenance and pollution source control is provided in City Ordinance _____ and in Development Policy _____, “Maintenance Required for Private Stormwater Drainage Systems.”

Legal Description

Whereas, Owner has constructed improvements, including but not limited to, buildings, pavement, and stormwater facilities on the property described above. In order to further the goals of the City to ensure the protection and enhancement of the city’s water resources, the City and Owner hereby enter into this Agreement. The responsibilities of each party to this Agreement are identified below.

Owner Shall

- (1) Implement the stormwater facility maintenance program included herein as Attachment “A”.
- (2) Implement the pollution source control program included herein as Attachment “B”.
- (3) Maintain a record (in the form of a log book) of steps taken to implement the programs referenced in (1) and (2) above. The log book shall be available for inspection by City staff at Owner’s business during normal business hours. The log book shall catalog the action taken, who took it, when it was done, how it was done, and any problems encountered or follow-on actions recommended. Maintenance items (“problems”) listed in Attachment “A” shall be inspected on a monthly or more frequent basis as necessary. Owner is encouraged to photocopy the individual checklists in Attachment A and use them to complete its monthly inspections. These completed checklists would then, in combination, comprise the monthly log book.

- (4) Submit an annual report to the City regarding implementation of the programs referenced in (1) and (2) above. The report must be submitted on or before May 15 of each calendar year and shall contain, at a minimum, the following:
 - (a) Name, address, and telephone number of the business, the person, or the firm responsible for plan implementation, and the person completing the report.
 - (b) Time period covered by the report.
 - (c) A chronological summary of activities conducted to implement the programs referenced in (1) and (2) above. A photocopy of the applicable sections of the log book, with any additional explanation needed, shall normally suffice. For any activities conducted by paid parties not affiliated with Owner, include a copy of the invoice for services.
 - (d) An outline of planned activities for the next year.

The City of _____ Shall

- (1) Provide technical assistance to Owner in support of its operation and maintenance activities conducted pursuant to its maintenance and source control programs. Said assistance shall be provided upon request, and as City time and resources permit, at no charge to Owner.
- (2) Review the annual report and conduct a minimum of one (1) site visit per year to discuss performance and problems with Owner.
- (3) Review this agreement with Owner and modify it as necessary at least once every three (3) years.

Remedies

- (1) If the City determines that maintenance or repair work is required to be done to the stormwater facility existing on the Owner property, the Director of the Department of Public Works shall give the owner of the property within which the drainage facility is located, and the person or agent in control of said property, notice of the specific maintenance and/or repair required. The Director shall set a reasonable time in which such work is to be completed by the persons who were given notice. If the above required maintenance and/or repair is not completed within the time set by the Director, written notice will be sent to the persons who were given notice stating the City's intention to perform such maintenance and bill the owner for all incurred expenses. The City may also revoke stormwater utility rate credits for the quality component or invoke surcharges to the quantity component of the Owner bill if required maintenance is not performed.

- (2) If at any time the City determines that the existing system creates any imminent threat to public health or welfare, the Director may take immediate measures to remedy said threat. No notice to the persons listed in (1), above, shall be required under such circumstances.
- (3) The owner grants unrestricted authority to the City for access to any and all stormwater system features for the purpose of performing maintenance or repair as may become necessary under Remedies (1) and/or (2).
- (4) The persons listed in (1), above, shall assume all responsibility for the cost of any maintenance and for repairs to the stormwater facility. Such responsibility shall include reimbursement to the City within 30 days of the receipt of the invoice for any such work performed. Overdue payments will require payment of interest at the current legal rate for liquidated judgments. If legal action ensues, any costs or fees incurred by the City will be borne by the parties responsible for said reimbursements.
- (5) The owner hereby grants to the City a lien against the above-described property in an amount equal to the cost incurred by the City to perform the maintenance or repair work described herein.

This Agreement is intended to protect the value and desirability of the real property described above and to benefit all the citizens of the City. It shall run with the land and be binding on all parties having or acquiring from Owner or their successors any right, title, or interest in the property or any part thereof, as well as their title, or interest in the property or any part thereof, as well as their heirs, successors, and assigns. They shall inure to the benefit of each present or future successor in interest of said property or any part thereof, or interest therein, and to the benefit of all citizens of the City.

Appendix 6D – New Development Inspection Form

Project: _____

BMP: _____

Location: _____

Installation	Maintenance			
Date Installed:	Inspected by:	Date Inspected:	Maintenance Satisfactory?	If no, correction action needed
Date Inspected:	1)		___ Yes ___ No	
Inspected by:	2)		___ Yes ___ No	
Installation satisfactory? ___ Yes ___ No	3)		___ Yes ___ No	
If No, Corrective Actions Needed: _____	4)		___ Yes ___ No	
	5)		___ Yes ___ No	

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Chapter 7 - Pollution Prevention in Municipal Operations Program

7.1 Requirements

The Stormwater Phase II Final Rule, published in December 1999, lists the following information as the regulatory requirements for pollution prevention/good housekeeping for municipal operations. This Regional Stormwater Program *Guide* is intended to meet these EPA regulations and provide a template for meeting the Phase II permit the Oregon Department of Environmental Quality issues to Rogue Valley jurisdictions. The following guidance section from the Phase II Rule provides additional details on the preceding regulations.

Regulations	<p>40 CFR 122.34(b)(6) Pollution prevention/good housekeeping for municipal operations.</p> <p>(i) You must develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Using training materials that are available from EPA, your State, Tribe, or other organizations, your program must include employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.</p>
Guidance	<p>40 CFR 122.34(b)(6) Pollution prevention/good housekeeping for municipal operations</p> <p>EPA recommends that, at a minimum, you consider the following in developing your program:</p> <ul style="list-style-type: none"> • Maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural stormwater controls to reduce floatables and other pollutants discharged from your separate storm sewers; • Controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by you, and waste transfer stations; • Procedures for properly disposing of waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatables, and other debris); and

Guidance	<p>40 CFR 122.34(b)(6) Pollution prevention/good housekeeping for municipal operations</p> <ul style="list-style-type: none"> • Ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices. <p>Operation and maintenance should be an integral component of all stormwater management programs. This measure is intended to improve the efficiency of these programs and require new programs where necessary. Properly developed and implemented operation and maintenance programs reduce the risk of water quality problems.</p>
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7.2 Benefits: Why this Program is Important

As the permittee, it is important that a municipality’s own operations minimize contamination of stormwater discharges and serve as a model for the entire regulated area. Municipal operations can contribute significant amounts of pollutants to stormwater. Examples of municipal operations that can negatively impact stormwater runoff – and ultimately water quality – include:

- Landscaping and maintaining parks, golf courses, and other municipal open spaces (e.g., sidewalks and plazas). These areas can contribute pesticides, herbicides, fertilizers, litter, and sediment to the storm drainage system if they are not properly maintained, or if municipal staff does not carry out maintenance activities in an efficient manner.
- Washing, repairing, and fueling municipally-owned vehicles and equipment. Spills and leaks not contained during repairs and fueling can contribute gasoline, oil, and grease to the storm drainage system.
- Maintaining city surfaces, including streets, parking lots, and buildings. Roads and other paved areas collect pollutants such as heavy metals, oil and grease, sediment, and litter from vehicles and motorists. These materials collect and wash into the storm drainage system during the “first flush” of a rain event. Many municipalities have street sweeping programs in place for aesthetic, safety, and public health reasons. These programs, if implemented properly, can reduce the amount of pollutants entering the storm drainage system. Sand and/or salt for deicing operations can also enter the storm drainage system. Another avenue for pollutants to enter the storm drainage system is from power washing or sand blasting buildings.
- Waste and materials storage, particularly in uncovered areas. Given all the activities that a municipality conducts, there is a vast array of materials and wastes stored at municipally-owned facilities. If spills

or leaks of these materials occur, it is possible for pollutants to drain to the storm drainage system.

- Construction activities and other land disturbances. Like any other type of construction activity, those initiated by the municipality can contribute sediment and other pollutants associated with construction equipment to stormwater runoff.

By implementing good housekeeping and pollution prevention procedures, employees can ultimately reduce stormwater pollutants and save the municipality money over time. Preventing litter and other debris from entering the system can reduce damage to the system and reduce the need for expensive, time-consuming repairs and maintenance.

7.3 Regional Guide for Pollution Prevention in Municipal Operations

The *Regional Guide* for pollution prevention/good housekeeping in municipal operations has the following components:

- Development and implementation of an operation and maintenance (O&M) plan with a focus on pollution prevention that addresses the municipal operations specified below, and
- Development and implementation of a training program for targeted municipal employees.

The following section describes the development of the O&M Plan that addresses pollution prevention and good housekeeping procedures for six municipal activities. The last section addresses employee training on the procedures contained within the O&M Plan.

Note: This pollution prevention/good housekeeping program only applies to operations and maintenance facilities within the municipality's Phase II boundary. See Chapter 1 for more information on how the Phase II boundary is defined.

All the BMPs in this chapter, BMPs 7A – 7J, are required. BMP 7A, the O&M Plan, is the primary BMP and includes descriptions of the other BMPs.

7.3.1 Operation and Maintenance (O&M) Plan

The primary goal of this program is to develop and implement a municipal O&M Plan that addresses pollution prevention and good housekeeping procedures for the following municipal activities:

- Park and Open Space Maintenance (7.3.2)
- Vehicle and Equipment Washing, including fleet and building maintenance (7.3.3)
- New Construction and Land Disturbances (7.3.4)

- Dust Control Practices (7.3.5)
- Stormwater System Maintenance (7.3.6)
- Open Channel and Structural Stormwater Controls (7.3.6.1)
- Roads, Highways, and Parking Lot Maintenance (7.3.6.2)
- Flood Management Project Evaluations (7.3.6.3)
- Employee Training on O&M Plan Implementation (7.3.7)
- Stormwater Plans for Municipal Facilities (7.3.8)

BMP 7A: Develop and implement a municipal O&M Plan that considers, where appropriate, BMPs 7B – 7J.

Measurable Goal: Complete development of an O&M Plan and implement the procedures described in the O&M Plan during the permit term. *(Establish specific goals in the individual plan for each jurisdiction.)*

An O&M plan is essential to ensure that all municipal activities and programs impacting stormwater are implemented efficiently and effectively. The O&M plan is intended to reduce the amount of pollutants carried by stormwater runoff into the storm drainage system. Comprised of a description of procedures and associated schedules, the O&M plan serves as a tool for all municipal employees that are directly involved in stormwater management or administer programs that impact stormwater. It also serves as the basis for the employee training program described in Section 7.3.2 below.

An O&M Plan contains the following information:

- Description of the required maintenance activities and procedures as it relates to existing municipal operations and programs
- List of responsible departments and personnel for each activity, and
- Schedule of activities, including maintenance, inspections and reporting

1. Collect information on existing municipal operations.

To gain an understanding of existing municipal operations in the six areas the O&M plan must address, assemble and review existing materials from various municipal departments who perform these activities. In reviewing information on existing programs, pay specific attention to the following: frequency of maintenance activities; types of substances used; materials storage, handling, and disposal practices; type and frequency of employee training; record keeping practices; and inspection procedures and frequencies. If documentation on activities does not exist, it may be necessary to conduct brief interviews with staff from the various departments to gain a thorough understanding of how they implement

existing municipal operations. If no municipal program exists for a certain activity (e.g., stormwater system maintenance), then determine which department is best suited to take on this activity.

2. Determine how to incorporate required procedures into existing activities.

Examine the required pollution prevention and good housekeeping procedures for each of the municipal operations that the O&M Plan must address. These procedures are described in Sections 7.3.1. Using information about existing municipal activities, determine how to best incorporate these procedures into current practices.

3. Create the O&M Plan.

- Include in the O&M plan the following information: 1) a description of the municipality's revised operating procedures that reflect the required pollution prevention and good housekeeping procedures, 2) the responsible departments for each municipal activity and program, and 3) the associated schedule for each activity. The final O&M plan should serve as a reference manual for all municipal employees involved in these activities and programs, ensuring that all employees consistently implement these activities using the appropriate procedures. Finally, provide training for municipal staff on the information contained in the O&M plan (described in Section 7.3.7).

Stormwater Management Manual (*Manual*)

A specific Stormwater Management Manual (*Manual*) for the Rogue Valley has not been developed. If it were to be developed, it would need to provide the technical guidance to help municipalities implement this *Regional Guide*. The *Manual* should provide commonly accepted stormwater management practices which, if implemented, are presumed to protect water quality. Jurisdictions are usually allowed to develop technical manuals, but may need to demonstrate to DEQ that such manuals and stormwater management practices will protect water quality.

For purposes of this *Regional Guide*, it is assumed that a *Manual* will need to be developed, or reference will need to be made to other pertinent manuals or guidance documents. For simplicity at this time, we shall assume a new *Manual* is prepared for the Rogue Valley, or for a specific Rogue Valley jurisdiction.

We will also assume the *Manual* will consist of core elements applicable to new development and redevelopment projects in the Rogue Valley that discharge to surface waters or to UIC rule-authorized subsurface drainage systems. For the pollution prevention/good housekeeping in municipal operations program, the main core elements would be: Operation and Maintenance, and Source Control.

The *Manual* should provide guidance on planning, design, operation, and maintenance of water quality treatment and flow control BMPs for the variety of stormwater facilities applicable to the local area.

At the time of publication of this *Regional Guide*, a comprehensive local or regional stormwater management technical *Manual* was not developed. Check to see if such a manual has been developed. Additional possibilities include reference(s) to other manuals or guidance documents prepared by other applicable jurisdictions, states, or agencies.

IMPORTANT: The municipal activities below are typically found in many municipal governments. If one or more of these activities does not exist, then the O&M plan does not need to address that activity.

7.3.2 Park and Open Space Maintenance

BMP 7B: In accordance with the O&M plan developed in BMP 7A, implement park and open space maintenance pollution prevention/good housekeeping practices.

Measurable Goal: Implement all pollution prevention/good housekeeping practices for park and open space maintenance at all park areas and other open spaces maintained by the jurisdiction. (*Establish specific goals in the individual plan for each jurisdiction.*)

Municipal maintenance practices at parks and other open spaces (e.g., golf courses, picnic areas, recreational facilities, rights-of-way, landscaped areas in parking lots, plazas) can include fertilizer, herbicide, and pesticide application; vegetation maintenance and disposal; and trash management. To ensure these activities do not negatively impact stormwater runoff, incorporate these pollution prevention/good housekeeping procedures into existing municipal operations for maintaining parks and other open spaces.

7.3.2.1 Pesticide, Herbicide, and Fertilizer Management

To minimize the impact that use of pesticides, herbicides, and fertilizers have on stormwater quality, implement the following procedures:

- **Applicator Certification.** Ensure that all personnel who apply pesticides have the appropriate license from the program administered by the Oregon Department of Agriculture. Renew this license annually, in accordance with existing state regulations.
- **Application and Record Keeping.** Apply and handle pesticides and herbicides and keep detailed records in accordance with existing state regulations. The rules contain recordkeeping forms to track the location, frequency, and materials used during application.
- **Storage and Inspection.** Store pesticides, herbicides and fertilizers and inspect storage areas in accordance with existing state regulations, as

well as applicable federal and county regulations. In general, these regulations require storage of materials in enclosed or covered areas; secondary containment of materials; and inspections of storage areas for spills, leaks, and/or unsafe storage methods.

- Scheduling. Existing state regulations address wind conditions when applying pesticides, but do not address rain events. Follow existing state regulations that set forth requirements about appropriate times and frequencies of pesticide application. In addition, do not apply pesticides, herbicides, and fertilizers under the following conditions:
 - Within one day of a rain event forecasted to be greater than 0.25 inches (except for application of pre-emergent herbicides).
 - During rain events.
 - When water is running off-site.

7.3.2.2 Landscaping Waste Disposal

Landscaping waste can consist of leafy and woody debris from clipping, cutting, mowing, and other maintenance activities. These materials can accumulate in the storm sewer system and/or discharge into receiving waters. To ensure that these waste materials do not enter the storm drainage system, implement the following procedures:

- Temporary stockpiling. Place materials to be temporarily stockpiled away from waterbodies and cover stockpiles.
- Proper disposal. Ensure that all municipal employees and contractors generating landscaping waste dispose of it at an approved location (e.g., composting pile or permitted landfill).

7.3.2.3 Trash Management

Open spaces such as parks, sports fields, and picnic areas receive a lot of visitors and can collect a large amount of litter and other debris. The following procedures will help to limit the amount of trash reaching the storm drainage system:

- Provide and maintain receptacles. Ensure that visitors can easily locate and access trash receptacles, and that there are enough on-site to serve the number of guest the area receives. Some areas may require more receptacles than others due to number of visitors, even if the size of the area may not seem to warrant more receptacles. Use past information about trash management from each site to make this determination. Also ensure that receptacles do not have cracks, holes, and other types of damage that could allow litter and other debris to escape and potentially enter the storm drain system.
- Increase collection frequency according to site use. During times of peak visitation, increase the frequency of trash collections at each area to ensure trash does not enter the storm drain system.

7.3.3 Vehicle and Equipment Washing

BMP 7C: In accordance with the O&M plan developed in BMP 7A, implement publicly-owned vehicle and equipment washing pollution prevention/good housekeeping practices.

Measurable Goal: Conduct all vehicle and equipment washing in a self-contained covered building or a designated wash area that meets the required criteria. *(Establish specific goals in the individual plan for each jurisdiction.)*

Wash water from vehicle/equipment cleaning can contain oil and grease, suspended solids, heavy metals, organics, and other pollutants from detergents. Follow the procedures for washing vehicles/equipment below to prevent wash water from entering storm drains.

Whenever possible, conduct vehicle/equipment cleaning in a self-contained, covered building. This includes:

- A commercial washing business in which the washing occurs in an enclosure and drains to a municipal sanitary sewer system, a treatment facility, a dead end sump or evaporative pond, or
- A building constructed specifically for washing of vehicles and equipment which is plumbed to a drain to a municipal sanitary sewer system, a treatment facility, or a dead end sump.

If the two types of enclosed facilities are not available for vehicle/equipment cleaning, conduct this activity in a designated uncovered wash area that meets the following criteria:

- Discharging onto an impervious surface that is graded to collect all wash water in a drain system and constructed as a spill containment pad to prevent the run-on of stormwater from adjacent pavement areas. Extend the containment pad out a minimum of four feet on all sides of the vehicles/equipment being washed.
- Discharging to a municipal sanitary sewer system, a treatment facility, or a dead-end sump for transportation to the nearest treatment facility.
- Discharging through a pipe that has a positive control valve (manual or automatic) that is shut when washing is not occurring to prevent the entry of stormwater. Post signs to inform employees of the operation and purpose of the valve, and
- Cleaned before a rain event to ensure pollutants collected on the impervious surface do not drain to the storm drain system.

7.3.4 New Construction and Land Disturbances

Follow procedures outlined in Chapter 5. Public construction projects are required to follow all the same requirements and procedures as private

construction projects. Ensure construction activities initiated by the municipality follow requirements applicable to all other construction.

7.3.5 Dust Control Practices

BMP 7D: In accordance with the O&M plan developed in BMP 7A, implement dust control practices where necessary on public projects.

Measurable Goal: Implement required dust control procedures on all public projects where appropriate. *(Establish specific goals in the individual plan for each jurisdiction.)*

Follow appropriate BMPs to minimize and control dust from public construction projects. Dust control BMPs could be described in the adopted stormwater management *Manual*, or other appropriate document.

7.3.6 Stormwater System Maintenance

Pollutants that do manage to enter the storm drainage system can impede proper functioning of the system and can create the need for costly repairs. Storm drain maintenance is conducted to prevent water quality impacts and to prevent local flooding does not occur due to a clogged pipe or catch basin. A long-term preventative maintenance program helps ensure that the system functions effectively while reducing the potential for pollution and significant infrastructure damage. Procedures for this municipal activity include regular inspections, cleaning, proper disposal of waste removed from the system, and record keeping. Conduct these activities year-round, increasing the frequency of these activities during the rainy season (if necessary).

When maintenance activities include stormwater outfalls, consider performing a visual inspection of the outfall for both maintenance needs and identification of any illicit discharges. See the example visual inspection form for outfalls in Appendix 7A.

BMP 7E: In accordance with the O&M plan developed in BMP 7A, implement catch basin cleaning and stormwater system maintenance pollution prevention/good housekeeping practices.

Measurable Goal: Inspect and maintain, as needed, catch basins and other stormwater system facilities based on a schedule described in the O&M plan. *(Establish specific goals in the individual plan for each jurisdiction.)*

- Catch Basin Inspections and Cleaning. Inspect catch basins and clean inlets at least once a year during the dry season. Based on inspection results, clean (i.e., remove debris from) catch basins as required to prevent water quality impacts. During or before the wet season, perform inspection, clearing, and cleaning in areas that generate large quantities of waste and debris during rainstorms and snowmelt events.

Using adaptive management, optimize maintenance activities and frequencies.

- Proper Waste Disposal. Dewater wastes collected during storm drain cleaning and maintenance, if necessary, into the municipal sanitary sewer. Do not dewater near a storm drain or stream. Store solid waste and debris in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain. Dispose of sediment waste appropriately, depending on the level of contaminants.
- Record keeping. Document the following information for inspections and cleaning of catch basins: 1) date, 2) location of catch basin, 3) activity performed (e.g., inspection or cleaning), and 4) description of condition or overall amount of material removed (estimated in either volume or dry weight).

7.3.6.1 Open Channels and Structural Stormwater Controls

BMP 7F: In accordance with the O&M plan developed in BMP 7A, implement structural stormwater control pollution prevention/good housekeeping practices.

Measurable Goal: Inspect structural stormwater controls on a schedule described in the O&M Plan or as specified by the adopted stormwater management *Manual* or an approved equivalent manual. (*Establish specific goals in the individual plan for each jurisdiction.*)

- Open Channel and Structural Controls Inspections and Cleaning. Inspect open channels and structural controls (e.g., detention ponds, commercial stormwater technologies) for trash and debris, and clean, if necessary, at least once a year during dry season. Inspect and clean open channels and structural stormwater controls in areas that generate significant waste and debris during rainy season.
- Proper Waste Disposal. Dewater wastes collected during storm drain cleaning and maintenance, if necessary, into the municipal sanitary sewer. Do not dewater near a storm drain or stream. Store solid waste and debris in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain. Sediment may contain elevated levels of lead, hydrocarbons, and oil and grease. If sediment contains elevated levels of these pollutants, dispose of as hazardous waste.
- Record keeping. Document the following information for inspections and cleaning of open channels and structural controls, including catch basins: 1) date, 2) location, 3) activity performed (e.g., inspection or cleaning), 4) description of condition or overall amount of material removed (estimated in either volume or dry weight).

7.3.6.2 Roads, Highways, and Parking Lot Maintenance

BMP 7G: In accordance with the O&M plan developed in BMP 7A, implement deicing and snow removal pollution prevention/good housekeeping practices for roads, highways, and parking lots.

Measurable Goal: Implement required procedures on all roads, highways, and parking lots per the O&M plan. *(Establish specific goals in the individual plan for each jurisdiction.)*

Maintaining roads, highways, and parking lots for public safety purposes can generate pollutants that will enter the storm drainage system, particularly those related to deicing and snow removal. Include in the O&M plan pollution prevention procedures related to deicing and snow removal described below.

- **Deicing Materials (e.g., Salt/Sand) Storage.** Locate all new salt/deicing material storage piles outside the 100-year floodplain. Continue operations of any existing storage piles within the 100-year floodplain until all materials are gone. Once materials are gone from these locations, close and relocate the storage area outside the 100-year floodplain. Cover all new salt/deicing material storage piles with tarps, hard shelters or contain them with dikes or berms.
- **Deicing Activities.** Apply deicing materials according to manufacturer's recommendations for the given circumstance. When determining the amount to apply, consider road width, traffic concentration, proximity to surface waters, and road temperature to prevent over-application. If possible, use trucks with calibration devices on their spreaders exclusively. In areas in which drain to sensitive or impaired waters, consider applying alternative deicing materials, such as sand or salt substitutes.
- **Snow Disposal Areas.** Designate "Snow Storage Areas" around the municipality for temporary storage of snow that has been removed from the roadways. Designate snow storage areas at least 100 feet from surface waters or ground water drinking water sources. Clean each snow storage area after snow has melted by collecting debris and trash picked up in the snow removal process. This will aid in preventing floatables from entering surface waters.

Optional BMP – Street Sweeping: Street sweeping is not required under Phase II, but communities already conducting street sweeping activities can take credit for this. Benefits include improved air quality, trash and debris removal, and decreased maintenance costs of removing debris from catch basins. Street sweeping debris should be disposed of properly.

7.3.6.3 Flood Management Project Evaluations

BMP 7H: In accordance with the O&M plan developed in BMP 7A, implement flood management project evaluation and review procedures.

Measurable Goal: All new flood management project evaluations to include water quality considerations. Priority existing flood management projects to be identified and re-evaluated with water quality considerations. *(Establish specific goals in the individual plan for each jurisdiction.)*

Flood control has been the traditional focus of stormwater management in many communities. Traditional approaches to flood management often include projects such as widening channels, dredging riverbeds, or creating dikes, levees or embankments. The purpose of these controls is to increase the capacity of the main channel or decrease the amount of water moving into the main channel (i.e., stormwater management), traditionally without consideration of impacts to water quality. For example, concrete lined channels do not provide for aquatic habitat and tend to increase potentially erosive velocities and ambient water temperature. These types of controls can be expensive and have limited effectiveness in the long-term, because they do little to discourage increases in impervious surfaces – a significant factor in flooding.

By incorporating water quality considerations into project review criteria, negative impacts to water quality from new flood management projects can be decreased.

In designing and/or evaluating flood management projects, attempt to employ more natural solutions and use controls that preserve the hydrology of a site (e.g., swales and natural channels, riparian buffers) as a first-line of flood control.

Evaluate existing flood management projects to determine whether or not additional water quality protection devices should be added. Do this by identifying several priority projects for review over the permit term to determine if additional water quality treatment can be achieved.

7.3.7 Employee Training on O&M Plan Implementation

BMP 7I: Develop materials and conduct employee training on the procedures contained in the O&M plan developed in BMP 7A.

Measurable Goal: All employees involved in stormwater management or municipal maintenance will receive training on the procedures in the O&M plan. *(Establish specific goals in the individual plan for each jurisdiction.)*

At a minimum, employees in targeted positions (generally employees involved in stormwater management or municipal maintenance) should be

trained on the requirements in the stormwater program by the end of permit term. Consider providing brief (1 hour) training to all municipal employees. More specific, specialized training can be developed for specific program areas. For example, provide additional training on proper operation and maintenance of the equipment for municipal employees involved in vehicle washing. Train municipal employees engaged in field work on the basics of identifying and reporting illicit discharges and spills, including what constitutes an illicit discharge and who to contact if they see an illicit discharge.

In addition to more intensive training, ensure that municipal employees have access to the public education materials produced under the public education minimum measure (Chapter 2). Even if a municipal employee's responsibilities do not directly impact stormwater management activities, their day-to-day actions can impact stormwater quality.

7.3.8 Stormwater Plans for Municipal Facilities

BMP 7J: Develop plans for all municipal facilities that would reasonably be expected to discharge contaminated runoff and are not covered under the NPDES Industrial Stormwater General Permit (1200-Z). Submit a permit application for all municipal facilities that are required to be covered under the 1200-Z General Permit.

Measurable Goal: Submit permit application for municipal facilities that are required to be covered under the NPDES Industrial Stormwater General Permit (1200-Z). Identify municipal facilities that would reasonably be expected to discharge contaminated runoff and not covered under the 1200-Z General Permit, and develop pollution prevention plans for these facilities. *(Establish specific goals in the individual plan for each jurisdiction.)*

NOTE: Under NPDES Phase II, a permitted small MS4 should probably apply for the 1200-Z permit, but optionally, they could designate those facilities be covered under this "Municipal Operations" section of their plan. This should be confirmed with DEQ during the permitting process.

Industrial Stormwater General Permit (1200-Z)

Some municipally owned or operated industrial facilities that discharge stormwater runoff to surface waters and/or storm drains are required to apply for coverage under DEQ's Industrial Stormwater General Permit. Municipal facilities subject to this permit typically include:

- Landfills that receive or have received any industrial wastes (even closed landfills).
- Vehicle maintenance shops for local public transportation.

- Wastewater treatment plants with a design flow of 1.0 million gallons per day.

Other municipal facilities could be required to apply for this permit. For more information and a full list of the types of facilities required to apply, see: <http://www.deq.state.or.us/wq/wqpermit/StormWaterHome.htm>.

Stormwater Plans

Municipal facilities that would reasonably be expected to discharge contaminated runoff and are not covered by the Industrial Stormwater General Permit should also have a stormwater plan developed. These facilities could include parking lots, fair grounds, storage facilities, maintenance facilities, airports, parks/sports fields, municipal buildings and any other municipally owned facilities. To implement this BMP, follow these steps:

1. Assess and Screen Municipal Facilities

Collect information on each municipally-owned or operated facility within your jurisdiction to assess the potential stormwater impact. If necessary, conduct site visits. Assess each facility to determine which of the following categories it falls into:

- Needs an Industrial Stormwater Permit. This facility falls within one of the SIC codes regulated by the permit and discharges to surface waters. Submit an industrial stormwater permit application.
- Some surface water pollution potential. Facilities that are not covered by the Industrial Stormwater Permit may still have the potential to impact surface waters. For facilities that have a potential to discharge contaminated runoff, a stormwater plan should be developed.
- Little/no surface water pollution potential. This facility either doesn't discharge to surface waters or has little or no potential to impact stormwater quality. No stormwater plan is required.

As you assess municipal facilities, consider factors such as distance to storm drains and surface waters, site activities, traffic flow, exposure to potential stormwater contaminants, facility size, existing stormwater BMPs already in place, and other relevant factors.

2. Prepare site-specific stormwater plans

The development of facility-specific pollution prevention plans should be based on guidance in the adopted stormwater management *Manual*. Consider including the following information in each stormwater plan:

- Description of storm drain system
- Materials storage, including exposure of potential pollutants
- Current O&M of storm drain system and structural BMPs

- Education/Training activities on stormwater
- Source Control activities
- New stormwater BMPs and pollutant control strategy
- Roles/responsibilities for stormwater
- Cost estimates

3. Prepare training materials and conduct training

Prepare training materials and conduct training at each facility on the practices described in the stormwater plan. This training should be coordinated with the general employee training in BMP 7I.

4. Implement stormwater plans

Carry out implementation of the stormwater plan at each facility.

7.4 Resources

Vehicle and Equipment Wash water Discharges/Best Management Practices Manual

<http://www.ecy.wa.gov/biblio/95056.html>

Recommended Practices Manual: A Guideline for Maintenance and Service of Unpaved Roads, produced by Choctawhatchee, Pea and Yellow Rivers Watershed Management Authority

<http://www.epa.gov/owow/nps/unpavedroads.html>

EPA's National Menu of BMPs

<http://www.epa.gov/npdes/menuofbmps/poll.htm>

Appendices

Appendix 7A – Visual Inspection Form for Outfalls

Appendix 7A – Visual Inspection Form for Outfalls

VISUAL INSPECTION FORM

Outfall Number: _____

Part 1 General Information

1. Map to location is? OK Incorrect, explain in Part 4, Comments
2. Date: _____ Time: _____ Inspection Crew Lead: _____
3. How long since last rainfall? Raining now 0-2 days 3 or more days Unknown
4. Access to end of pipe is? OK Far from road, _____ feet Steep Ground wet or soft Blocked ☒
If blocked, by what? Fence gate/unlocked Fence gate/locked Vegetation Water Other: _____

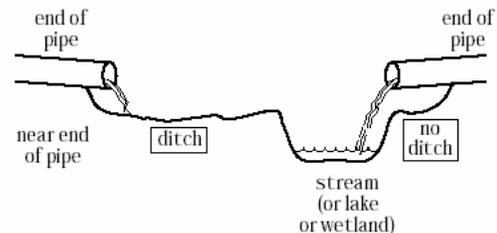
Part 2 End-of-Pipe Information

5. End of pipe flows into: Lake Stream Wetland Ditch Other _____
6. End of pipe submerged? No Yes *If yes, how much?* less than 25% about 50% more than 50%
7. End of pipe crushed? No Yes *If yes, how much?* less than 25% about 50% ☒ almost closed ☒
8. Grate on end of pipe? No Yes *If yes, is grate locked?* No Yes
If yes, is grate plugged? less than 25% about 50% ☒ almost closed ☒

Part 3 Visual Observations

9. Water flowing from end of pipe? No Yes
If yes, what does water look like? Clear Colored, what color? _____ Muddy
If yes, are petroleum products present? No Yes, in the form of: Floating globs Moving sheen
10. Sediment accumulation in pipe? No Yes
If yes, how much? less than 25% full about 50% full ☒ more than 50% full ☒
11. Debris accumulation in pipe? No Yes
If yes, how much? less than 25% full about 50% full ☒ more than 50% full ☒
Describe debris: _____
12. If end of pipe flows to a ditch, is there (near end of pipe):
 Sediment accumulation in ditch? No Yes
If yes, how much? less than 25% full about 50% full ☒ more than 50% full ☒
 Debris accumulation in ditch? No Yes
If yes, how much? less than 25% full about 50% full ☒ more than 50% full ☒
Describe debris: _____

Part 4 Comments



NOTE: If the answer to a question has this symbol ☒ next to the entry, flag this form for a supervisor's attention by placing an "X" in the box to the right.

INSTRUCTIONS FOR COMPLETION OF THE VISUAL INSPECTION FORM

A separate form must be filled out for each major outfall. Answer all questions on the form.

PART 1 GENERAL INFORMATION

1. **Map to Location, and Outfall Number:** Verify the map guiding you to the outfall location is accurate. Make location corrections to the map and/or in the inspection form, Part 3, Comments. If the outfall cannot be found based on inspection crew experience or map information make a note and return the uncompleted form and map to supervisor.
2. **Outfall Number, Date, Time and Field Crew Lead.** When you arrive at an outfall to conduct the inspection, write the outfall identification number on the inspection form. The outfall identification number can be found on the location map. Record the date and time the inspection is made. Fill in the name of the field crew lead conducting the inspection.
3. **How Long Since Last Rainfall?** Check the box that best represents when the last rainfall occurred. "Rainfall" is defined as a rainstorm big enough to cause runoff from the streets to enter the local storm drains being inspected. Indicate if you do not know the date of the last rainfall.

PART 2 VISUAL OBSERVATIONS

The "end-of-pipe" is defined as the open-end of a pipe discharging storm water from a piped storm water conveyance system into the environment.

4. **Water Flowing from End-of-Pipe?** Check the NO box if there is no water flowing out of the end-of-pipe. Note: If you see standing water in the end-of-pipe or the end-of-pipe is partially submerged in water and you cannot determine if the water is actually flowing out of the pipe, also check the NO box. Check the YES box only if water is flowing out of the end-of-pipe. If you checked the YES box, you also need to answer the questions about the quality of the water flowing out of the pipe. Check the appropriate boxes for the water quality questions.

If yes, what does water look like?

Clear (not colored): Imagine a glass of drinking water, you can see through the water and the water is not colored. Is this what the water flowing from the end-of-pipe looks like?

Colored: Imagine a glass of tea, you can see through the water, but the water is colored. Is this what the water looks like? Be careful not to let the color of subsurface objects fool you. For example, green algae under the water can give water the appearance of being green. Color can range from light to dark. If the water seems very lightly colored but you are in doubt, do not mark the "Colored" box.

Muddy: You cannot see through the water (it has a cloudy or muddy appearance).

If yes, are petroleum products present in water? Imagine pouring new or used motor oil into water. Do you see this effect in the water flowing from the end-of-pipe? Unless you see floating globs or a moving sheen of oil in the water mark NO.

5. **Sediment Accumulation in Pipe?** If you can see sediment in the pipe, check the YES box. Then estimate how much sediment is present in the pipe (less than ¼ full, about ½ full, or more than ½ full) and check the appropriate box.

Note: If you checked the "about ½ full" or "more than ½ full" box, also check the box at the bottom of the page to flag the form for a supervisor's attention.

6. **Debris Accumulation in Pipe?** If you see any debris piled up in the pipe, check the YES box. Then estimate how much debris is present in the pipe (less than ¼ full, about ½ full, or more than ½ full) and check the appropriate box.

Note: If you checked the "about ½ full" or "more than ½ full" box, also check the box at the bottom of the page to flag the form for a supervisor's attention.

7. **If the "End of Pipe" Flows into a Ditch, is there (near end of pipe) Sediment Accumulation in Ditch?** If you can see sediment in the pipe, check the YES box. Then estimate how much sediment is present in the pipe (less than ¼ full, about ½ full, or more than ½ full) and check the appropriate box.

Note: If you checked the "about ½ full" or "more than ½ full" box, also check the box at the bottom of the page to flag the form for a supervisor's attention.

Debris Accumulation in Ditch? If you see any debris piled up in the pipe, check the YES box. Then estimate how much debris is present in the pipe (less than ¼ full, about ½ full, or more than ½ full) and check the appropriate box.

Note: If you checked the "about ½ full" or "more than ½ full" box, also check the box at the bottom of the page to flag the form for a supervisor's attention.

PART 3 COMMENTS

As needed, explain answers in Parts 1-2. Record anything unusual about the site not covered by the questions on the form.

FIELD EQUIPMENT CHECKLIST

- Appropriate protective work clothing and boots
 Safety and communication equipment
 Outfall location maps
 Clipboard
 Major outfall identification number list
 Visual Inspection Forms
 Pencil or Waterproof permanent ink pen

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Chapter 8 - Evaluation and Assessment, Record Keeping, and Annual Reporting

8.1 Evaluation and Assessment

Under federal NPDES regulations, operators of regulated small MS4s are required to evaluate the appropriateness of their identified BMPs and progress toward achieving their identified measurable goals.

The purpose of this evaluation is to determine whether or not the MS4 is meeting the requirements of the minimum control measures. DEQ is responsible for determining whether and what types of monitoring needs to be conducted and may require monitoring in accordance with State/Tribe monitoring plans appropriate to the watershed. This *Regional Guide* does not include specific monitoring requirements. In the federal Phase II rule, EPA does not encourage requirements for “end-of-pipe” monitoring for regulated small MS4s. Rather, EPA encourages states to carefully examine existing ambient water quality and assess data needs. EPA encourages states to consider a combination of physical, chemical, and biological monitoring or the use of other environmental indicators such as exceedance frequencies of water quality standards, impacted dry weather flows, and increased flooding frequency. For a discussion of monitoring in greater detail, see Claytor, R. and W. Brown, 1996, *Environmental Indicators to Assess Storm Water Control Programs and Practices*, Center for Watershed Protection, Silver Spring, MD - Section II.L., Water Quality Issues.

Under the federal regulations, DEQ is encouraged to consider the following watershed objectives in determining monitoring requirements:

- (1) To characterize water quality and ecosystem health in a watershed over time,
- (2) To determine causes of existing and future water quality and ecosystem health problems in a watershed and develop a watershed management program,
- (3) To assess progress of a watershed management program or effectiveness of pollution prevention and control practices, and
- (4) To support documentation of compliance with permit conditions and/or water quality standards.

The federal rules are intended to provide flexibility to both MS4s and permitting authorities regarding appropriate evaluation and assessment. Permitting authorities can specify monitoring or other means of evaluation when writing permits. If additional requirements are not specified, MS4s

can specify the most appropriate way to evaluate their stormwater management program.

In order to demonstrate the effectiveness of BMPs and the stormwater program, municipalities can consider tracking and documenting implementation using a variety of measures. The following are examples of programs or activities that can be used to help demonstrate effectiveness:

Public Education / Public Involvement

- How many school children receive education on stormwater or water quality topics?
- How many people are involved in stream cleanup or other volunteer activities?
- Conduct a survey to assess the effectiveness of public outreach and education efforts

Illicit Discharges

- Track the visual monitoring of outfalls during dry and wet weather conditions
- Photograph the conditions of streams upstream and downstream of outfalls periodically
- Track the number of spills or illicit connections found each year

Construction

- Track the number of plans that are reviewed for adequate erosion and sediment controls
- Track the number of local construction operators who are training on proper erosion and sediment controls
- Track the number of erosion and sediment control inspections at construction sites

Post-Construction

- Track the number of stormwater site plans and permanent stormwater control plans that are reviewed
- Track the number of structural stormwater BMPs that are constructed and maintained each year

Municipal Operations / Good Housekeeping

- Track the number of pollution prevention plans developed
- Track the amount of deicing materials applied to roads
- Track the number of curb miles swept annually
- Track the number of employees trained on proper stormwater practices

8.2 Record Keeping

In order to track program implementation and progress, thorough, timely and accurate record keeping is essential. This can be accomplished through either a series of organized, printed files or electronically via a database or similar tracking system.

Record keeping is conducted for two primary purposes. First, record keeping is conducted in order to track and more effectively manage the day-to-day activities of the stormwater program. This could include keeping track of activities and staff time for cost accounting purposes, and tracking inspections, incidents or responses for later follow-up. Second, record keeping is conducted to collect data on program performance that is reported to DEQ, the city/county council, ratepayers, or the public. This will consist primarily of record keeping on the jurisdiction's progress in meeting measurable goals.

Records required by the NPDES Phase II Municipal Stormwater Permit must be kept for at least three years and must be submitted to DEQ when requested. Jurisdictions are required to make records, including their stormwater management program, available to the public at reasonable times during regular business hours (a reasonable charge for providing information can be assessed in accordance with State laws governing open records requests). Jurisdictions can require that a member of the public provide advance notice.

8.3 Annual Reporting

EPA's federal regulations require that jurisdictions permitted under Phase II submit reports annually during the first permit term (five years). EPA requires that the annual report include the following information (from 40 CFR 122.34(g)(3)):

- The status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving your identified measurable goals for each of the minimum control measures.
- Results of information collected and analyzed, including monitoring data, if any, during the reporting period.
- A summary of the stormwater activities you plan to undertake during the next reporting cycle.
- A change in any identified best management practices or measurable goals for any of the minimum control measures, and
- Notice that you are relying on another governmental entity to satisfy some of your permit obligations (if applicable).

The annual report form in Appendix 8A is an example of what this report could look like. The general Phase II permit issued by DEQ may contain

the annual report form that must be used. This proposed form contains the following six sections:

Section I – Contact Person

This will be the primary contact for DEQ, other state agencies, and the public for stormwater issues in this jurisdiction. This may or may not be the individual who signed the municipal stormwater permit application (see Appendix 8C).

Section II – MS4 Location

Information on the jurisdiction the report covers, permit number, the type of jurisdiction, and the major receiving water body.

Section III – BMP and Measurable Goal Status

For each BMP and measurable goal, the permittee must describe completed activities for this permit year, and planned activities for the next permit year. As an example, this form includes all the BMPs and measurable goals for the *Regional Guide*.

Section IV – Information Collection

Where information, studies, monitoring data, or other relevant information is collected on the stormwater program, briefly describe that information here. This could also include any information collection conducted for Endangered Species Act or Total Maximum Daily Load programs that relate to stormwater.

Section V – Changes in BMPs and Measurable Goals

If any BMPs or measurable goals have been changed during the reporting period, describe those changes and provide a justification for the changes. If any BMPs or measurable goals are proposed to be changed, describe those changes and provide a justification for the changes.

Section VI – Relying on Another Governmental Entity

If relying on another governmental entity to satisfy one or more of the requirements, list what that requirement is and list the governmental entity who is implementing this requirement (see Appendix 8C).

Appendices

Appendix 8A – Example NPDES Phase II Municipal Stormwater Permit Annual Report Form

Appendix 8B – Monitoring and Reporting Requirements

Appendix 8C – 40 CFR - Chapter I - Part 122.22 Signatories; and Part 122.35 Responsibilities

Appendix 8A – Example NPDES Phase II Municipal Stormwater Permit Annual Report Form

Annual Report covering the period from _____ to _____

I. Contact Person

II. MS4 Location

Contact Name & Title:	Permit Number:
Jurisdiction/Agency/Company:	Jurisdiction(s) Covered:
Mailing Address:	Entity type: State <input type="checkbox"/> County <input type="checkbox"/> City <input type="checkbox"/> District <input type="checkbox"/>
City State Zip + 4	Major receiving water(s):
Phone Number:	Email address:

III. BMP and Measurable Goal Status

Public Education BMPs		
BMP 2A: Stormwater Education and Outreach Strategy		Initial Goal: Develop strategy by _____ Subsequent Goal: Update strategy as needed
(a)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 2B: Stormwater brochure for general public		Initial Goal: Distribute to residents and businesses as specified in outreach strategy Subsequent Goal: Update if needed
(b)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 2C: Targeted Brochure		Initial Goal: Distribute to targeted audience as specified in outreach strategy Subsequent Goal: Update if needed
(c)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>

BMP 2D: Storm Drain Stenciling		Initial Goal: Stencil ___% of inlets Subsequent Goal: Re-stencil as needed
(d)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 2E: Classroom Education		Initial Goal: Contact school districts as specified in outreach strategy Subsequent Goal: Re-contact as needed
(e)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 2F: Work with Volunteers		Initial Goal: Contact volunteer groups as specified in outreach strategy Subsequent Goal: Re-contact as needed
(f)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 2G: Speakers Bureau		Initial Goal: Develop bureau by year ___ Subsequent Goal: Modify as needed
(g)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 2H: Stormwater PSAs		Initial Goal: Run PSAs so the population receive info an average of __ times per year Subsequent Goal: Modify as needed
(h)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 2I: Stormwater Display		Initial Goal: Develop and use display as specified in outreach strategy Subsequent Goal: Use/update as needed
(i)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 2J: Stormwater Web Site		Initial Goal: Develop/update web site as specified in outreach strategy Subsequent Goal: Update regularly
(j)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>

Public Involvement BMPs		
BMP 3A: Public review/public meetings		Initial Goal: Hold per outreach strategy Subsequent Goal: Schedule as appropriate
(a)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 3B: Distribute news releases		Initial Goal: Distribute per outreach strategy Subsequent Goal: Modify if needed
(b)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 3C: Stormwater Advisory Team (SWAT)		Initial Goal: Hold regular meetings Subsequent Goal: Modify if needed
(c)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 3D: Governed Body Meetings		Initial Goal: Hold regular meetings Subsequent Goal: Modify if needed
(d)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
Illicit Discharge BMPs		
BMP 4A: Create System Map		Initial Goal: Create system map in first year Subsequent Goal: Update as needed
(a)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 4B: Illicit Discharge Ordinance		Initial Goal: Develop ordinance by year ____ Subsequent Goal: Enforce/update as needed
(b)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 4C: Illicit Discharge Plan		Initial Goal: Develop plan by year ____ Subsequent Goal: Implement/update plan
(c)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 4D: Field Inspections		Initial Goal: Begin inspections by year ____ Subsequent Goal: Inspect all by year ____
(d)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 4E: Spill Response Plan		Initial Goal: Develop plan by year ____ Subsequent Goal: Implement plan as needed
(e)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>

BMP 4F: Enforcement Plan		Initial Goal: Develop plan by year ____ Subsequent Goal: Implement plan as needed
(f)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 4G: Training		Initial Goal: Train staff by year ____ Subsequent Goal: Re-train as needed
(g)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
Construction BMPs		
BMP 5A: Erosion & Sediment Ordinance		Initial Goal: Adopt ordinance by year ____ Subsequent Goal: Enforce/update as needed
(a)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 5B: Training for MS4 staff		Initial Goal: Train staff by year ____ Subsequent Goal: Re-train as needed
(b)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 5C: Review site plans		Initial Goal: Begin plan review by year ____ Subsequent Goal: Continue to review plans
(c)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 5D: Receive info from the public		Initial Goal: Set up mechanism by year ____ Subsequent Goal: Respond as needed
(d)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 5E: Inspect construction sites		Initial Goal: Begin inspections by year ____ Subsequent Goal: Inspect all each year
(e)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 5F: Training for construction operators		Initial Goal: Provide training by year ____ Subsequent Goal: Re-train as needed
(f)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>

Post-Construction BMPs		
BMP 6A: Post-Construction Control Ordinance		Initial Goal: Adopt ordinance by year ____ Subsequent Goal: Enforce/update as needed
(a)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 6B: Post-construction plan		Initial Goal: Adopt plan by year ____ Subsequent Goal: Update as needed
(b)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 6C: Training		Initial Goal: Train by year ____ Subsequent Goal: Re-train as needed
(c)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 6D: Site Plan review		Initial Goal: Review all site plans Subsequent Goal: Continue to review plans
(d)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 6E: Inspect post-construction BMPs		Initial Goal: Begin inspections by year ____ Subsequent Goal: Inspect annually per plan
(e)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
Municipal Operations / Good Housekeeping BMPs		
BMP 7A: Develop O&M Plan		Initial Goal: Develop plan by year ____ Subsequent Goal: Implement plan as needed
(a)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 7B: Park/Open Space BMPs		Initial Goal: Implement BMPs per plan Subsequent Goal: Enforce/update as needed
(b)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>

BMP 7C: Vehicle/Equipment washing BMPs		Initial Goal: Implement BMPs per plan Subsequent Goal: Enforce/update as needed
(c)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 7D: Dust Control BMPs		Initial Goal: Implement BMPs per plan Subsequent Goal: Enforce/update as needed
(d)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 7E: Stormwater System Maintenance		Initial Goal: Maintain per O&M plan Subsequent Goal: Modify plan if needed
(e)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 7F: Open Channel/Structural BMPs		Initial Goal: Implement BMPs per plan Subsequent Goal: Enforce/update as needed
(f)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 7G: Deicing BMPs		Initial Goal: Implement BMPs per plan Subsequent Goal: Enforce/update as needed
(g)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 7H: Flood Management BMPs		Initial Goal: Implement BMPs per plan Subsequent Goal: Enforce/update as needed
(h)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 7I: Employee Training on O&M		Initial Goal: Train by year ____ Subsequent Goal: Re-train as needed
(i)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>
BMP 7J: Stormwater Plans for Municipal Facilities		Initial Goal: Develop plans by year ____ Subsequent Goal: Update plans as needed
(j)	<i>Completed activities for this permit year</i>	<i>Planned activities for the next permit year</i>

V. Changes in BMPs or Measurable Goals

If any of the BMPs or Measurable Goals are being changed, list the old BMP and measurable goal, the new BMP and measurable goal, and a justification for the change below.	
Old BMP:	Old Goal:
New BMP:	New Goal:
Justification for change:	
Old BMP:	Old Goal:
New BMP:	New Goal:
Justification for change:	
Old BMP:	Old Goal:
New BMP:	New Goal:
Justification for change:	

VI. Relying on Another Governmental Entity

If relying on another governmental entity to satisfy one or more of the permit obligations, list the entity and the permit obligation they are implementing on your behalf below.

Appendix 8B – Monitoring and Reporting Requirements

The text below is from the following document: *7/7/03 DRAFT – General Permit – National Pollutant Discharge Elimination System – Storm Water Discharge Permit – Schedule B*, by the Oregon Department of Environmental Quality (see Appendix 1B). Schedules and Sections referenced in the text below refer to the full document, a current copy of which should be obtained from the Oregon DEQ.

Schedule B MONITORING AND REPORTING REQUIREMENTS

1. Minimum Monitoring Requirements

The permittee must evaluate program compliance, the appropriateness of identified best management practices, and progress toward achieving identified measurable goals. Monitoring of storm water discharged from outfalls or monitoring of the quality of receiving water bodies are not requirements of this permit. However, if such monitoring is undertaken as part of a permittee's program evaluation efforts, the requirements described in Schedule F, Section C(1) and C(2) must be followed. The types of monitoring information that must be maintained in such cases are specified in Schedule F, Section C(6).

2. Record Keeping

The permittee must submit its records to the Department upon request. The permittee must retain a description of the Storm Water Management Program (SWMP) required by this permit at a location accessible to the Department. The permittee must make the records subject to the public records law, including the permit application and the description of its SWMP, available to the public if requested to do so in writing. The permittee must also comply with the records retention requirements in Schedule F, Section C(5).

3. Annual Reporting Requirements

The permittee must submit the following to the Department's Water Quality Division using a reporting form approved by the Department:

- a. The status of the permittee's compliance with permit conditions, an assessment of the appropriateness of the identified best management practices (using available guidance from the Department), progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and the measurable goals for each of the minimum control measures;
- b. Results of information collected and analyzed, if any, during the reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP;
- c. A summary of the storm water activities the permittee plans to undertake during the next reporting cycle (including an implementation schedule);
- d. Proposed changes to the permittee's storm water management program, including changes to any BMPs or any identified measurable goals that apply to the program elements;
- e. Information on all new annexed areas and any resulting updates required to the SWMP (if applicable);
- f. Notice that the permittee is, through an inter-local agreement, relying on another government entity to satisfy some of the permittee's permit obligations (if applicable); and
- g. Enforcement actions taken.

Appendix 8C – 40 CFR - Chapter I - Part 122.22 Signatories; and Part 122.35 Responsibilities

The text below are excerpts from 40 CFR - Chapter I- Part 122 of the Federal Register.

40 CFR - CHAPTER I - PART 122

[THIS DATA CURRENT AS OF THE FEDERAL REGISTER DATED JANUARY 23, 2004]

§ 122.22 Signatories to permit applications and reports (for applicability to State programs, see § 123.25).

(a) *Applications.* All permit applications shall be signed as follows:

(1) *For a corporation.* By a responsible corporate officer. For the purpose of this section, 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, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in § 122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under § 122.22(a)(1)(ii) rather than to specific individuals.

(2) *For a partnership or sole proprietorship.* By a general partner or the proprietor, respectively; or

(3) *For a municipality, State, Federal, or other public agency.* By either a principal executive officer or ranking elected official. For purposes of this section, 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 (e.g., Regional Administrators of EPA).

(b) All reports required by permits, and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, 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 in paragraph (a) of this section;

(2) 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,

(3) The written authorization is submitted to the Director.

(c) *Changes to authorization.* If an authorization under paragraph (b) of this section 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 paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d) *Certification.* Any person signing a document under paragraph (a) or (b) of this section 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. (Clean Water Act (33 U.S.C. 1251 *et seq.*), Safe Drinking Water Act (42 U.S.C. 300f *et seq.*), Clean Air Act (42 U.S.C. 7401 *et seq.*), Resource Conservation and Recovery Act (42 U.S.C. 6901 *et seq.*))

[48 FR 14153, Apr. 1, 1983, as amended at 48 FR 39619, Sept. 1, 1983; 49 FR 38047, Sept. 29, 1984; 50 FR 6941, Feb. 19, 1985; 55 FR 48063, Nov. 16, 1990; 65 FR 30907, May 15, 2000]

40 CFR - CHAPTER I - PART 122

[THIS DATA CURRENT AS OF THE FEDERAL REGISTER DATED JANUARY 23, 2004]

§ 122.35 As an operator of a regulated small MS4, may I share the responsibility to implement the minimum control measures with other entities?

(a) You may rely on another entity to satisfy your NPDES permit obligations to implement a minimum control measure if:

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

(2) The particular control measure, or component thereof, is at least as stringent as the corresponding NPDES permit requirement; and

(3) The other entity agrees to implement the control measure on your behalf. In the reports you must submit under § 122.34(g)(3), you must also specify that you rely on another entity to satisfy some of your permit obligations. If you are relying on another governmental entity regulated under section 122 to satisfy all of your permit obligations, including your obligation to file periodic reports required by § 122.34(g)(3), you must note that fact in your NOI, but you are not required to file the periodic reports. You remain responsible for compliance with your permit obligations if the other entity fails to implement the control measure (or component thereof). Therefore, EPA encourages you to enter into a legally binding agreement with that entity if you want to minimize any uncertainty about compliance with your permit.

(b) In some cases, the NPDES permitting authority may recognize, either in your individual NPDES permit or in an NPDES general permit, that another governmental entity is responsible under an NPDES permit for implementing one or more of the minimum control measures for your small MS4 or that the permitting authority itself is responsible. Where the permitting authority does so, you are not required to include such minimum control measure(s) in your storm water management program. (For example, if a State or Tribe is subject to an NPDES permit that requires it to administer a program to control construction site runoff at the State or Tribal level and that program satisfies all of the requirements of § 122.34(b)(4), you could avoid responsibility for the construction measure, but would be responsible for the remaining minimum control measures.) Your permit may be reopened and modified to include the requirement to implement a minimum control measure if the entity fails to implement it.

[64 FR 68846, Dec. 8, 1999]