

DRAFT June 6, 2008



Multnomah County

NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM (NPDES) MUNICIPAL
SEPARATE STORM SEWER SYSTEM (MS4) PERMIT
STORMWATER MANAGEMENT PLAN

Multnomah County
1600 S.E. 190th Avenue
Portland, OR 97233

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Multnomah County Stormwater Management Plan (SWMP)

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Multnomah County Stormwater Management Plan (SWMP)

1.0 Introduction

The Oregon Department of Environmental Quality (DEQ) regulates stormwater from Multnomah County through two separate Phase I National Pollution Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Discharge Permits. These permits are number (No.) 101314 for the areas within the City of Portland permit boundary and No. 108013 for the areas within the Gresham permit boundary. Multnomah County is a co-permittee on both Portland and Gresham's MS4 Permit. In addition, more recently (2005), some of Multnomah County's arterial roads within the cities of Troutdale and Wood Village became subject to a Phase II National Pollution Discharge Elimination System (NPDES) MS4 permit (Permit Nos. 102910 and 102911). As the County implements stormwater related best management practices consistently among these jurisdictions, Multnomah County's roads in Troutdale and Wood Village were brought into and included under the Gresham Phase I NPDES permit. This was done to facilitate a comprehensive stormwater management, reporting and compliance program for these County areas.

This Stormwater Management Plan (SWMP) describes activities related to implementation of the County's MS4 NPDES Permits. The primary component of the SWMP is the list of best management practices (BMPs), which outline the specific tasks that the County will conduct in order to reduce stormwater pollution to the maximum extent practicable (MEP). In addition, the SWMP is required to include a stormwater monitoring plan and benchmarks for addressing Total Maximum Daily Load requirements where applicable.

Although the County operates under two separate MS4 permits, the County has a limited amount of regulatory area under each permit. In addition, a number of activities related to specific permit requirements are either the responsibility of the lead permittee or they are conducted by one of the other co-permittees on behalf of Multnomah County through an Intergovernmental Agreement (IGA). To clarify the County's variable permit responsibilities, Table 1-1 is provided. Table 1-1 indicates the specific regulatory areas of responsibility Multnomah County has under each MS4 permit, outlines each permit requirement, and specifies when and whether Multnomah County is responsible for addressing the requirement.

The remainder of this document includes the following:

Section 2.0 – This section provides details regarding the specific regulatory areas of responsibility.

Section 3.0 – This section includes a description of how the County is addressing the stormwater monitoring and TMDL benchmark requirements.

Section 4.0 – This section includes the stormwater management plan (SWMP) and provides a list of the County's best management practices (BMPs).

Section 5.0 – This section summarizes the rationales for changes in this revision.

2.0 Summary of Multnomah County's Area of Permit Responsibility

As mentioned in Section 1.0, Multnomah County has select regulatory responsibilities for each of their two MS4 NPDES permits. Specifically, within Portland's NPDES permit area, Multnomah County is only responsible for the Willamette River bridges and a few small unincorporated pocket areas within the Portland Urban Services boundary (see Figure 2-1). Under Gresham's NPDES permit, Multnomah County is responsible for approximately twenty-eight miles of arterial roadways in the Cities of Fairview, Troutdale, and Wood Village, and the unincorporated Interlachen residential area that is located between Fairview Lake and Blue Lake (see Figure 2-2). More specific details regarding the County's jurisdiction are provided below.

Portland MS4 Permit No. 101314 (Co-permittees: Port of Portland and Multnomah County)

Multnomah County's activities and associated BMP implementation within the Portland Permit area has significantly diminished over the years. In 1984, the County transferred road and drainage facility maintenance to the City for roads in the unincorporated pocket areas within the Portland Urban Services Boundary through an Intergovernmental Agreement known as the Westside Pocket Area Maintenance Agreement (WPAMA). Of note is the requirement that road and drainage facility maintenance provided by the City is to be provided in a manner consistent with applicable operations and maintenance best management practices as set forth in the City of Portland's Stormwater Management Plan under their MS4 NPDES Permit. (WPAMA, Art. 3, Sec. I, (A))

As a result of the Metro Urban Growth Management Functional Plan the City of Portland and Multnomah County entered into an Urban Planning Area Agreement (UPAA) dated March 5, 1998. The UPAA provided for the coordination and orderly conversion of unincorporated urbanizable land in the County to urban uses and authorized the City to prepare applicable comprehensive plan and implementing ordinances for the County's urban areas. The County adopted the City's applicable land use regulations, comprehensive plan and zoning through County Ordinance 967, which went into effect January 1, 2002. Under the UPAA, the County agreed to transfer to the City responsibility for implementing and administering comprehensive plan and zoning regulations for all County unincorporated areas within the City's Urban Services Boundary.

An important aspect of the UPAA is the expressed responsibility of the City to address, through their comprehensive plan and zoning regulations, erosion control, floodplain review, grading, and stormwater disposal (UPAA III(C)(2)(a)). Further, land use planning review shall be provided by the City in a manner consistent with applicable best management practices as set forth in the City of Portland National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit. The level of review shall be provided at the same level provided by the City to other areas within the City limits. (UPAA III(C)(2)(o))

The County's remaining primary stormwater management activity in the City of Portland's MS4 NPDES permit area is associated with five of the Willamette River bridges. Secondly, the County retains jurisdiction to review development connection or impacts to the right-of-way on the roads that the City maintains and operates.

Gresham MS4 Permit No. 108013 (Co-permittees: City of Fairview and Multnomah County; also includes County roads in Troutdale and Wood Village)

Multnomah County's activities and associated BMP implementation within the Gresham / Fairview Permit area has also significantly diminished over the years. In 1995, the County transferred many of its roads to the City of Gresham, including a majority of the drainage system and outfalls. Effective January 1, 2006, the remaining County roads within the City of Gresham were transferred to the City pursuant to Senate Bill 1096. Road maintenance for the transferred roads is currently performed by the County, however, the roads are under the jurisdiction of, and they are the responsibility of Gresham. The road maintenance is conducted by the County pursuant to an Intergovernmental Agreement.

The County continues to own, operate and maintain approximately 11 miles of arterial roads within the City of Fairview, 13 miles of roadway within Troutdale, and 4 miles of roadway in Wood Village. The County remains responsible for zoning and planning in the unincorporated residential area known as Interlachen.

3.0 Stormwater Monitoring and TMDL Benchmark Development

Monitoring

The MS4 NPDES permits include specific requirements for stormwater monitoring. As shown in Table 1-1, the cities (Portland and Gresham) conduct the monitoring to meet the requirements and the County participates in the monitoring through intergovernmental agreements (IGAs). These IGAs fulfill the County's responsibilities for monitoring under the permits.

Benchmarks

The MS4 NPDES permits also include specific requirements for benchmarks. Specifically, "*progress towards reducing TMDL pollutant loads must be evaluated by the co-permittee through the use of performance measures and pollutant load reduction benchmarks developed and listed in the SWMP.*" TMDLs have been established for the following watersheds in the permit areas for which Multnomah County is a co-permittee.

City of Portland permit area:

- Tualatin River watershed (Fanno Creek),
- Columbia Slough watershed,
- Johnson Creek watershed,
- Tryon Creek watershed,

- Willamette River basin, and
- Springbrook Creek.

City of Gresham permit area:

- Columbia Slough watershed (including Fairview Creek),
- Sandy River watershed, and
- Johnson Creek watershed.

County Roads in Troutdale and Wood Village:

- Columbia Slough watershed, and
- Sandy River watershed.

A benchmark summary is provided for each of the three permit areas listed above as follows:

City of Portland Permit Area

Within the Portland permit area, the County does not have any responsibility for discharges to the Tualatin River, Johnson Creek, Springbrook Creek or Tryon Creek watersheds. While the County does have some pocket unincorporated areas in these watersheds, the City of Portland is responsible for operations and maintenance of roads and related drainage and all planning and zoning in these areas through IGAs with the County. The County does have responsibility for one outfall to the Columbia Slough, located at the Inverness Jail site. This outfall was not included in the City of Portland's benchmark analysis because it does not drain to the MS4 system and only the MS4 area was included in the City's analysis. Regardless of whether this area is included in the MS4, the County has made efforts to reduce discharges from this site. All runoff from this site is treated with a VortechTM structural treatment facility.

In addition, the five County bridges over the Willamette River (Burnside, Broadway, Hawthorne, Morrison and Sellwood Bridges) have some stormwater discharges to the Willamette River, and therefore are subject to wasteload allocations for bacteria. The only potential source of bacteria from the bridge areas would be the holding tanks for the restroom facilities (for bridge operators) that are located on the bridges; the Sellwood Bridge does not have restroom facilities. These holding tanks are inspected and, if necessary, maintained quarterly to prevent the potential for leaks (see BMP ILL-5). In addition, StormFilters for filtering pollutants are included and maintained in the catch basins located on the Burnside and Broadway bridges. Given this information, and the fact that these areas represent a very *de minimus* portion of the Portland permit area, Multnomah County-specific numerical benchmarks have not been developed.

City of Gresham Permit Area

As described above, within the Gresham permit area, the County's responsibility includes approximately 11 miles of arterial roadways in the City of Fairview. The County does not have any MS4-related responsibilities for any areas within the City of Gresham. The County roadways in Fairview are located within the Columbia Slough watershed. The City of Gresham and the City of Fairview have developed benchmarks for discharges to

the Columbia Slough. The County's roadway discharges have been accounted for in the City of Fairview benchmarks. A summary of the City of Fairview benchmarks is provided with their SWMP. These benchmarks are for toxics (with TSS as a surrogate), bacteria, total phosphorus, dissolved lead and BOD. County BMPs are in place to address these pollutants in discharges from County roads in Fairview. These BMPs include the following (for reference, BMP ID's are provided):

- Implementation of an adopt-a-road program. (PI-5)
- Conduct street sweeping. (OM-3)
- Minimize Impacts from County truck hauling practices. (OM-6)
- Implement procedures as outlined in the County's Road Maintenance Operations Manual to conduct roadway maintenance practices in ways that reduce the potential water quality impacts. (OM-1)
- Implement a spill response program. (ILL-1)
- Investigate and eliminate illegal dumping. (ILL-4)
- Consider and, where possible address water quality in new CIP and/or roadway improvement projects. (STR-1)
- Implement erosion controls for County projects. (ILL-3)

Through the adaptive management process the County will continually work to refine and revise these BMPs over time so that they represent the County's reduction of pollutant discharges to the maximum extent practical.

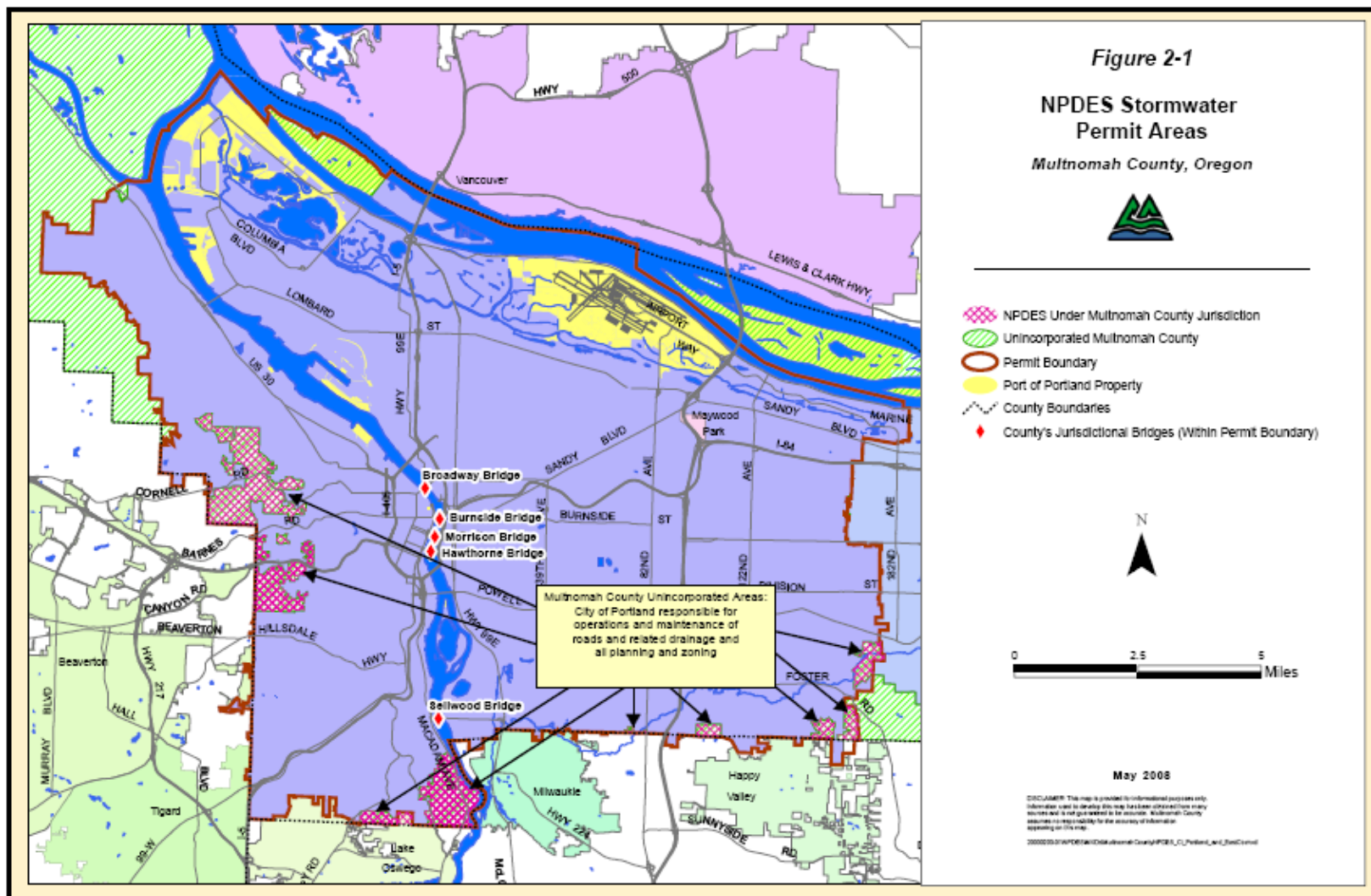
County Roads in Troutdale and Wood Village

As described above, within Troutdale and Wood Village, the County's responsibility includes approximately 17 miles of arterial roadways. These roadways are located within the Columbia Slough and Sandy River watersheds. The cities of Troutdale and Wood Village will be required to develop benchmarks for discharges to these watersheds under their Phase II MS4 NPDES permits. However, benchmark development is not required until the Phase II permits are renewed in 2012. It is assumed that the County's discharges will be accounted for in the Troutdale and Wood Village benchmarks. For the Columbia Slough, benchmarks will be needed for toxics (with TSS as a surrogate), bacteria, total phosphorus, dissolved lead, and BOD. For the Sandy River watershed, benchmarks will be needed for bacteria. As with roads in Fairview, County BMPs are in place to address these discharges from County roads in Troutdale and Wood Village. These BMPs include the following:

- Implementation of an adopt-a-road program. (PI-5)
- Conduct street sweeping. (OM-3)
- Minimize Impacts from County truck hauling practices. (OM-6)
- Implement procedures as outlined in the County's Road Maintenance Operations Manual to conduct roadway maintenance practices in ways that reduce the potential water quality impacts. (OM-1)
- Implement a spill response program. (ILL-1)
- Investigate and eliminate illegal dumping. (ILL-4)

- Consider and, where possible address water quality in new CIP and/or roadway improvement projects. (STR-1)
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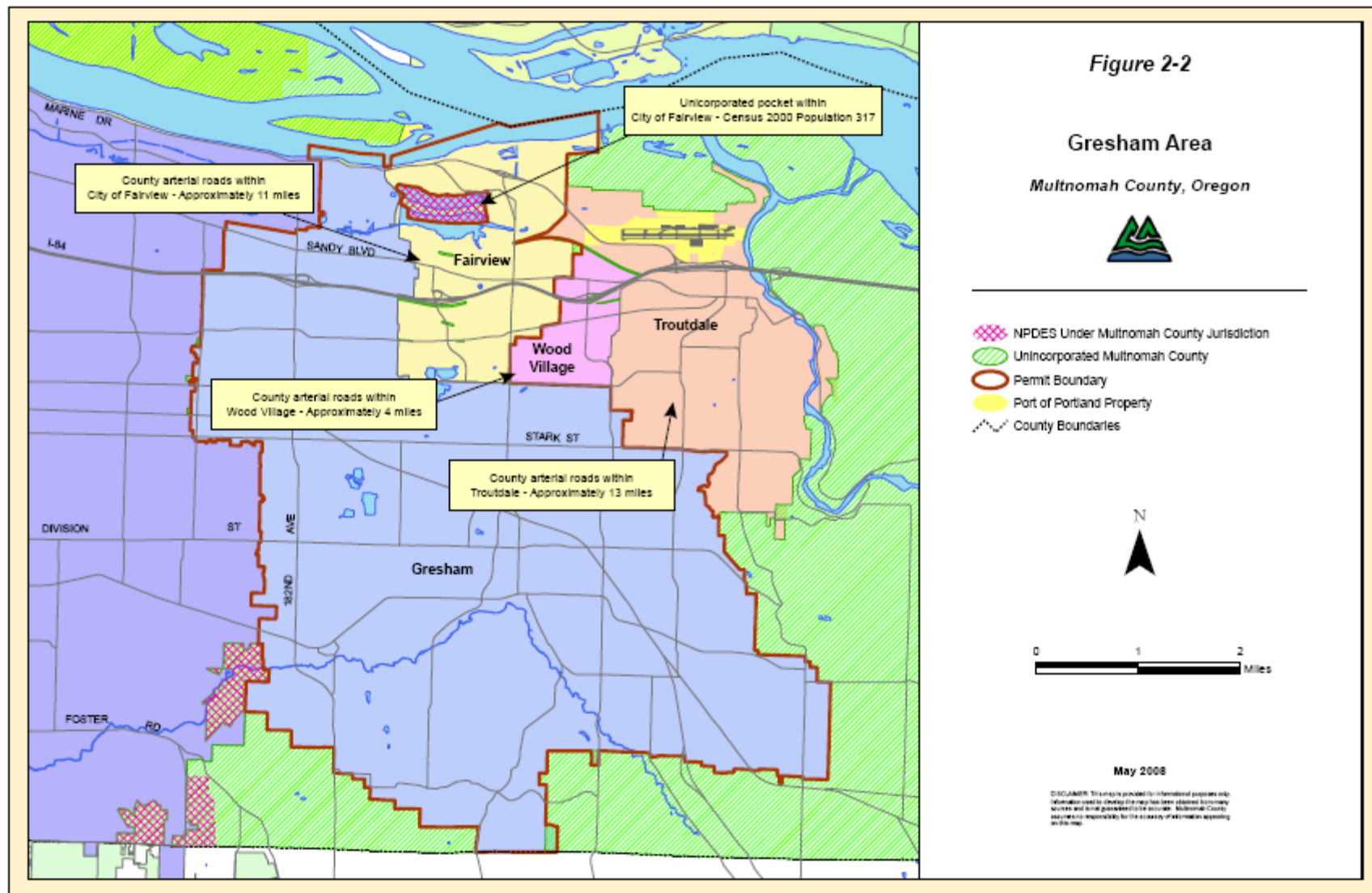


Table 1-1: Multnomah County MS4 NPDES Stormwater Permit Requirements and Responsibilities

NPDES Permit	BMPs	Portland NPDES Permit Areas of Responsibility		Gresham NPDES Permit Areas of Responsibility	
SWMP Requirements		Five Portland Bridges Over the Willamette	Unincorporated Parcels in Multnomah County	Interlachen Residential Development	Arterial Roadway Areas in the Cities of Fairview, Troutdale and Wood Village
Schedule B(1)(a-d) Monitoring Component Requirements					
Assist with monitoring efforts in conjunction with requirements as stated in Tables B-1 and B-2, Schedule B(1)(b)(i-vi), Schedule B(1)(c)(i-ii), and Schedule B(1)(d).		Multnomah County has an IGA with the City of Portland to meet their responsibilities as stated in Table B-1 and under Schedule B(1)(b).		Multnomah County has an IGA with the City of Gresham to meet their responsibilities as stated in Table B-1 and under Schedule B(1)(b).	
Schedule D(2)(c)(i) Implement structural and source control measures for existing and new residential and commercial areas.					
1. Maintenance activities and maintenance schedule for structural controls.	OM-2 Inspect and Maintain the Storm Drainage System OM-8 Minimize Impacts from Ditch Maintenance	County BMPs Apply	The City of Portland conducts maintenance under an IGA.	County BMPs Apply	County BMPs Apply
2. Planning procedures to control pollutant discharges from areas of new and redevelopment.	ND-2 Regulate Stormwater Discharge	The City of Portland is the primary reviewing authority for stormwater quality and quantity.		County BMPs Apply	Private new and redevelopment does not occur within County ROWs.
3. Practices for operating and maintaining streets.	OM-3 Conduct Street Sweeping OM-4 Properly Dispose of Road Waste Material OM-5 Minimize Impacts from Anti-icing Operations OM-7 Minimize Impacts from Right-of-Way and Road Shoulder Maintenance PI-5 Implement the Adopt-A-Road Program	The City of Portland is responsible for sweeping and anti-icing activities.	The City of Portland conducts maintenance activities in these areas.	County BMPs Apply	County BMPs Apply
		Multnomah County cleans the catch basins on the Willamette River Bridges.			
4. Retrofitting flood control facilities.	STR-1 Address WQ With New Capital or Roadway Improvement Projects STR-2 Retrofit Existing Facilities for Water Quality Benefit PI-7 Provide Opportunities for Public Involvement During the CIP Process	County BMPs Apply	The City of Portland has planning and zoning authority in these areas.	County BMPs Apply	County BMPs Apply

NPDES Permit SWMP Requirements	BMPs	Portland NPDES Permit Areas of Responsibility		Gresham NPDES Permit Areas of Responsibility	
		Five Portland Bridges Over the Willamette	Unincorporated Parcels in Multnomah County	Interlachen Residential Development	Arterial Roadway Areas in the Cities of Fairview, Troutdale and Wood Village
			Multnomah County retains authority to initiate capital improvements for County roads.		
5. Monitor landfills.	Not Applicable	There are no landfills in these areas.		Although there are no landfills within the existing Multnomah County jurisdictional area, the City of Gresham is currently evaluating an existing closed landfill that was previously on Multnomah County property. The County is cost-sharing in this effort.	
6. Program to reduce pesticides/herbicides/fertilizers.	NS-1 Conduct Vegetation Management Activities NS-2 Specify Native Vegetation in ROW and Permitted Projects PI-1 Participate in Regional Public Education Efforts PI-4 Conduct Training and Education for County Personnel	County BMPs Apply	The City of Portland conducts vegetation management activities as part of the IGAs.	County BMPs Apply	County BMPs Apply
Schedule D(2)(c)(ii) Detect and remove illicit discharges and improper disposals into the storm sewer.					
1. Program, including inspections to eliminate illicit discharges.	ILL-5 Identify and Investigate Sanitary Discharges to the Storm Sewer	County BMPs Apply	County BMPs Apply	County BMPs Apply	County BMPs Apply
2. On-going field screening program.	ILL-5 Identify and Investigate Sanitary Discharges to the Storm Sewer	The Cities of Gresham and Portland conduct field-screening efforts that encompass Multnomah County drainages. The Cities of Troutdale and Wood Village will also be investigating the MS4 as a result of their Phase II permit. Their efforts will also encompass Multnomah County.			
3. Field screening follow-up investigations.	ILL-5 Identify and Investigate Sanitary Discharges to the Storm Sewer	County BMPs Apply	County BMPs Apply	County BMPs Apply	County BMPs Apply
4. Spill prevention and response.	OM-6 Minimize Impacts from County Truck Hauling Practices ILL-1 Implement Spill Response Program ILL-2 Address Spills from Private Truck Haulers PI-4 Conduct Training and Education for County Personnel	County BMPs Apply	County BMPs Apply	County BMPs Apply	County BMPs Apply
5. Promote public reporting of illicit discharges.	PI-3 Distribute Public Education Information Regarding Stormwater PI-8 Facilitate Public Reporting of Illicit Discharges	County BMPs Apply	County BMPs Apply	County BMPs Apply	County BMPs Apply

NPDES Permit SWMP Requirements	BMPs	Portland NPDES Permit Areas of Responsibility		Gresham NPDES Permit Areas of Responsibility	
		Five Portland Bridges Over the Willamette	Unincorporated Parcels in Multnomah County	Interlachen Residential Development	Arterial Roadway Areas in the Cities of Fairview, Troutdale and Wood Village
6. Public education re: proper disposal of toxic materials.	PI-6 Maintain Signage to Protect Water Quality	County BMPs Apply	County BMPs Apply	County BMPs Apply	County BMPs Apply
7. Control infiltration from sanitary sewers.	ILL-5 Identify and Investigate Sanitary Discharges to the Storm Sewer	County BMPs Apply	The cities have jurisdiction over sanitary discharges in these areas.		
Schedule D(2)(c)(iii) Implement a program to monitor and control pollutants in stormwater associated with industrial facilities.					
1. Industrial inspection program.		The County does not have jurisdiction over any industrial discharges within the MS4 NPDES permit areas.			
2. Industrial monitoring program.					
Schedule D(2)(c)(iv) Implement and maintain BMPs to reduce pollutants in runoff from construction sites.					
1. Procedures for site planning to address water quality.	ND-1 Require Erosion Control for Private Development	The City of Portland has planning authority for these areas.		County BMPs Apply	The cities have site planning authority for these areas.
2. Requirements for construction site BMPs.	ND-1 Require Erosion Control for Private Development	Multnomah County requires specific construction site BMPs for private development areas (Interlachen) and for public roadway and right-of-way improvement projects.			
3. Procedures for inspection and enforcement.	ND-1 Require Erosion Control for Private Development ILL-3 Require Erosion and Pollution Controls for Public Projects	County BMPs Apply	County BMPs Apply	County BMPs Apply	County BMPs Apply
4. Education/training for construction site operators.	ILL-3 Require Erosion and Pollution Controls for Public Projects PI-4 Conduct Training and Education for County Personnel	County BMPs Apply	County BMPs Apply	County BMPs Apply	County BMPs Apply

Other BMPs:
PM-1 Stormwater Program Management, PM-2 Assess and Evaluate the Stormwater BMP Program, PM-3 Maintain Environmental Management Database, STR-3 Inventory and Map the County Storm Sewer System,
PI-2 Participate in Public Meetings
Key:
Gray shaded indicates that Multnomah County is not responsible for this permit requirement for a particular area.
White indicates Multnomah County is responsible for this permit requirement for a particular area. The BMPs listed in column 2 for the permit requirement apply to these areas.

Section 4.0 Stormwater Management Plan

The Multnomah County stormwater management plan (SWMP) is provided in the following pages. It is made up of a series of best management practices (BMPs) that are grouped into the following seven categories:

- Public involvement and education,
- Operations and maintenance,
- Illicit discharge detection and elimination,
- Natural systems,
- New development,
- Structural controls, and
- Program management.

The County complies with NPDES permit requirements through the implementation of the above seven categories of BMPs as shown in Table 1-1 (Section 1.0). There are fourteen separate functional staff groups that are responsible for the implementation of these BMPs. These fourteen groups are as follows:

1. Program Management
2. Public Affairs
3. Bridge Engineering
4. Bridge Maintenance
5. Land Use Planning
6. Transportation Planning
7. Right-of-Way Permits
8. Code Compliance
9. Emergency Response
10. Road Maintenance
11. Road Engineering
12. Sustainability
13. Nuisance Code
14. Asset Management

For each BMP, a fact sheet is provided in the SWMP which includes the portion of the permit area where the BMP applies, which functional staff group or groups are responsible for BMP implementation, a description of the BMP, BMP implementation tasks, measurable goals, and tracking measures. Measurable goals indicate the County commitments related to a specific BMP and tracking measures include the information that will be provided in the annual reports to track BMP implementation status.

PI – Public Involvement and Education**Overall Goal**

The Public Involvement and Education BMPs are designed to inform and educate the public about the causes of stormwater pollution, the effects on local streams and rivers, and the need for stormwater management, and to encourage active participation in pollution reduction efforts.

As a result of increased public involvement and education efforts since the first permit term, the BMPs were separated by actual practice area into eight different descriptions to better respond to reporting requirements.

Public Involvement and Education BMPs

BMPs described in more detail on the following pages include the following:

BMP ID	BMP Description	Area of BMP Application			
		Portland Permit Area		Gresham Permit Area	
		Willamette River Bridges	Unincorporated Multnomah County	Interlachen Residential Area	County Arterials in Fairview, Troutdale and Wood Village
PI-1	Participate in Regional Public Education Efforts	✓	✓	✓	✓
PI-2	Participate in Public Meetings	✓	✓	✓	✓
PI-3	Distribute Public Education Information Regarding Stormwater	✓	✓	✓	✓
PI-4	Conduct Training and Education for County Personnel	✓	✓	✓	✓
PI-5	Implement the Adopt-a-Road Program			✓	✓
PI-6	Maintain Signage to Protect Water Quality	✓	✓	✓	✓
PI-7	Provide Opportunities for Public Involvement During the CIP Process	✓	✓	✓	✓
PI-8	Facilitate Public Reporting of Illicit Discharges	✓	✓	✓	✓

Regulations Addressed by BMPs

See Table 1-1

PI-1	Participate in Regional Public Education Efforts
Application area	County-wide
Responsibility	Public Affairs
Description	Participate with regional entities and cities in coordinating new and existing efforts to educate and inform the public about stormwater pollution problems, and to involve the public in developing stormwater pollution prevention programs. The County will provide support for the various public involvement and education activities provided by the Regional Coalition of Clean Rivers and Streams (RCCRS). The County participates in the RCCRS by attending meetings and contributing financially to annual campaigns.
Tasks	<ol style="list-style-type: none"> 1. Provide County representative to attend the RCCRS meetings. 2. Plan and Implement public education campaign promoting behaviors that improve water quality.
Measurable Goal	Continue to participate in the RCCRS.
Tracking measure	Provide narrative to describe activities, accomplishments, and level of effort.

PI-2	Participate in Public Meetings
Application area	County-wide
Responsibility	Program Management
Description	Educate the public about the County's role in protecting stormwater quality and the opportunities for public participation in pollution prevention as well as public involvement and education on stormwater pollution problems by attending public meetings. County staff attends a variety of public meetings including those held by watershed councils depending on staff availability. Each of these groups meets monthly throughout the year with special ad hoc committee work occasionally required.
Tasks	1. Attend public meetings related to water quality.
Measurable Goal	Continue to participate in watershed councils.
Tracking measure	Narrative describing outcomes and level of effort associated with public meetings.

PI-3	Distribute Public Education Information Regarding Stormwater
Application area	County-wide
Responsibility	Program Management
Description	Promote public education and involvement in stormwater pollution prevention efforts through distribution of brochures and educational materials regarding water quality and watershed health at County offices and public water quality meetings and maintenance of County Environmental Compliance Program website. The County distributes brochures and educational materials from local watershed councils, Soil & Water Conservation Districts, and utilities at the Land Use Planning and Survey Permit Office, which is an area of public activity. Educational materials are also distributed at other County offices and at public events.
Tasks	<ol style="list-style-type: none"> 1. Make brochures and other educational materials available to the public and County staff. 2. Ensure that public education materials are current and cover relevant topics.
Measurable Goal	Ensure availability of current materials at meetings, front counters and online.
Tracking measure	<p>List publications.</p> <p>Confirm availability of materials.</p>

PI-4	Conduct Training and Education for County Personnel
Application area	County-wide
Responsibility	Program Management, Road Maintenance, Bridge Maintenance, Code Compliance, Land Use Planning, Emergency Response, Bridge Engineering, Road Engineering
Description	Train and educate appropriate Multnomah County personnel about impacts of on-the-job activities to the MS4, and how to minimize negative impacts to receiving streams. Topics include erosion control, stormwater maintenance activities, inspection practices, construction BMPs, and spill response. Training will also include measures to minimize impacts from regular road maintenance activities as covered in the County's Road Maintenance & Operations Manual (RMOM). In addition, educate the County staff about the public's role in protecting water quality on a watershed-wide basis.
Tasks	<ol style="list-style-type: none"> 1. Send a representative(s) to water quality conferences when feasible. Share information learned in training with other staff. 2. Train volunteers, maintenance and operations crews, as well as inspectors on impacts of activities on water quality and MS4 in addition to new approaches to water quality protection and proper reporting procedures.
Measurable Goal	Conduct a minimum of one staff training session a year.
Tracking measure	Track training events and attendance at conferences.

PI-5	Implement the Adopt-a-Road Program
Application area	Gresham permit area only (including Fairview, Troutdale and Wood Village).
Responsibility	Road Maintenance
Description	Continue to implement the Multnomah County Adopt-A-Road program to promote public awareness of litter control and impacts to roads and waterways. Increase use of volunteers and track work by volunteers, including County inmate work crews. The Adopt-A-Road program mainly focuses on picking up litter and trimming vegetation. The County uses Adopt-A-Road videos to train participants in the program. Interested groups volunteer time to conduct the maintenance activities. Following a maintenance event, inmate work crews pick up the bags of litter and trimmings collected by volunteer groups.
Tasks	<ol style="list-style-type: none"> 1. Develop a strategy to promote the adopt-a-road program. 2. Track road segments where volunteer roadside litter removal and clean-up is performed through participation in County Adopt-A-Road programs. 3. Provide program support (e.g., coordinating volunteers and providing equipment).
Measurable Goal	Continue to advertise and support the adopt-a-road program as interest exists.
Tracking measure	Report on adopt-a-road activities.

PI-6	Maintain Signage to Protect Water Quality
Application area	County-wide
Responsibility	Road Maintenance
Description	Participate in storm drain marking and other signage programs to promote public awareness of the importance of keeping pollutants out of storm drains as opportunities arise. Gresham, Fairview, and Portland currently conduct storm drain marking (e.g., “Dump No Waste, Drains to Stream”). A bi-lingual marker was developed by County staff for application to County Roads. Currently, all catchbasins in the permit area are marked and all stream crossings have signs.
Tasks	<ol style="list-style-type: none"> 1. Determine whether any areas need to be marked or re-marked and provide staff and materials to carry this out. 2. Maintain signs in right-of-way promoting watershed awareness, as requested by watershed councils.
Measurable Goal	Inspect drain markers and signage annually at all catchbasins and stream crossings in the permit area.
Tracking measure	Track replacement of signage.

PI-7	Provide Opportunities for Public Involvement During the CIP Process
Application area	County-wide
Responsibility	Transportation Planning
Description	Ensure public involvement during two-year update process for Capital Improvement Plan and Program that addresses stormwater quality impacts and issues. Identify NPDES drainage issues and remedies on Capital Improvement Plan project scope sheets. Include in project atlas during public review process. The Capital Improvement Program (CIP) identifies transportation projects that the County needs to build to provide a balanced and efficient transportation system. Public meetings are held throughout the CIP update process.
Tasks	1. Involve the public in the process of updating the Capital Improvement Plan and Program (every two years) and in evaluating the stormwater quality impacts and issues associated with the program.
Measurable Goal	Ensure opportunities for public participation in the CIP update process through public meetings.
Tracking measure	Track public meetings and other public involvement activities in the CIP update process.

PI-8	Facilitate Public Reporting of Illicit Discharges
Application area	County-wide
Responsibility	Road Maintenance, Bridge Maintenance, Right-of-Way Permits, Emergency Response, Nuisance Code
Description	Facilitate efforts to report illegal dumping of pollutants, trash, or illegal fill (dirt/soil). The County utilizes its nuisance ordinance (MCC 7.20) to encourage the public to report incidents of illegal dumping. The County Nuisance Division web page provides the process and telephone number to report illegal dumping. Nuisance, as part of this program investigates, enforces and assesses penalties. All of the co-permittees, including the County, work with, and/or contribute money to, volunteer groups such as SOLV to address littering and dumping problems in their jurisdictions. Citizens may call the County Transportation Offices for illegal dumping on a County road or in the right-of-way of any County road. Signs are currently posted in all known problem areas.
Tasks	1. Annually review field logs and public reports regarding litter and illegal dumping. Determine where signs need to be posted regarding illegal dumping and place them.
Measurable Goal	Install and maintain signage in all known areas that are problematic in terms of dumping.
Tracking measure	Report on the addition of any new signage.

OM - Operations and Maintenance

Overall Goal

These BMPs are designed for the implementation of operations and maintenance practices for public streets, bridges, storm sewers, and other facilities to reduce pollutants in discharges from the municipal separate storm sewer system.

Within Multnomah County's portion of the Portland and Gresham permit areas, and the unincorporated County area, the County's Transportation Division of the Department of Community Services (DCS) is responsible for operating and maintaining bridges, roads, and associated drainage facilities (except for the unincorporated pocket areas within the Portland permit which are maintained by Portland under an Inter-governmental agreement). The Transportation Division is also responsible for maintaining five Willamette River bridges within the permit area (Hawthorne, Morrison, Burnside, Broadway and Sellwood Bridges).

Operations and Maintenance BMPs

BMPs described in more detail on the following pages include the following:

BMP ID	BMP Description	Area of BMP Application			
		Portland Permit Area		Gresham Permit Area	
		Willamette River Bridges	Unincorporated Multnomah County	Interlachen Residential Area	County Arterials in Fairview, Troutdale and Wood Village
OM-1	Review the RMOM for Potential Updates to Address Water Quality	✓		✓	✓
OM-2	Inspect and Maintain the Storm Drainage System	✓		✓	✓
OM-3	Conduct Street Sweeping			✓	✓
OM-4	Properly Dispose of Road Waste Material	✓		✓	✓
OM-5	Minimize Impacts from Anti-icing Operations			✓	✓
OM-6	Minimize Impacts from County Truck Hauling Practices	✓	✓	✓	✓
OM-7	Minimize Impacts From Right-of-Way and Road Shoulder Maintenance			✓	✓
OM-8	Minimize Impacts from Ditch Maintenance			✓	✓

Regulations Addressed by BMPs

See Table 1-1

OM-1	Review the RMOM for Potential Updates to Address Water Quality
Application area	County-wide except for the unincorporated parcels in Multnomah County where the City of Portland conducts maintenance.
Responsibility	Program Management, Road Maintenance
Description	<p>The goal of this BMP is to ensure that road maintenance practices are conducted in ways that minimize the impact to water quality.</p> <p>The County Road Maintenance and Operation Manual (RMOM) is a reference manual with guidance on vegetation management, equipment and material transport, emergency maintenance, and roadway and drainage maintenance. The manual was developed to comply with ODOT's Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices (2004), and will serve as the core of the County's ESA 4(d) submittal.</p> <p>For this BMP the County will conduct annual reviews of the manual to ensure that it is current with respect to addressing water quality to the extent feasible.</p>
Tasks	<ol style="list-style-type: none"> 1. Review the Road Maintenance Operations Manual annually. 2. When manual revisions are made, conduct refresher staff training as provided for under BMP PI-4.
Measurable Goal	Ensure that the RMOM is current with respect to addressing water quality.
Tracking measure	Describe updates to the RMOM when applicable.

OM-2	Inspect and Maintain the Storm Drainage System
Application area	County-wide except for the unincorporated parcels in Multnomah County where the City of Portland conducts maintenance
Responsibility	Road Maintenance, Bridge Maintenance
Description	<p>The goal of this BMP is to ensure that inlets, catch basins, and stormwater conveyance systems are maintained in a manner that reduces pollutants to the maximum extent practicable and to continue to review and revise operations and maintenance procedures as appropriate. Routine cleaning of these basins prevents this sediment from entering main stormwater distribution facilities. Cleaning occurs manually or by Vactor™ two times per year and more often if sediment and debris deposits are heavy.</p> <p>Catch basins on the Willamette River Bridges are serviced the same as described above, except for the catch basin filters installed on the Burnside and Broadway Bridges. The filter cartridges are replaced according to manufacturer suggestions.</p>
Tasks	<ol style="list-style-type: none"> 1. Follow written procedures from the Road Maintenance and Operations Manual (RMOM) for routine inspection and maintenance of catch basins. 2. Inspect the entire stormwater conveyance system on an annual basis. 3. Utilize the record keeping system and database to record findings and follow-up work completed by field crews.
Measurable Goal	Clean all catchbasins a minimum of 2 times per year.
Tracking measure	Frequency of catchbasin cleaning and percent full at time of cleaning.

OM-3	Conduct Street Sweeping
Application area	Gresham Permit Area and the Sellwood Bridge
Responsibility	Road Maintenance
Description	<p>The street sweeping program for County roads reduces materials on the roadway and impacts to the stormwater sewer system. The County will continue to review and revise the program and schedule and make improvements as appropriate.</p> <p>Within the Gresham permit area, the County's Transportation Division of the Department of Community Services (DCS) owns, operates and maintains approximately 28 center lane miles of paved public roads. Runoff from these roadways drains as surface flow to roadside ditches, into inlets in sumps, or through piped stormwater system conveyances to outfalls. Street sweeping occurs on curbed streets in accordance with the schedule in the Multnomah County Road Maintenance Operations Manual (RMOM), a minimum of 20 times per year (generally 3 to 4 times per month) for most roadways. All efforts are made to minimize flushing.</p> <p>The City of Portland sweeps the Willamette River Bridges, except the Sellwood Bridge. The County sweeps the Sellwood Bridge typically once a month, or as needed.</p>
Tasks	<ol style="list-style-type: none"> 1. Follow written procedures in the Multnomah County RMOM for inspection and maintenance of streets as part of the street sweeping program for protecting water quality. 2. Track street sweeping efforts to record the sweeping frequency.
Measurable Goal	Sweep all curbed road segments 20 times per year unless catch basin cleaning records indicate that less frequent sweeping is appropriate.
Tracking measure	Track the frequency of sweeping and reference catchbasin conditions from OM-2.

OM-4	Properly Dispose of Road Waste Material
Application area	County-wide except for unincorporated parcels in Multnomah County where the City of Portland conducts maintenance activities.
Responsibility	Road Maintenance, Emergency Response
Description	<p>The objective of the road waste disposal operations for County roads is to identify and implement practices for disposal of road waste materials that protect water quality. Materials removed from the drainage system are collected by the County road crews on a regular basis. These wastes are properly decanted or stockpiled at Vance Pit, a County-owned facility, then disposed by a private contractor. The facility, however, continues to be compromised due to vandalism and new disposal methods are desired.</p> <p>The County will continue to investigate alternatives to decant and dispose of road waste materials including the feasibility of a decant facility upgrade for County waste materials, partnerships with neighboring jurisdictions, or contracts with other private waste handlers.</p>
Tasks	<ol style="list-style-type: none"> 1. Identify alternatives for a new decant facility to be used for the dewatering of road wastes, or upgrades to the existing facility. 2. As a result of Task 2, include any new road waste disposal procedures in the County's Road Maintenance and Operations Manual (RMOM). 3. Conduct sampling of road wastes and provide reports to the landfill facility, as required by the facility.
Measurable Goal	Identify appropriate road waste disposal options by the end of the first permit year.
Tracking measure	Describe facility upgrades or selected disposal options and report on updates to the County's RMOM.

OM-5	Minimize impacts from Anti-icing Operations
Application area	Gresham Permit Area only
Responsibility	Road Maintenance
Description	<p>The overall goal of this BMP is to reduce effects of roadway anti-icing activities on water quality by proper sand collection methods and evaluation of chemical anti-icing applications.</p> <p>During winter sanding operations, the County applies washed rock (less than 3/8" dia.) to roadways. Clean up operations begin as soon as practicable by Multnomah County road crews. Removed sanding material is stockpiled at Multnomah County's Vance Pit for recycling. The material is recycled by rewashing or screening out road debris. If material is free of road debris, it can be reused.</p> <p>Testing was performed during the first permit term on the feasibility of alternative anti-icing materials such as calcium magnesium acetate (CMA). Test results showed that CMA is environmentally safe and better than sand, but more expensive. Multnomah County and the City of Portland currently uses CMA at select locations, such as the Willamette Bridges as a replacement for ethylene glycol, however ODOT continues to use glycol on their bridges in the permit area in extreme ice conditions. The County prohibits the use of salt or glycol on County roadways.</p>
Tasks	<ol style="list-style-type: none"> 1. Continue to follow the County's Road Maintenance and Operations Manual procedures for the application, collection, and washing of sanding materials applied to roadways. 2. Continue to research alternative anti-icing methods.
Measurable Goal	Conduct street sweeping to recover sanding materials within one week after anti-icing is no longer necessary.
Tracking measure	Report on anti-icing applications and material recovery.

OM-6	Minimize impacts from County Truck Hauling Practices
Application area	County-wide
Responsibility	Road Maintenance
Description	<p>The goal of this BMP is to control discharges from truck hauling activities to the extent that they are impacting County right-of-way (ROW) and/or the Municipal Separate Storm Sewer System (MS4).</p> <p>County trucks haul materials during routine road maintenance activities. Discharges are controlled to the maximum extent practicable. Maintenance crews are trained to avoid any discharge from truck hauling activities. Road Maintenance Operations Manual (RMOM) maintenance practices specify that all equipment operators do an equipment check when hauling material.</p> <p>Release agents are used in dump trucks, for example, during road paving repair operations. County road crews currently use an environmentally friendly non-stick/asphalt release agent to allow paving material to slide out of a dump truck.</p> <p>For this BMP, the County will review County truck hauling practices with field crews annually; recommend revisions (if necessary) to limit occurrence of leaks, spills, or other releases; and, continue to test and evaluate asphalt release agents for truck and tool cleanup, which use “environmentally-friendly” products.</p>
Tasks	<ol style="list-style-type: none"> 1. Follow the RMOM procedures for conducting equipment checks when hauling materials. 2. Continue to test and evaluate asphalt release agents currently used for truck and tool cleanup which use “environmentally-friendly” products. 3. Recommend revisions (if necessary) to limit occurrence of leaks, spills, or other releases. Revise operations and the RMOM manual as necessary to reduce potential pollutants.

Measurable Goal	See measurable goal for OM-1.
Tracking measure	See tracking measure for OM-1.

OM-7	Minimize Impacts from Right-of-Way and Road Shoulder Maintenance
Application area	County-wide except for the unincorporated parcels in Multnomah County where the City of Portland conducts maintenance.
Responsibility	Road Maintenance
Description	<p>The purpose of this BMP is to control and reduce the amount of sediments discharged to the receiving waters via the right-of-way. Sediments attract and adhere to other pollutants (heavy metals, oil/grease) and increased turbidity/sedimentation on channel bottoms impairs water quality and fish habitat.</p> <p>The Transportation Division of Multnomah County performs routine maintenance upon most shoulder, ditches, and rights-of-way adjacent to its road system. The maintenance of vegetation within this right-of-way is carried out in an integrated manner. Methods include machine mowing and brushing, hand clearing, shoulder re-grading, mechanical ditchline cleaning, and herbicide application as necessary.</p> <p>For this BMP, the County will maintain right-of-way and road shoulders in ways that avoid and prevent future adverse water quality impacts; and continue review of current maintenance practices.</p>
Tasks	<ol style="list-style-type: none"> 1. Conduct right-of-way and shoulder maintenance activities as specified in RMOM. 2. Review RMOM procedures with new and existing staff.
Measurable Goal	See measurable goal for OM-1.
Tracking measure	See tracking measure for OM-1.

OM-8	Minimize Impacts from Ditch Maintenance
Application area	County-wide with the exception of unincorporated parcels in Multnomah County where the City of Portland conducts maintenance.
Responsibility	Road Maintenance
Description	<p>The goal of this BMP is to control/reduce amount of sediments and pollutants discharged to the receiving waters. Sediments attract and adhere to other pollutants (heavy metals, oil/grease) and increased turbidity/sedimentation on channel bottoms impairs water quality and fish habitat.</p> <p>Multnomah County's natural ditch lines serve safety and environmental functions: they receive, collect, absorb and transmit stormwater from the road surface, road sub-grade and adjoining private properties; they provide sedimentation and pollutant/nutrient filtering; and they also may carry year round streams or seasonal springs to other receiving water bodies.</p> <p>Various mechanical methods of ditch maintenance are used, including vacuum truck (Vactor™) backhoes, excavators, front-end loaders, road graders and mowers. Routine ditch line cleaning begins each fall by addressing conditions that reduce the carrying capacity of the roadside drainage system. The timing and frequency of such activities, as well as the type of equipment used to remove debris can affect the likelihood of debris being released to the stormwater system and also the integrity of the ditch surface. Ditch maintenance activities are outlined in the Road Maintenance Operations Manual (RMOM).</p> <p>For this BMP, the County will conduct ditch maintenance activities; review the frequency and timing of ditch cleaning in areas where sediment and/or debris tend to accumulate; determine if the frequency and timing of current ditch maintenance practices allows for reduction of pollutants and minimizes the impact on ditch surface (if not, recommend and implement improved frequencies, timing, and/or type of equipment to minimize damage to ditch bottom); and use records to determine where improvements are needed to reduce discharges to ditches.</p>

Tasks	<ol style="list-style-type: none">1. Conduct ditch maintenance activities as specified in the RMOM.2. Review RMOM procedures with new and existing staff.
Measurable Goal	See measurable goal for OM-1.
Tracking measure	See tracking measure for OM-1.

ILL – Illicit Discharge

Overall Goal

To prevent, identify, investigate, and if appropriate, control/eliminate any non-stormwater discharges into the municipal separate storm sewer system.

Illicit Discharge BMPs

BMPs described in more detail on the following pages include the following:

BMP ID	BMP Description	Area of BMP Application			
		Portland Permit Area		Gresham Permit Area	
		Willamette River Bridges	Unincorporated Multnomah County	Interlachen Residential Area	County Arterials in Fairview, Troutdale and Wood Village
ILL-1	Implement the Spill Response Program	✓	✓	✓	✓
ILL-2	Address Spills from Private Truck Haulers	✓	✓	✓	✓
ILL-3	Require Erosion and Pollution Controls for Public Projects	✓	✓	✓	✓
ILL-4	Identify and Investigate Illegal Dumping	✓	✓	✓	✓
ILL-5	Identify and Investigate Sanitary Discharges to the Storm Sewer	✓			

Regulations Addressed by BMPs

See Table 1-1

ILL-1	Implement the Spill Response Program
Application area	County-wide
Responsibility	Emergency Response, Road Maintenance, Bridge Maintenance
Description	<p>The goals of this BMP are to prevent spills to the maximum extent practicable, and respond to accidental non-stormwater discharges promptly to reduce the frequency and overall impact of spills to the stormwater system.</p> <p>The County Road Maintenance Operations Manual (RMOM) outlines Emergency Response procedures (per the Multnomah County Emergency Spill Response Plan) to address potential runoff of fine materials through waste streams and ditches. Depending on the magnitude of the spill occurring on County property, County personnel will either initially respond (and utilize appropriate clean up measures for minor spills) or coordinate with National Response Corporation (NRC) Environmental Services or RMCAT Environmental Services for hazardous material spill clean up. Spills occurring on County roads are addressed through HAZMAT units and fire departments. Spills occurring in the unincorporated areas are addressed through the local fire department.</p> <p>For this BMP, the County will continue to manage the spill prevention and response program that reduces the frequency and impact of accidental non-stormwater discharges to the MS4; revise the County Road Maintenance Operation Manual (RMOM), if necessary, to include clear instructions for field personnel in the event of a spill; improve the use of absorbent materials for quick response to minor spills of oil or fluid; keep records of incidents and response; and continue to coordinate response to appropriate incidents with cities.</p>

Tasks	<ol style="list-style-type: none">1. Continue to follow and implement the Multnomah County Spill Response Plan.2. Track and record spills and information regarding spills as they occur.3. Maintain agreements with contractors for spill response.4. Participate in the regional Stormwater Spill Committee lead by the City of Portland Bureau of Environmental Services.
Measurable Goal	Conduct spill response procedures when spills are reported.
Tracking measure	Track the spills that occur and the outcome of the spills.

ILL-2	Address Spills from Private Truck Haulers
Application area	County-wide
Responsibility	Right-of-Way Permits, Road Engineering, Bridge Engineering
Description	<p>The goal of this BMP is to control discharges from private truck hauling activities to the extent that they are impacting the County right-of-way.</p> <p>Problems may arise with haulers working on private property and hauling materials onto the County's right-of-way from those properties or city streets. These activities do not require a County permit. The County will respond to leaks or spills when a complaint is received, or if a County road maintenance crew observes problems.</p> <p>For contract work or work requiring a County permit (e.g., County road or bridge projects or in the County right-of-way), the County adds standard language to the contract or permit to inform the contractor of the state requirements prohibiting leaking, spilling, etc. The language is the same as that used by ODOT (00280 ODOT requirements for erosion and sediment control).</p> <p>Trucks in excess of statute-established weight limit (80,000 lbs) require overweight and over-dimension permits to travel over Multnomah County roads. This permit requires the operator to have a spill prevention, contingency, and countermeasure plan.</p> <p>The County's Transportation Division responds to complaints regarding nonhazardous spills and notifies local fire departments and DEQ depending on the type and severity of the spill. Local fire departments and DEQ respond to hazardous spills; however, records show that the majority of spills are nonhazardous.</p> <p>ORS 368.251 et seq. gives the County legal authority to address these incidents. A county road official may order an abatement of a road hazard as authorized by ORS 368.261.</p> <p>For this BMP, the County will review reporting of and action for noticeable private truck hauling practices causing discharges to County roads and the stormwater conveyance system; and work with</p>

	County inspection officers for immediate response.
Tasks	1. Report to the appropriate agency of the private truck hauling practices impacting the County right-of-way and the stormwater conveyance system.
Measurable Goal	Contact all private haulers when spills are observed.
Tracking measure	Track the spills observed and the outcome.

ILL-3	Require Erosion and Pollution Controls for Public Projects
Application area	County-wide
Responsibility	Right-of-Way Permits, Road Engineering, Bridge Engineering
Description	<p>The goals of this BMP are to enforce erosion control measures to reduce sediment discharges to County ROW; monitor to ensure control over regulated contractors' activities; and, continue to require those responsible for damage and water quality pollution due to construction activities to pay the clean-up costs. This BMP is intended to apply to contractors hired to construct County projects, including road and bridge repair and construction, and associated projects.</p> <p>Currently, erosion control measures are required in contract specifications, construction drawings, and/or permits. The County initiates pre-construction meetings to disseminate information about requirements to prevent damages associated with construction projects, and County inspectors monitor the contractors' activities. The County requires a general project bond when the project agreement is executed. This bond ensures that there are funds available in the event that the contractor/owner's activities create erosion and sedimentation damage.</p> <p>The County establishes special provisions and specifications in individual project agreements/ROW permits to address erosion control. Current requirements include placing filters in catch basins, monitoring catch basins, following standards for construction of temporary access roads, and a \$1,000 cash deposit.</p> <p>For this BMP, the County will implement requirements to control discharges from construction sites to ensure that construction practices do not release sediment and contaminants onto roadways or open space where they may be washed into storm drains or waterways; continue to require erosion control measures in contract specifications; continue to require cash deposits, performance-payment bonds, final inspections and other mechanisms to ensure compliance with permit requirements; review erosion control permit requirements with contractors during projects; inspect and review Erosion and Sediment Control Plans to ensure control of discharges; and, continue pre-construction meetings to disseminate information</p>

	about requirements to prevent damages during construction projects.
Tasks	<ol style="list-style-type: none"> 1. Provide information to contractors in pre-construction meetings regarding permit specifications for erosion and sediment control practices. 2. Continue to require cash deposits, performance-payment bonds, pre-construction meetings, and final inspections to ensure compliance with County permit requirements regarding erosion and sediment control during bridge road construction projects. 3. Conduct routine erosion control inspections to ensure compliance. Develop monitoring process to ensure control of discharges. 4. Review corrective actions and violations and evaluate whether changes are needed in future permit conditions and/or future pre-construction meetings to clarify requirements to avoid future erosion and sediment control problems. 5. Include pollution control for additional non-sediment related discharges in permits (e.g., paints, solvents, metals, etc.).
Measurable Goal	Inspect 100% of sites that obtain permits.
Tracking measure	<p>Report number of sites inspected.</p> <p>Report observed erosion and pollution problems and outcomes.</p>

ILL-4	Identify and Investigate Illegal Dumping
Application area	County-wide
Responsibility	Road Maintenance, Nuisance Code, Emergency Response, Code Compliance
Description	<p>The goal of this BMP is to eliminate or reduce discharge of pollutants associated with illegal dumping, which may adversely impact stormwater and receiving water quality.</p> <p>County personnel during typical job related activities occasionally encounter various forms of illegal dumping either within the County right-of-way, on the premises of County facilities or on private property. If unusual occurrences or substances are found in the ditch, waterway, or right-of-way as observed by County field personnel they are immediately reported to the District Supervisors in the Road Maintenance County Transportation Division. In addition, depending on the type of material, the county staff reports the event to the appropriate supervisor, safety officer, Code Compliance staff, Nuisance Control Officer. The Maintenance and Operations crew will follow the problem to its source and take enforcement action as necessary. In addition, the Sheriff's office manages an inmate crew responsible for investigation and clean-up of illegal dumps.</p> <p>For this BMP, the County will continue to implement a program to identify and investigate illegal dumping of pollutants including trash, fill, oil, or toxic materials in the right-of-way or to the storm sewer system; and, report and follow up on reports by County staff when illegal dumping is discovered during the course of job duties.</p>
Tasks	<ol style="list-style-type: none"> 1. Continue to implement the existing field inspection program during routine maintenance activities. Record and report any noticeable illegal dumping, illicit connections and/or discharges to the storm sewer system. 2. Report illegal dumping to appropriate supervisor, Safety Officer, Code Compliance Officer, Nuisance Control Officer or environmental contractor. 3. Follow up identification of an illegal dumping activity or discharge with solutions, including enforcement action as necessary, when the source of an illegal dumping or discharge

	activity can be determined.
Measurable Goal	Clean up all reported debris dumped in the right-of-way.
Tracking measure	Track observed dumping problems and outcomes.

ILL-5	Identify and Investigate Sanitary Discharges to the Storm Sewer
Application area	Broadway, Burnside, Hawthorne and Morrison Bridges on the Willamette River
Responsibility	Bridge Maintenance
Description	<p>The goal of this BMP is to identify and investigate any possible sanitary discharges in the storm system.</p> <p>Generally, the Cities within the NPDES permit areas are responsible for ensuring that there are no cross connections or failing sanitary pipes or septic tanks that may potentially discharge into the County's stormwater system. The Investigations and Monitoring Division of the Portland's Bureau of Environmental Services also investigates the major outfalls in the Portland/County permit area and traces observed discharges to their source.</p> <p>County personnel are responsible for inspection and maintenance of the restroom facilities (for bridge operators) on four Willamette River bridges, to ensure that potential leaks are prevented.</p> <p>For this BMP, the County will continue to implement a program to identify and investigate sanitary discharges to the storm sewer system; and, continue a reporting and follow-up procedure for County staff to follow when a cross-connection or illicit connection is discovered during the course of job duties.</p>
Tasks	<ol style="list-style-type: none"> 1. Continue to inspect and maintain the bridge restroom facility holding tanks on all bridges. 2. Follow up on illicit discharge investigations by Cities, as needed.
Measurable Goal	Conduct quarterly maintenance of bridge facilities.
Tracking measure	Confirm maintenance frequency and any problems observed.

ND – New Development

Overall Goal

New Development Standards (ND) BMPs are designed to mitigate pollutant discharges and other water quality impacts associated with new development and redevelopment during and after construction.

New Development BMPs

BMPs described in more detail on the following pages include the following:

BMP ID	BMP Description	Area of BMP Application			
		Portland Permit Area		Gresham Permit Area	
		Willamette River Bridges	Unincorporated Multnomah County	Interlachen Residential Area	County Arterials in Fairview, Troutdale and Wood Village
ND-1	Require Erosion Control for Private Development			✓	
ND-2	Regulate Stormwater Discharge			✓	

Regulations Addressed by BMPs

See Table 1-1

ND-1	Require Erosion Control for Private Development
Application area	Interlachen Residential Development
Responsibility	Land Use Planning and Code Compliance
Description	<p>The goal of this BMP is to control/reduce amount of erosion and sediments discharged to the receiving waters. Negative charged clay particles attract and attach to pollutants, (heavy metals, oil/grease). Increased turbidity/sedimentation on channel bottoms impairs water quality and fish habitat.</p> <p>The Planning Division of the Multnomah County Department of Community Services applies the Grading and Erosion Control Standards (GEC) for most “ground-disturbing activities” through plan review and inspections. The County Planning Division requires Hillside Development (HD) or GEC Permits for grading, clearing or fill on any sites within its jurisdictional authority.</p> <p>HD and GEC Permits standards require temporary and permanent erosion control and water quality protection during construction stages and for long term site stability and mitigation. Inspections are performed by Planning staff for large grading projects and Right-of-Way inspectors perform inspections for the “minimal impact” projects. Each inspection receives either a pass or fail.</p> <p>An erosion control review is required by the County whenever:</p> <ul style="list-style-type: none"> • > 10,000 square feet of ground disturbing activity, or • Areas disturbed < 200 feet from top of bank of watercourse, or Pre-development slopes are > 10 % , or • Post construction; unsupported slopes > 33% that exceed five feet in height. <p>A Hillside Development review is typically required for all construction within a mapped slope hazard zone. See the Hillside Development and Erosion Control ordinance for more detail. This applies to existing undeveloped sites as well as newly developing sites.</p>

	For this BMP, the County will continue issuing grading and hillside development permits per County zoning code.
Tasks	<ol style="list-style-type: none">1. Review and provide comments on applications for grading permits and hillside development permits.2. Perform Erosion and Sediment Control Inspections for all approved construction projects.3. Investigate and enforce related land use and transportation code provisions.4. Require site remediation where appropriate.
Measurable Goal	Inspect 100% of sites once during the permit review, and a second time during active construction.
Tracking measure	Number of permits issued, number of inspections conducted, number of problems encountered, number of enforcement actions.

ND-2	Regulate Stormwater Discharge
Application area	Interlachen Residential Development
Responsibility	Land Use Planning, Right-of-Way Permits, Code Compliance, Road Engineering
Description	<p>The goals of this BMP are to implement localized design standards to adequately address stormwater discharge issues.</p> <p>The County has minimal development review responsibility, yet reviews development for compliance with certain local guidance documents and standards regarding stormwater discharge. County code requires that stormwater runoff attributed to new and re-development is managed on-site for a storm of ten-year, 24 hour design frequency or, is to be discharged to a watercourse in or adjacent to the property at pre-developed rates.</p> <p>The County has development review authority in the Interlachen Residential Area. When conducting hillside development and erosion control permit review, the County Planning Program of the Department of Community Services uses the current City of Portland <i>Erosion and Sediment Control Manual</i> and the <i>Stormwater Management Manual</i>. The Multnomah County Zoning Code makes reference to the Portland guidance manuals.</p> <p>In the unincorporated pockets within the Portland Permit Area connection to the right-of-way and drainage discharge to the right-of way is reviewed by Road Engineering. When conducting development review activities, the County refers to their drainage design standards (Chapter 5 of the Design Construction Manual), which references portions of the City of Portland's water quality design standards for new development. Portland Planning also provides drainage review.</p> <p>Under both the Land Use and Transportation Planning Programs and Right-of-Way permitting processes, engineering criteria are applied to development plans, including considerations of stormwater management. Property owners may be required to install stormwater quality controls and consider using storage facilities (detention ponds) to control stormwater discharge.</p>

	<p>For this BMP, the County will review stormwater regulations, design standards, and criteria, as issued by the City of Portland and other jurisdictions, and consider them for use as guidance to regulate both stormwater discharge associated with new and redevelopment activities; review new development permit applications for appropriate stormwater quality and quantity controls in the Interlachen area.</p>
Tasks	<ol style="list-style-type: none">1. Continue to review new development permit applications to ensure proper connection to the storm sewer system and application of design standards.2. Inspect stormwater facilities during and after construction to ensure that the site is compliant with design standards.3. Enforce the land use and transportation codes with respect to stormwater quality treatment.
Measurable Goal	<p>Conduct plan reviews and inspections for 100% of permitted projects.</p>
Tracking measure	<p>Percentage of reviewed permits, percentage of permitted sites inspected, describe permit violations and outcomes.</p>

STR – Structural Control

Overall Goal

These BMPs are designed to implement structural modifications (constructed facilities) to existing systems/development to reduce pollutants in discharges from the municipal separate storm sewer system.

Structural Control BMPs

BMPs described in more detail on the following pages include the following:

BMP ID	BMP Description	Area of BMP Application			
		Portland Permit Area		Gresham Permit Area	
		Willamette River Bridges	Unincorporated Multnomah County	Interlachen Residential Area	County Arterials in Fairview, Troutdale and Wood Village
STR-1	Address Water Quality with New Capital or Roadway Improvement Projects	✓	✓	✓	✓
STR-2	Retrofit Existing Facilities for Water Quality Benefit	✓	✓	✓	✓
STR-3	Inventory and Map the County Storm Sewer System	✓	✓	✓	✓

Regulations Addressed by BMPs

See Table 1-1

STR-1	Address Water Quality with New Capital or Roadway Improvement Projects
Application area	County-wide
Responsibility	Road Engineering, Bridge Engineering, Land Use Planning, Transportation Planning
Description	<p>The goals of this BMP are to ensure that water quality facilities, built as part of a drainage/flood control capital improvement project or road construction project apply appropriate design standards to reduce the discharge of pollutants from sites to the maximum extent practicable, and that practices are applied consistently.</p> <p>The County Transportation Engineering/ Design Group or consultant ensures through design and review of new capital improvement projects that stormwater and Best Management Practice (BMP) structural controls are considered and properly designed for inclusion in the Capital Improvement Program. Currently, the group reviews designs of various capital improvement projects (flood control facilities, culvert replacements) for appropriate water quality controls. The City of Portland Stormwater Management Manual has been used as guidance in the design of stormwater facilities that are part of Road Capital Improvement Projects.</p> <p>The County Planning Program of the Department of Community Services uses the current Portland Stormwater Management Manual in Hillside Development (HD) and Grading and Erosion Control (GEC) Permit reviews county-wide. These permits are required for County road construction projects and include guidelines for stormwater facilities. Stormwater facilities built in conjunction with County road or bridge projects are generally owned and maintained by the County. Long-term maintenance is assured through routine County maintenance and operations procedures.</p> <p>For this BMP, the County will ensure that any capital improvement or road construction project considers long-term water quality protection, where feasible; and review the plans, design, and purpose of such stormwater quality treatment facilities.</p>
Tasks	<ol style="list-style-type: none"> 1. Conduct plan checks of stormwater quality treatment facilities that are included in capital improvement or roadway improvement projects to assure they follow standard design criteria that include

	<p>stormwater quality considerations, and that the appropriate facility is selected for the intended purpose.</p> <p>2. Conduct design/permit reviews for road construction. Decide whether to apply the Portland Stormwater Management Manual or another standard to designs.</p>
Measurable Goal	Include consideration of stormwater treatment for all significant CIP and road construction projects.
Tracking measure	List projects constructed with and without treatment and provide the rationale.

STR-2	Retrofit Existing Facilities for Water Quality Benefit
Application area	County-wide
Responsibility	Road Engineering, Bridge Engineering
Description	<p>The goal of this BMP is to consider retrofits and improvements to existing stormwater infrastructure for all major repair projects.</p> <p>The County owns and maintains drainage facilities for its portion of the permit area. When major repair is needed, the County will develop and implement retrofits of existing public drainage and flood control facilities (sumps, water quality filtration devices, retention basins, drainage channels, bioswales, trash racks, sediment trap devices, etc.) where practicable to improve water quality, and install new systems according to current standards.</p>
Tasks	<ol style="list-style-type: none"> 1. Implement retrofits as opportunities arise. Include stormwater treatment for water quality purposes to reduce pollutants to the maximum extent practicable.
Measurable Goal	Include the consideration of stormwater treatment for all major repair projects.
Tracking measure	List repair projects conducted both with and without treatment and provide the rationale.

STR-3	Inventory and Map the County Storm Sewer System
Application area	County-wide
Responsibility	Road Engineering, Bridge Engineering
Description	<p>The goal of this BMP is to ensure County storm sewer mapping is accurate. This BMP supports the MS4 by providing valuable information allowing the County to effectively accomplish other elements of the NPDES permit requirements.</p> <p>The County has a detailed mapping system of drainage facilities including structural control facilities and continually updates this as new facilities are added. A computer system has been developed for inventory of the road system (IRIS: Integrated Road Information System).</p> <p>For this BMP, the County will continue to inventory and map the municipal storm sewer system; improve knowledge of the County system to facilitate identification of problem areas and implementation of control programs in strategic locations; and allocate staff resources to ensure continued map updates.</p>
Tasks	1. Continue to update the County storm sewer system map as needed.
Measurable Goal	Keep infrastructure maps current within 6 months.
Tracking measure	Narrative to describe updates and whether maps are current.

NS – Natural Systems

Overall Goal

These BMPs are designed to help preserve and restore the natural environment/functions to reduce pollutants in discharges from the municipal separate storm sewer system.

Multnomah County has implemented and enhanced a vegetation management Functional Group within both Road and Bridge Maintenance, partly in response to Stormwater Implementation Team recommendations, since the first permit term began.

Natural Systems BMPs

BMPs described in more detail on the following pages include the following:

BMP ID	BMP Description	Area of BMP Application			
		Portland Permit Area		Gresham Permit Area	
		Willamette River Bridges	Unincorporated Multnomah County	Interlachen Residential Area	County Arterials in Fairview, Troutdale and Wood Village
NS-1	Conduct Vegetation Management Activities	✓		✓	✓
NS-2	Specify Native Vegetation in ROW and Permitted Projects	✓		✓	✓

Regulations Addressed by BMPs

See Table 1-1

NS-1	Conduct Vegetation Management Activities
Application area	County wide except unincorporated parcels in Multnomah County where the City of Portland conducts vegetation management.
Responsibility	Road Maintenance, Bridge Maintenance
Description	<p>The goal of this BMP is to implement existing/improved vegetation management practices to ensure that pollutants discharged from and into County rights-of-way (roads, ditches) are reduced to the maximum extent practicable.</p> <p>Vegetation management policies and strategies are outlined in the Multnomah County Transportation Integrated Vegetation Management Program (IVM), and vegetation management procedures are outlined in the Road Maintenance Operations Manual (RMOM) including environmental considerations for daily operations such as: tractor mowing, hand brushing, hand weeding, pesticide application, fertilizing, planting, pruning, water, etc.</p> <p>Chemical herbicide applicators receive annual certification from the Oregon Department of Agriculture in proper handling, safety, and application of allowable chemicals. All herbicides are applied in accordance with manufacturers' labels.</p> <p>For this BMP, the County will continue to implement vegetation management strategies and procedures as provided in the Integrated Vegetation Management Program (IVM) and the Road Maintenance Operations Manual (RMOM) to assure that water quality impacts are addressed; include annual Oregon Department of Agriculture certification for pesticide applicators; selectively use pesticides wherever applicable; and, continue to improve application practices and train personnel to reduce pollutants to the maximum extent practicable.</p>
Tasks	<ol style="list-style-type: none"> 1. Follow RMOM and IVM procedures. 2. Apply herbicides selectively to reduce overall application, and to promote the growth of native species. 3. Keep Oregon Department of Agriculture (ODA) certifications current.

	<ul style="list-style-type: none">4. Selectively target invasive species for control.5. Review and update integrated vegetation management practices (IVM) as necessary.
Measurable Goal	Review RMOM vegetation activities and the Integrated Vegetation Management Program (IVM) during the permit term.
Tracking measure	Narrative description of relevant changes to IVM and RMOM.

NS-2	Specify Native Vegetation in ROW and Permitted Projects
Application area	County wide except unincorporated parcels in Multnomah County where the City of Portland conducts vegetation management.
Responsibility	Land Use Planning, Transportation Planning, Road Engineering, Road Maintenance, Bridge Engineering, Bridge Maintenance
Description	<p>The goal of this BMP is to reduce pesticide use and encourage use of self-sustaining native vegetation as means of improving water quality.</p> <p>Native vegetation reduces/eliminates the need for chemicals, watering and maintenance (mowing) thereby, greatly reducing stormwater runoff and pollutant loads. Trees are known to absorb and hold large quantities of rain water, both in the above ground mass and in the root systems. This characteristic can reduce erosive runoff and stabilize soils. Root systems have been found to effectively filter pollutants in groundwater, especially related to landfills. Native vegetation offers many other environmental benefits such as air quality improvement, community ambiance, economic enhancement, and wildlife habitat.</p> <p>Currently, specifications for landscaping in the ROW are an integral part of a road improvement project. Specifications are detailed in the project contract, and require the use of self-sustaining vegetation.</p> <p>Permit approval for a new use or change in use in a County designated Significant Environmental Concern (SEC) zone may require natural vegetative fringe along rivers, lakes, wetlands and streams to be “enhanced and protected to the maximum extent practicable to assure scenic quality and protection from erosion.” Flood plains, water courses and wetlands “shall be retained in their natural state to the maximum possible extent to preserve water quality and protect water retention, overflow and natural functions.”</p> <p>The County coordinates with the cities, landscape industries, nurseries, and others to develop recommendations for new design practices encouraging use of self-sustaining vegetation.</p> <p>Most County rights-of-way are utilizing native species, thereby reducing the need for chemicals, watering and maintenance</p>

	<p>(mowing).</p> <p>For this BMP, the County will promote the use of native vegetation on public and private projects; utilize existing native plant lists for development review; and encourage the use of self-sustaining, non-invasive vegetation as well as Green Street Design practices which reduces the need for pesticides, fertilizers, and water.</p>
Tasks	<ol style="list-style-type: none"> 1. Review the current contract specifications for landscaping in the right-of-way, and update as needed. 2. The County, in continuing its current review and approval process, will promote the use of native vegetation and develop contract specifications for landscaping. 3. Ensure contract specifications are followed which require certain landscaping materials and placement. 4. Condition plan approvals with invasives removal, if appropriate. 5. Review and update the IVM as necessary (see NS-1).
Measurable Goal	Inspect 100% of project sites for landscaping specifications.
Tracking measure	Report compliance with landscaping specifications.

PM – Program Management

Overall Goal

Program Management BMPs ensure effective program management, coordination, and reporting.

Program Management BMPs

BMPs described in more detail on the following pages include the following:

BMP ID	BMP Description	Area of BMP Application			
		Portland Permit Area		Gresham Permit Area	
		Willamette River Bridges	Unincorporated Multnomah County	Interlachen Residential Area	County Arterials in Fairview, Troutdale and Wood Village
PM-1	Stormwater Program Management	✓	✓	✓	✓
PM-2	Assess and Evaluate the Stormwater BMP Program	✓	✓	✓	✓
PM-3	Maintain Environmental Management Database	✓	✓	✓	✓

Regulations Addressed by BMPs

See Table 1-1

PM-1	Stormwater Program Management
Application area	County-wide
Responsibility	Program Management
Description	<p>The goals of this BMP are to develop and manage the County's stormwater program to ensure compliance with the NPDES permit, and to develop and implement cost-effective, practical BMPs and activities that are designed to reduce stormwater pollution to the maximum extent practicable.</p> <p>Multnomah County participates in periodic co-permittee management committee meetings and the Oregon Department of Environmental Quality (DEQ) meetings. The County conducts program management that includes implementation scheduling, budgeting and tracking. The County prepares the required Annual Compliance Reports and coordinates with the City of Gresham and the City of Portland (leads for the respective NPDES co-permits) in preparing annual reports for submittal to DEQ.</p>
Tasks	<ol style="list-style-type: none"> 1. Continue to participate in the co-permittee management committee meetings and any DEQ meetings. Continue to work with the co-permittee agencies and DEQ to implement the stormwater management program. 2. Review each BMP file semi-annually. Prepare an annual report to demonstrate the County's compliance with requirements. Submit to DEQ through City of Portland co-permittee group, and City of Gresham co-permittee group.
Measurable Goal	Meet regulatory obligations.
Tracking measure	Submit annual report.

PM-2	Assess and Evaluate the Stormwater BMP Program
Application area	County-wide
Responsibility	Program Management
Description	<p>The County has continually assessed and evaluated BMPs. Work sessions each permit year occur to ensure progress of each BMP. Program updates and progress review regarding BMP implementation is also conducted via emails. BMP files demonstrate work done to date for each BMP. The effectiveness of the BMPs has been summarized in each annual report.</p> <p>The two sets of BMPs (one for the Portland permit, and one for the Gresham permit) were combined in 2006 for future permit terms, into one set of County BMPs. Evaluation of BMP activity allowed a more efficient set of BMPs which can be assessed in more detail, and resulted in the new BMP set.</p> <p>For this BMP, the County will assess and evaluate the BMP program (on a continuous basis and especially annually) to ensure the best use of available resources, and make recommendations for improvements in program implementation tasks; designate County staff to compile/summarize records for each BMP; and, utilize a BMP record-keeping system for evaluation of progress at regular work sessions with the Stormwater Implementation Team.</p>
Tasks	1. Conduct annual meetings or work sessions with the functional groups to assess and evaluate each BMP.
Measurable Goal	Evaluate BMPs annually.
Tracking measure	Provide results of the BMP evaluations in the annual reports and include any changes to the BMPs.

PM-3	Maintain Environmental Management Database
Application area	County-wide
Responsibility	Asset Management
Description	<p>The County maintains records of NPDES permit activities through the Environmental Management Database. Data is entered by each functional group for the BMPs which they are responsible, and those data are summarized for the Annual Report.</p> <p>The records track the various activities such as attendance and training obtained/provided by County staff at meetings, seminars, workshops. Data from the various field logs and reporting forms are input into the Environmental Management data base.</p> <p>For this BMP, the County will continue to keep field records of maintenance activities and update the database as needed.</p>
Tasks	1. Conduct maintenance of the Environmental Management database.
Measurable Goal	Maintain the database annually.
Tracking measure	Confirm annual database maintenance.

5.0 Summary of Proposed SWMP Changes and the Rationale for Changes

For the permit renewal, the Department of Environmental Quality (DEQ) has written into the Gresham and Portland MS4 NPDES permits a specific requirement for each co-permittee to evaluate their Stormwater Management Plan (SWMP) and describe the rationale for any changes. Specifically, the permits require the following as per Schedule D(2)(b):

“...Each co-permittee must review Schedule D(2)(c) and, for each component, determine whether implementation of the components in the SWMP as submitted is sufficient to reduce the discharge of pollutants to the maximum extent practicable. Each co-permittee must submit to the Department details on how each of the components are, or will be, addressed and the rationale for the continued existing or revised level of implementation. (If certain components are not included in the plan, then the rationale for exclusion must also be submitted.) The level of implementation for each component must, when practicable, have measurable performance indicators to assist with the reporting on the status of implementation as part of the annual reports.”

As a result of the permit requirement provided above, Multnomah County reviewed their SWMP to ensure that the plan is continuing to address Federal regulation CFR 40.122.26, that it is sufficient to reduce the discharge of pollutants to the maximum extent practicable, and that it meets additional requests from DEQ included in a letter dated January 11, 2008. This letter from DEQ provided a clarification of expectations for some of the permit renewal application requirements. One clarification regarding “measurable goals” was specifically related to revising the SWMPs. The purpose of this section is to provide a summary of how the County’s SWMP was revised.

There were two types of changes made to the County’s SWMP. The first set of changes were not substantive but were related to the overall formatting of the document and text. In addition, text was revised to clarify and provide more detail related to measurable goals and tracking measures for each of the BMPs. A more detailed summary of these SWMP revisions is as follows:

- *Revised Format:* In the previous County SWMP, BMPs were provided in a text format with lists of BMP tasks that each included assignments, schedules and performance measures. For the new SWMP, the text of these BMPs has been condensed into a BMP fact sheet format for each BMP. The fact sheet format includes information regarding where the BMP applies, who is responsible for BMP implementation, a BMP description, BMP tasks, measurable goals, and tracking measures. The purpose of the reformatting was to make the document easier to read and to make it easier to locate information on individual BMPs.

- *Added Measurable Goals:* There are several terms included in the 2004-2009 permit language that are confusing with respect to how they are defined. These terms include performance indicators, and performance measures. DEQ recommended a clarification and consolidation of these two terms for use in the revised SWMPs prepared for permit renewals. The term that DEQ recommended was “measurable goals”. As acknowledged by DEQ, measurable goals are meant to provide a quantification of the efforts proposed for the BMPs in the SWMP by identifying what a permittee specifically intends to do, and when they intend to do it. As targets, measurable goals are not fixed requirements and may change as a result of adaptive management. Further, there is no link established between measurable goals and either results or effectiveness of BMPs. As a result of this DEQ clarification/recommendation, Multnomah County revised the performance measures listed in the previous SWMP and replaced them with measurable goals for each of its BMPs where applicable.
- *Revised Tracking Measures:* Tracking measures relate to the information that will be compiled by the County for the annual compliance reports in order to track progress in addressing measurable goals. The County’s tracking measures were revised/updated to better reflect the new measurable goals provided for each BMP.
- *Renamed/Renumbered Some of the BMPs:* While substantively the BMPs may not have changed, some of them were renamed to better reflect the proposed BMP tasks and activities. For example, OM-8 was changed from “*Conduct Ditch Maintenance*” to “*Minimize Impacts from Ditch Maintenance*”. Some of the BMPs were also renumbered to maintain a consecutive numbering system after select BMPs were added or removed as described below.
- *Removed Tasks that Were Tracking Measures:* Some of the tasks that were listed for the BMPs were actually tracking measures. These tasks are still being completed but they are covered under the tracking measures section of the BMP. An example is Task 2 of the old BMP ND-2 which was to determine whether Hillside Development and/or GEC permits were issued by the County for the reporting period.
- *Consolidated Tasks to Maintain the Environmental Management Database:* In the previous SWMP, there was a task under the majority of the individual BMPs to record related activities into the County’s Environmental Management Database. Rather than have that task listed individually under each BMP, it was removed and added as one comprehensive task under the program management BMP PM-3 (Maintain the Environmental Management Database).

The second set of changes included more specific individual BMP modifications. Again, in general, changes were not substantive but were made to consolidate information where it was repetitive, eliminate information that was not relevant, remove information that

was outdated, and improve the readability of the document. A summary of these more specific changes, and the rationale for the changes is provided as follows:

Public Involvement and Education BMPs

BMP PI-3- Distribute Public Education Information Regarding Stormwater: The task to develop and implement a distribution strategy was removed because the County has limited outlets for materials for other agencies material and the County relies on other entities for public education programs. A new task was added to ensure that the educational materials that are distributed are current and cover relevant topics.

BMP PI-4 – Conduct Training and Education for County Personnel: The task to disseminate new training materials was removed because this task is already implicit in the task that is under this BMP to conduct training on new approaches to water quality protection.

BMP PI-5 – Implement the Adopt-a-Road Program: The task to utilize inmate crews to pick up trash bags was removed because this is a consistent element of the program, not subject to change. This task was incorporated into a broader task of program support. Two tasks were also added: the first to promote the adopt-a-road program, and the second to provide program support such as providing equipment and coordination for volunteers.

Operations and Maintenance BMPs

BMP OM-1 – Review the RMOM for Potential Updates to Address Water Quality: This is a new BMP that was added to the SWMP. RMOM is the County Road Maintenance and Operations Manual that provides guidance with respect to conducting road maintenance activities using procedures that minimize impacts to water quality. The County operations and maintenance BMPs are all conducted according to RMOM guidance. Therefore, this BMP was added to ensure that RMOM continues to stay up-to-date as the most appropriate guidance for the County with respect to water quality. While details are still provided in BMP fact sheets for activities such as minimizing impacts from ROW, road shoulder (OM-7), and ditch maintenance (OM-8); and minimizing impacts from County truck hauling practices, the measurable goals for these specific BMPs have all been provided for under OM-1 with respect to ensuring these practices are implemented and stay current.

Due to adding the new BMP OM-1, the BMPs that followed were renumbered and do not directly compare back with the BMP number from the previous SWMP.

BMP OM-3 – Conduct Street Sweeping (Old BMP OM-2): The task to inspect sweeping equipment was removed because it is a routine activity covered under the Road Maintenance and Operations Manual.

BMP OM4 – Properly Dispose of Road Waste Material (Old BMP OM-3): While the content of this BMP did not really change, it was significantly reworded to provide better clarification of activities.

BMP OM-5 – Minimize Impacts from Anti-icing Operations (Old BMP OM-4): Tasks to prohibit the use of salt and glycol and to procure funding for the anti-icing program were removed because these are policies rather than actual tasks.

BMP OM-6 – Minimize Impacts from County Truck Hauling Practices (Old OM-5): Tasks relating to staff training and reviewing new product specifications were removed as these are already covered under either BMP PI – 4 (Conduct Training and Education for County Personnel), or BMP OM-1 (Review the RMOM for Potential Updates to Address Water Quality).

Old BMP OM-6 – Perform Culvert Maintenance: This BMP was removed altogether as maintaining culverts is not a water quality measure. However, it is important to conduct culvert maintenance activities using procedures that minimize water quality impacts. These procedures are implemented by the County as already provided for in RMOM under BMP OM-1. Therefore, this BMP description was no longer needed.

Illicit Discharge Detection and Elimination BMPs

Old BMP ILL-1 – Interagency Coordination on Spill Response: This BMP was removed as a spill response process has been developed and this BMP is no longer relevant.

BMP ILL-3 – Require Erosion and Pollution Controls for Public Projects (Old BMP ILL-4): Added a task to include requirements for pollution controls in contracts for public projects that address additional non-sediment related discharges (e.g., paints, solvents, metals, etc.).

Old BMP ILL-5 – Pollution Control for County Contractors: This BMP was removed as the activities for this BMP were added to ILL-3 as described above.

BMP ILL-5 – Identify and Investigate Sanitary Discharges to the Storm Sewer: A task was added to follow up on illicit discharge investigations by cities as needed.

New Development BMPs

Old BMP ND-1 Coordinate Transfer of Land Use Planning Authority: This BMP was removed because the transfer itself is not a water quality BMP, but rather a part of the annexation process.

BMP ND-1 Require Erosion Control for Private Development (Old ND-2): A task was added to this BMP to require site remediation where appropriate. The task to determine whether permits were issued for an area during the applicable reporting period was

removed because this is a sub-task to other tasks in this BMP, such as reviewing permits or investigating un-permitted activity.

Old BMP ND-3 – Stream Setback Requirements: While the County still implements this BMP, it was removed as it was related to riparian health and is not relevant as a BMP with respect to the MS4. One task that was in this BMP that was maintained was the task to enforce land use and transportation code relating to water quality. This task was moved to, and included under the new BMP ND-2 (Stormwater Treatment for New Development).

BMP ND-2 – Regulate Stormwater Discharge (Old BMP ND-4): The task to review the new Portland standards and consider their adoption was removed because the task was completed. The task to continue to review driveway connections to the ROW and permit for cross culverts was also removed. As this activity is still conducted, it was not relevant as a water quality BMP.

Structural Controls BMPs

These BMPs did not have any significant changes.

Natural Systems BMPs

BMP NS-1 – Conduct Vegetation Management Activities: Two tasks were added to this BMP: the first task was to selectively target invasive species for control; the second task was to review and update the Integrated Vegetation Management Program (IVM) during the permit term.

Program Management BMPs

BMP PM-3 – Maintain the Environmental Management Database: As mentioned above, in the previous SWMP, there was a task under the majority of the individual BMPs to record related activities into the County's Environmental Management Database. Rather than have that task listed individually under each BMP, it was removed and added as one comprehensive task under this BMP.