



**Multnomah County NPDES MS4 Phase I Permit  
Stormwater Management Program**

**Annual Report 2012  
Permit year 17**

**Submitted to:**

*Oregon Department of Environmental Quality  
November 2012*

*Submitted in Accordance with the Requirements  
of the National Pollutant Discharge Elimination System  
(NPDES) Permit Number 103004, File Number 120542*

**Submitted by:**

*Water Quality Program  
Department of Community Services  
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## **1. Introduction**

Multnomah County implements a comprehensive stormwater management program with the goal of reducing pollutants into the municipal stormwater system to the maximum extent practicable. This program is maintained and prioritized in response to the federal Clean Water Act and the County's responsibility to protect the health and welfare of its citizens and natural environment. The Stormwater Management Plan is the main component of the stormwater management program. This plan is submitted to and approved by the Oregon Department of Environmental Quality (DEQ) under the National Pollutant Discharge and Elimination System Municipal Separate Storm Sewer Phase I (NPDES MS4 Phase I) permit. The County's roles and responsibilities for complying with the permit term falls under seven categories of Best Management Practices (BMPs) with a focus on operating and maintaining the County bridges and roads.

This Annual Report summarizes the implementation activities of Multnomah County's Stormwater Management Plan in the County's permit area for the Permit Year 17 (Fiscal year 2012 - July 1, 2011 – June 30, 2012).

## **2. Program Overview**

### **History**

From 1995 to 2010, the Oregon Department of Environmental Quality (DEQ) regulated stormwater from Multnomah County through two separate NPDES MS4 Phase I Discharge permits: Permit #101314 for the areas within the City of Portland permit boundary and Permit #108013 for the areas within the Gresham permit boundary. Multnomah County was a co-permittee on both Portland and Gresham's MS4 Permit.

The County had a limited amount of regulatory area under each permit under the two separate MS4 permits. To reduce the administrative burdens for program management and reporting, Multnomah County requested to DEQ that the permit areas be combined under a single individual permit for the 2010 permit renewal. DEQ granted this request and issued the new individual Phase I permit on December 30, 2010.

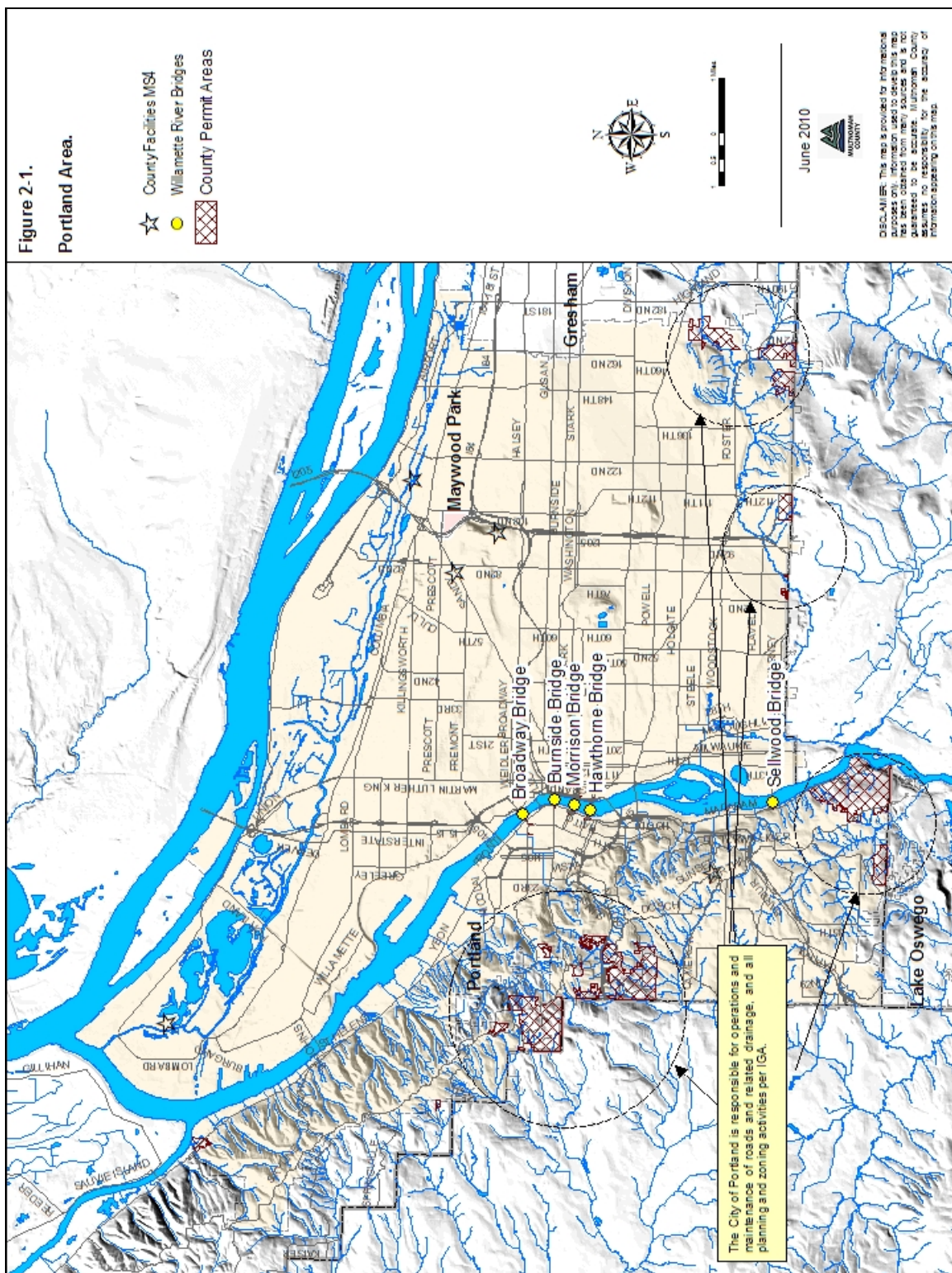
### **Permit area description**

Multnomah County is a unique jurisdiction with NPDES permit areas composed of several discrete urban pockets, and approximately twenty-eight miles of road and bridge right-of-ways. The terms "Portland Area" and "Gresham Area" are used in this report to provide clarity in the area descriptions, and to provide continuity from the previous reporting areas.

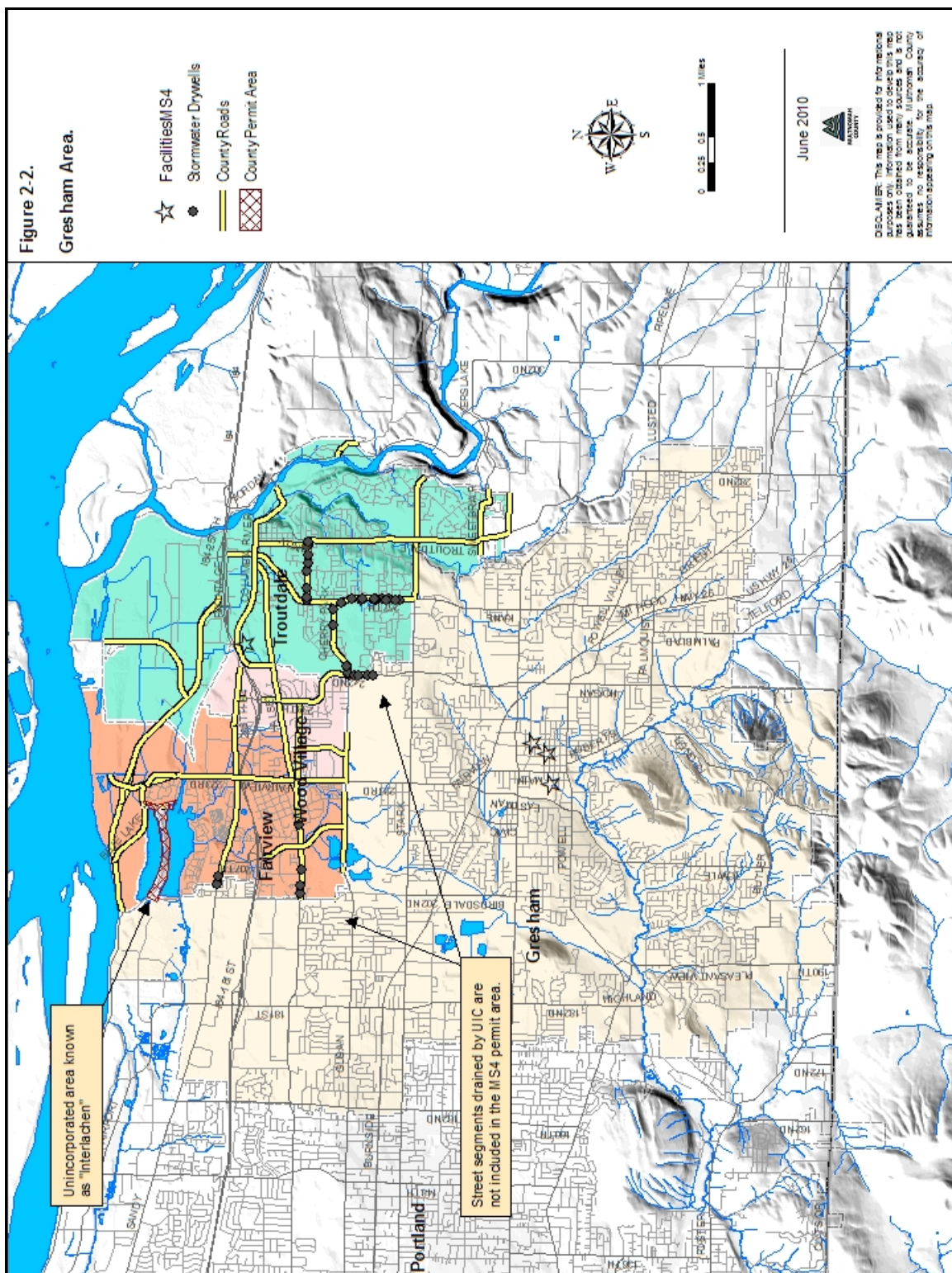
Within the Portland Area, Multnomah County is responsible for five Willamette River bridges (see Figure 2-1). A few small unincorporated pocket areas within the Portland Urban Services boundary are under Portland's stormwater management through an Intergovernmental Agreement with the City of Portland. These areas are also under the City of Portland's land use authority.

Within the Gresham Area, Multnomah County is responsible for approximately twenty-eight miles of arterial roadways in the Cities of Fairview, Troutdale, and Wood Village, and the unincorporated residential area known as "Interlachen" that is located between Fairview Lake and Blue Lake (see Figure 2-2). In 2007, Troutdale and Wood Village came under NPDES Phase II coverage, and the County roads in those communities also came into permit coverage. Some road segments shown in the following maps are served by Underground Injection Controls or lack curb/gutter systems and do not discharge to surface waters.

More specific details regarding the County's jurisdiction are provided in the Stormwater Management Plan (updated April 2011).







## Reporting requirements

The following table summarizes the requirements for the annual report as described in Schedule B.5 of the permit:

<i>Permit reporting requirement</i>	<i>Annual report section</i>
a. Status of each SWMP program element and progress in meeting measurable goals	BMP summary - status
b. Status or results of any public education program effectiveness evaluation conducted during the reporting year and summary of how the results were or will be used for adaptive management	BMP summary PI-1
c. Summary of the adaptive management process implementation during reporting year, including proposed changes or additions to BMPs	BMP summary – adaptive management
d. Proposed changes to SWMP elements designed to reduce TMDL pollutants	BMP summary
e. Summary of total stormwater program expenditures and funding sources over the reporting year and those anticipated in the next reporting year	Stormwater program budget
f. Summary of monitoring program results, including monitoring data and analyses	Environmental monitoring; also see Gresham and Portland permit annual reports
g. Proposed modifications to the monitoring plan	Environmental monitoring
h. Summary of the enforcement actions, inspections, public education programs, and illicit discharge screening and investigations	BMP summary
i. Overview of land use changes, concept planning and new development activities in the reporting year, including number of new post-construction permits issued and an estimate of the total new or replaced impervious surface area related to new development and redevelopment projects	Permit area description; BMP summary (ND, STR)
j. Results of ongoing field screening and follow up related to illicit discharges.	BMP summary (ILL-5)



## **Environmental monitoring**

The City of Gresham and City of Portland have historically collected, managed, and analyzed stormwater and instream data on behalf of the County as the lead Permittee for the respective NPDES permits when the County was a co-permittee on both permits. Because the County's jurisdiction is part of the fabric of both permit areas, the data for each permit represented the overall quality of stormwater and instream health. This environmental monitoring was a component of the Intergovernmental Agreements (IGA) with both the City of Portland and City of Gresham.

Beginning December 2010, the County managed its stormwater program under a single individual permit. The monitoring requirements are met through a new IGA with the City of Gresham, and the monitoring plan is available online through the City of Gresham website.

The environmental data and analysis presented in the Annual Reports for City of Gresham independent of this report fulfill the monitoring requirement for the County's Annual Report, per the respective IGA. The monitoring results are attached as an appendix to this report.

The data includes monitoring requirements from the County permit: two instream monitoring sites, two macroinvertebrate monitoring sites, and one mercury monitoring site. These are fulfilled by data from Fairview and Beaver Creeks, and the Columbia Slough Water Quality Facility.

## **Adaptive management process**

The assessment of BMPs occurs annually during preparation of the County NDPES annual report, to be submitted to DEQ by November 1 of each permit year. Among other reporting requirements, the MS4 annual report must contain (Schedule B.5) the following:

*The status of implementing the stormwater management program and each SWMP program element, including progress in meeting the measurable goals identified in the SWMP.*

By providing a summary in the NPDES annual report of progress toward attaining BMP measurable goals (through data collection and tracking measures), the County both: 1) meets the aforementioned reporting requirement, and 2) facilitates a critical step in adaptively managing its stormwater program by assessing each BMP.

While preparing this MS4 annual report, the County collected data and feedback from staff responsible for implementing/reporting on each BMP to facilitate the BMP assessment process. Key factors considered in the annual evaluation include but are not limited to:

- *Was the BMP measurable goal attained? If not, describe circumstances why, and how progress will be made toward future attainment.*
- *For multi-year BMPs, were milestones or timelines met?*
- *Can we feasibly refine or improve the BMP to gain efficiency or effectiveness in removing stormwater pollutants?*
- *Are staffing/financial resources available to support such a BMP improvement or refinement?*

### 3. BMP Summary

The Multnomah County Stormwater Management Plan is a set of Best Management Practices (BMPs) designed to reduce stormwater pollutants to the maximum extent practicable. The County's stormwater management plan is made up of thirty-two BMPs grouped into seven categories as shown below. The following table summarizes the task, measurable goals, status, and changes for each BMP.

- Public Involvement and Education (PI);
- Operations and Maintenance (OM);
- Illicit Discharges Control (ILL);
- New Development Standards (ND);
- Structural Controls (STR);
- Natural Systems (NS); and
- Program Management (PM).

Managers and staff in the Multnomah County Department of Community Services, Land Use and Transportation Program are organized into “functional groups” to implement the Stormwater Management Program. The functional groups are:

- Public Affairs
- Bridge Engineering
- Bridge Maintenance
- Land Use and Transportation Planning
- Code Compliance
- Facilities
- Emergency Response
- Right-of Way Permits
- Road Maintenance
- Road Engineering
- Asset Management
- Nuisance Code
- Program Management

## PI – Public Involvement and Education

Overall goal: *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.*

	<i>Tasks</i>	<i>Measurable Goal</i>	<i>Status</i>	<i>Adaptive Management</i>
PI-1 Participate in Regional Public Education Efforts	<p>Provide County representative to attend the <i>Regional Coalition for Clean Rivers and Streams</i> (RCCRS) meetings.</p> <p>Plan and Implement public education campaign promoting behaviors that improve water quality.</p>	<p>Help develop and implement RCCRS annual strategy to promote behavior change through the RCCRS website, television, radio and social media.</p> <p>Evaluate education campaign effectiveness by November 1, 2014.</p>	<p>RCCRS contracted EvirolIssues to manage the outreach program. The firm continued the use of “Don’t be a Water Hazard” and “Is your lawn chemical free” logos and slogans for web, social media, billboard, bus ads, radio and cable spots based on previous focus group research by Davis, Hibbits &amp; Midgall in 2010. RCCRS also paid to support the KOIN TV “Do the Right Thing – Clean Water Tips” program which promotes on broadcast TV and web. Over 22,350,000 impressions for all media outlets.</p> <p>Additionally, the County’s watershed model was used at the Children’s Clean Water Festival and an Earth Day event during the permit term.</p>	The RCCRS membership is decreasing as a result of budget cuts and other priorities. Future discussions to stabilize the coalition is needed as well as additional ideas for messaging.
PI-2 Participate in Public Meetings	Attend public meetings related to water quality.	Track participation in watershed council and ad hoc committee meetings.	Water Quality (WQ) staff shared monitoring and project updates at regular monthly meetings of the Johnson Creek Watershed Council and Sandy River Watershed Council. WQ Staff facilitates the Interjurisdictional Committee for Johnson Creek, a technical workgroup that coordinates stream monitoring and analysis for Johnson Creek watershed.	No change
PI-3 Distribute Public Education Information Regarding Stormwater	<p>Make brochures and other educational materials from Soil &amp; Water Conservation Districts and Watershed Councils available at the planning office.</p> <p>Ensure that public education materials are current and cover relevant topics.</p>	Track the number of materials distributed at meetings, front counters and online.	Although the landowners who visit the planning office are largely rural property owners not included in the NPDES permit area, this public education outlet is valuable for the TMDL pollutant reduction. Approximately 96 brochures were taken on various topics from septic maintenance, riparian management and livestock care, during the last permit year. Also, 43 hits on the County website of Beaver Creek fish survey results were recorded.	No change

PI-4 Conduct Training and Education for County Personnel	<p>Send a representative(s) to water quality conferences when feasible. Share information learned in training with other staff.</p> <p>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.</p>	Conduct a minimum of one staff training session a year.	<p>Road crew trainings include: Road Maintenance &amp; Operations Manual (RMOM) BMP review (10/11), Johnson Creek fish survey presentation(11/11), vendor training on Vactor (2/12) and CCTV (8/12) equipment, sweeping techniques, confined space training for WQ filter vault inspection (5/12).</p> <p>WQ staff attended the regional Urban Ecology symposium (2/12) and ACWA Stormwater Summit(5/12). Vegetation staff continued to participate in regular meetings of the Cooperative Weed Management Areas group.</p>	No change
PI-5 Implement the Adopt-a-Road Program	<p>Develop a strategy to promote the adopt-a-road program.</p> <p>Track road segments where volunteer roadside litter removal and clean-up is performed through participation in County Adopt-A-Road programs.</p>	Continue to advertise and support the adopt-a-road program as interest exists.	<p>Adopt-a-road program is promoted though a County webpage, complete with instructions. Five groups are active in the NPDES area, with one new group signed on in June, 2011. Clean ups range from once a month to once a year depending on the group. Adopt a Road is a trash pick up, but additional eyes on the road for illegal dumping is a benefit to the Roads program, as well as increasing the stewardship ethic in the community.</p>	No change
PI-6 Maintain Signage to Protect Water Quality	<p>Determine whether any areas need to be marked or re-marked and provide staff and materials to carry this out.</p> <p>Maintain signs in right-of-way promoting watershed awareness, as requested by watershed councils.</p>	Inspect drain markers and signage once per permit term at all catch basins and stream crossings in the permit area.	GIS mapping of catch basins were completed with drain marker inspection. Over 80 new catch basin markers – “Do Not Pollute” – were installed at various locations.	No change
PI-7 Provide Opportunities for Public Involvement During the CIP Process	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.	<p>Ensure opportunities for public participation in the CIP update process through public meetings.</p> <p>Ensure that public comment period is established for permit renewal.</p>	CIP update process was completed in FY12 with review of stormwater treatment among criteria for bicycle and pedestrian priorities to develop rankings. County conducted public meetings throughout the County, including several advisory committees meetings with the East Mult Co Trans Comm, local municipalities and other groups. The public involvement program for the Sellwood Bridge project also continues from previous years.	No change
PI-8 Facilitate Public Reporting of Illicit Discharges	Determine where signs need to be posted regarding illegal dumping and place them.	Install and maintain signage in all known areas that are problematic in terms of dumping.	No activity in permit year.	No change

## OM – Operations and Maintenance

Overall goal: *To implement 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.*

<i>BMP</i>	<i>Tasks</i>	<i>Measurable Goal</i>	<i>Status</i>	<i>Adaptive Management</i>
OM-1 Review the RMOM for Potential Updates to Address Water Quality	Review the Road Maintenance Operations Manual annually.  When manual revisions are made, conduct refresher staff training as provided for under BMP PI-4.	Annually review of the RMOM to ensure current practices are incorporated respect to water quality.	The RMOM was updated in November 2010 and again in June 2011 with small changes in bridge maintenance BMPs. No changes in the RMOM were made during the this permit year.	No change
OM-2 Inspect and Maintain the Storm Drainage System	Inspect the entire stormwater conveyance system on an annual basis.  Utilize the record keeping system and database to record findings and follow-up work completed by field crews.	Establish criteria used to determine catch basin (CB) cleaning frequency to maintain effective pollutant removal by July 1, 2011.  Clean all roadway catch basins (CB) a minimum of 2 times per year, unless catch basin cleaning records indicates less frequent or more frequent cleaning is appropriate.	Criteria for roadway CB and sweeping frequency were submitted to DEQ on June 22, 2011. The program involves remote data entry from vehicles in the field and GIS to store data.  Radio-based Automatic Vehicle Locators with remote data entry were installed and tested. While baseline data has been collected, data from the fall and spring intervals has not been consistent due to technical failures, and difficulty in transitioning to the new system. While we are interested in the amount of sediment accumulation between cleanings, one third of catch basins have outlet pipes at the bottom of the sump, and thus do not regularly trap sediment as expected. Further quality control is needed to develop the dataset needed for effectiveness evaluation. (See PM-3 for additional information).  Parking lot CBs maintained by County Facilities were inspected and cleaned on annual basis.	Achieving the consistency and reliability of systems needed for this project is a challenge. Remote data input, data retrieval from the contractor, overall technical support have been impeding factors. While an adequate system was found, new solutions are being researched.
OM-3 Conduct Street Sweeping	Track street sweeping efforts to record the sweeping frequency.	Use catch basin cleaning records or inspections to inform the necessary sweeping frequency.  Establish criteria used to determine street sweeping frequencies to maintain effective pollutant removal, and identify high priority street	(See OM-2 and PM-3) Automatic Vehicle Location tracking hardware was installed and tested, which will allow for the GIS tracking of street sweeping frequency. Sweeping routes have been established in GIS. The next step to evaluate catch basin fullness during cleaning intervals will allow us to associate sweeping with catch basin cleaning frequency.	The next step will to develop SAP work orders to link GIS with AVL to maximize efficiency in street sweeping operations.

		sweeping areas by July 1, 2011		
OM-4 Properly Dispose of Road Waste Material	Identify alternatives for a new decant facility to be used for the dewatering of road wastes, or upgrades to the existing facility.	Annually review disposal options that protect water quality.	Vactor waste and sweepings are disposed at a private transfer facility. Vactor liquid is field decanted into public sewer trunk with approval from Fairview. WQ staff researched alternative ditch waste disposal options. Samples collected from ditches with a range of traffic volumes were analyzed and determined that high traffic rural and urban ditch spoils should be treated as solid waste. Ditching spoils from the urban area will continue to be disposed at a waste facility.	No change
OM-5 Minimize Impacts from Anti-icing Operations	Continue to follow the County RMOM procedures for the application, collection, and washing of sanding materials applied to roadways.  Continue to research alternative anti-icing methods.	Conduct street sweeping to recover sanding materials within two weeks after the Road Maintenance Manager determines that the roads are free from the threat of an ice or snow event.	Sanding materials were used very sparingly on steep hills and freeway ramps during approximately three freezing events in FY12 and were removed within two weeks after the threat of ice was gone. The effectiveness of MgCl has allowed us to reduce sanding.  The County began using MgCl last year after a review of anti-icing chemicals showed that it was likely to be more effective than CMA which had been used previously.	Continue to reduce the use of sanding materials with MgCl to reduce water quality impacts
OM-6 Minimize Impacts from County Truck Hauling Practices	Follow the RMOM procedures for conducting equipment checks when hauling materials.	See OM-1	No activity in permit area.	See OM-1
OM-7 Minimize Impacts From Right-of-Way and Road Shoulder Maintenance	Conduct maintenance according to RMOM	See OM-1	Activity was minimal and followed RMOM BMPs.	See OM-1
OM-8 Minimize Impacts from Ditch Maintenance	Conduct maintenance according to RMOM	See OM-1	Activity was minimal and followed RMOM BMPs.	See OM-1



OM-9 Maintain County-owned stormwater facilities	Inventory facilities by January 1, 2013	Annual inspection of treatment facility	<p>Road Crews received confined space training to take care of inspection and replacement of Contech Stormwater filters in the two filter vaults. Both vaults were inspected in FY12, and cartridges are slated for replacement in FY13. Stormfilters on County bridges were inspected and replaced in FY11.</p> <p>The County Roads owns two vegetated infiltration swales which were inspected annually by Vegetation staff.</p> <p>County Facilities maintains several Vortex units and one swale in facility parking lots. Inspection and cleaning occurred annually.</p>	No change
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## 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.*

<i>BMP</i>	<i>Tasks</i>	<i>Measurable Goal</i>	<i>Status</i>	<i>Adaptive Management</i>
ILL-1 Implement the Spill Response Program	Continue to follow and implement the Multnomah County Spill Response Plan.  Track and record spills and information regarding spills as they occur.	Conduct spill response procedures when spills are reported.	County crews responded to one minor spill of fuel on NE 238 <sup>th</sup> Dr in Wood Village. Absorbent material was applied to the spill, then cleaned up and disposed at a private facility. Fuel was contained on the road surface.	No change
ILL-2 Address Spills from Private Truck Haulers	Report to the appropriate agency of the private truck hauling practices impacting the County right-of-way and the stormwater conveyance system.	Contact all private haulers when spills are observed to ensure proper clean up	No activity in permit area.	No change
ILL-3 Require Erosion and Pollution Controls for Public Projects (formerly ILL-4 and ILL-5)	Execute formal contracting practices including pre-construction meetings, bonding, construction permit review, and erosion control inspections.	Inspect 100% of County project sites	DEQ responded to the County's request to inspect and enforce against the Morrison Bridge contractor, Conway Construction, for poor pollution control practices (7/11). As termination proceedings began, the contractor proposed new pollution control measures and work ultimately resumed. DEQ issued a citation to the contractor, but the citation was appealed and ultimately pulled.	No change
ILL-4 Investigate Illegal Dumping	Continue to implement the existing field inspection program during routine maintenance activities. Record and report any noticeable illegal discharge and dumping in the right-of-way.	Clean up all reported discharge or debris dumped in the right-of-way	Nuisance Code Enforcement responded to two incidents of human feces deposited in the right of way in the urban areas of Gresham and Troutdale.	No change
ILL-5 Detect and Eliminate Illicit Discharges to the Storm Sewer	Continue to inspect and maintain the bridge restroom facility holding tanks on a quarterly basis.  Document enforcement response plan for illicit discharges by November 1, 2011  Develop pollutant parameter actions levels and identify priority outfall locations by July 1,	Conduct quarterly maintenance of bridge facilities.  Conduct tasks by date above, and annual inspection of dry weather flows at major outfalls.	Bridge facilities maintained quarterly without incident.  Dry weather outfall inspection of eight outfalls occurred in September 2011. No flows were observed.	The County Illicit Discharge Detection and Elimination Program was submitted to DEQ in July 2012.

	2012.			
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**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.*

<i>BMP Description</i>	<i>Tasks</i>	<i>Measurable Goal</i>	<i>Status</i>	<i>Adaptive Management</i>
ND-1 Require Erosion Control for Private Development	Review and provide comments on applications for grading permits and hillside development permits.  Perform Erosion and Sediment Control Inspections for all approved construction projects.	Inspect 100% of sites once during the permit review, and a second time during active construction.	One erosion control permit was opened. The initial inspection was completed, and the follow up will occur during construction next year.	No change
ND-2 Regulate Stormwater Discharge	Continue to review new development permit applications to ensure proper connection to the storm sewer system and application of design standards.  Inspect stormwater facilities during and after construction to ensure that the site is compliant with design standards.	Conduct plan reviews and inspections for 100% of permitted projects.	No activity in permit area.	No change

## STR – Structural Controls

Overall goal: *To implement structural modifications (constructed facilities) to existing systems/development to reduce pollutants in discharges from the municipal separate storm sewer system.*

<i>BMP</i>	<i>Tasks</i>	<i>Measurable Goal</i>	<i>Status</i>	<i>Adaptive Management</i>
STR-1 Address Water Quality with New Capital or Roadway Improvement Projects	<p>Develop criteria and strategy for when stormwater treatment will be incorporated into public projects.</p> <p>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 stormwater quality considerations, and that the appropriate facility is selected for the intended purpose.</p>	Identify strategy or criteria used to determine when stormwater quality treatment will be incorporated into Capital Improvement Projects by November 1, 2014.	See below – Morrison Bridge improvements.	No change
STR-2 Retrofit Existing Facilities for Water Quality Benefit	<p>Include consideration of stormwater treatment for water quality purposes in capital projects to reduce pollutants to the maximum extent practicable.</p> <p>Conduct a hydromodification assesement and develop a strategy to identify and prioritize potential retrofit projects by November 1, 2014.</p>	<p>Identify one retrofit project by November 1, 2013.</p> <p>Develop hydromodification and retrofit strategy by November 1, 2014.</p>	Morrison Bridge replacement of steel deck with concrete deck includes new storm filter catch basins and improved traction for reduced accidents/spills. The movable solid deck now also collects debris which is collected in traps when decks are raised. Bio-bags are used at the outlets of these traps to catch sediment.	No change
STR-3 Inventory and Map the County Storm Sewer System	Continue to update the County GIS storm sewer system map.	Complete GIS drainage system maps of the NPDES permit area by 2014, including catch basins, culverts, manholes, ditches and pipes systems.	Catch basin GIS layer was completed and verified using field checks and aerial imagery. Pipe and culvert maps are in development at 50%. Given the nature of the County system – arterial roadways within the Cities of Troutdale, Wood Village, and Fairview, - interjurisdictional coordination is a major factor in developing and finalizing GIS work.	With limited funds, GIS work has been largely done with engineering interns. Given the complexity of the project and lack of continuity with interns, funding for a limited duration (2 yr) position was leveraged to ensure consistency and timeliness of project completion.

## NS – Natural Systems

Overall goal: *to help preserve and restore the natural environment/functions to reduce pollutants in discharges from the municipal separate storm sewer system.*

<i>BMP</i>	<i>Tasks</i>	<i>Measurable Goal</i>	<i>Status</i>	<i>Adaptive Management</i>
NS-1 Conduct Vegetation Management Activities	<p>Follow RMOM and IVM procedures.</p> <p>Maintain current Oregon Department of Agriculture (ODA) certifications for chemical applicators.</p> <p>Review and update integrated vegetation management practices (IVM) annually.</p>	Review RMOM vegetation activities and the Integrated Vegetation Management Program (IVM) annually.	<p>Facilities Management developed a new Pesticide, Herbicide, and Fertilizer management policy for use on County properties with input from the Water Quality Program.</p> <p>No changes on the existing Road Services IVM were proposed.</p>	No change
NS-2 Specify Native Vegetation in ROW and Permitted Projects	<p>Review the current contract specifications for landscaping in the right-of-way, and update as needed.</p> <p>Promote the use of native vegetation and develop contract specifications for landscaping. Condition plan approvals with invasive plants removal, if needed.</p> <p>Ensure contract specifications are followed which require certain landscaping materials and placement.</p>	Inspect 100% of project sites for landscaping specifications.	No activity in permit year.	No change

## PM – Program Management

Overall goal: *Program Management BMPs ensure effective program management, coordination, and reporting.*

<i>BMP</i>	<i>Tasks</i>	<i>Measurable Goal</i>	<i>Status</i>	<i>Adaptive Management</i>
PM-1 Stormwater Program Management	Continue to participate in the NPDES MS4 coordination meetings and any DEQ meetings. Continue to work with other NPDES MS4 permittees and DEQ to implement the stormwater management program.  Review each BMP file annually. Prepare an annual report to demonstrate the County's compliance with requirements. Submit to DEQ.	Annually review BMP implementation data and submit annual report by November 1 each year.	Annual report submitted to DEQ.	No change
PM-2 Assess and Evaluate the Stormwater BMP Program	Evaluate progress of BMPs for annual report using adaptive management approach.	Develop an adaptive management approach by November 1, 2011.	The adaptive management approach was discussed with other ACWA phase I jurisdiction staff to develop a consistent and meaningful strategy for program evaluation. The approach was included in the 2011 annual report. Current adaptive management considerations are included in this table.	No change
PM-3 Maintain Environmental Management Database	Pilot new GPS and onboard computer technology by July 2011.  Develop GIS or other mapping technology to sync with GPS system by July 2012.  Develop SAP work orders and tracking to integrate with GIS by July 2013.	Ensure tasks are completed by dates shown.	Automatic Vehicle Location devices (AVL with radio-based transmitters) were installed and beta testing commenced. The final verification for catch basin GIS data was completed and GIS mapping is linked to the AVL. During FY13, final move from existing Access database system to GIS-based system will occur.  Also in FY13, Road segments will be translated from GIS to SAP to begin developing GIS-SAP integrated work orders and data storage.	(See OM-2)



#### 4. Stormwater Management Program Budget

Program activity within the County's NPDES permit area is divided between areas that were previously managed under the Portland area and Gresham area NPDES permits. The Water Quality program, consisting of one staff manages the County stormwater program, and portions of two Asset Management staff provide mapping and database services across the entire permit area. Services specific to the two areas are described below.

##### Gresham area stormwater related services:

- Road Maintenance expenditures and anticipated budget allocations within the Fairview and Interlachen incorporate items including drainage maintenance, right-of-way, surface management, vegetation management, general administration, emergency road hazard response and training.
- Road Engineering expenditures and anticipated budget allocations within Fairview and Interlachen incorporate drainage studies and reviews, environmental compliance review, as-built plan drafting and inventory, GIS database entry, and training.
- Land Use and Transportation Planning expenditures and anticipated budget for design review of capital improvements and right-of-way impacts to the County roads in Fairview, Troutdale, and Wood Village, and for design review and permits for development within the Interlachen Area.

##### Portland area stormwater related services:

- Bridge Maintenance expenditures and anticipated budget allocations within the Portland Permit area incorporate items including, drainage maintenance, right-of-way, surface management, vegetation management, general administration, emergency road hazard response and training.
- Bridge Engineering expenditures and anticipated budget allocations within the Portland Permit area incorporate drainage studies and reviews, environmental compliance review, as-built plan drafting and inventory, GIS database entry, and training.
- Multnomah County Road Maintenance, contracts the City of Portland and Clean Water Services to maintain and operate County owned roads to their respective standards in the urban unincorporated pocket areas through Intergovernmental Agreements.
- Road Engineering continues to retain authority to review access and impacts to the right-of-way including stormwater discharge when such discharges cannot be retained on site.
- Transportation Planning within the Portland Permit area includes development review in the unincorporated pockets where such development has the potential to access or impact the county right-of-way.

Funding sources for stormwater program expenditures are derived from two sources. The Land Use Planning receives funding from County's General Fund. The Transportation Division - Road and Bridge

Services – and Transportation Planning receive funding from the State Highway Trust Fund, which consists of revenue from this source include the State gasoline tax, weight/mile tax on trucks, and vehicle registration fees, which are constitutionally dedicated to road related issues. The County has no revenue from dedicated stormwater fees. This is a result of the County roads and unincorporated pockets being nested within other city jurisdiction's service areas.

The table below outlines program expenditures for Fiscal Year 2012 and provides the anticipated budget for Fiscal Year 2013.

<i>Program Area</i>	<i>FY 2012 actual</i>	<i>FY 2013 budget</i>
Water Quality Program <sup>1</sup>	\$142,000	\$177,000
Asset Management <sup>2</sup>	\$15,300	\$20,000
Gresham area		
• Road Maintenance <sup>3</sup>	\$245,900	\$250,000
• Road Engineering <sup>3</sup>	\$143,000	\$146,000
• Land Use & Transportation Planning	\$590	\$500
Portland Area		
• Bridge Maintenance/Operations	\$13,600	\$43,000
• Bridge Engineering <sup>4</sup>	\$73,397,000	\$196,948,800
• Road Maintenance IGA	\$20,900	\$100,000
• Road Engineering <sup>5</sup>	\$10,700	\$10,000
• Transportation Planning	\$2,030	\$2,000

<sup>1</sup>Figure includes entire Water Quality program includes one staff, monitoring budget for UIC, TMDL and NPDES programs, and additional program costs. Increase from previous year is the result of some additional allocation of other program areas that previously funded water quality activities.

<sup>2</sup>Estimate is based on a portion of time from two Asset Management staff.

<sup>3</sup>Estimate is based on actual spending from the previous year for time spent on water quality work plus a budget for training.

<sup>4</sup>The amount shown represents the entire Bridge Engineering program. The entire program is included because Bridge Services do not budget or collect charges for water quality tasks. Water quality best practices are integral in all aspects of design and construction and hence we are not able to be segregated from the other work. Increase in budget reflects Sellwood Bridge funding.

<sup>5</sup>Estimate of the amount of time spent on spends on water quality issues in Portland area right-of-way.