

2013 Stormwater Report

NPDES Municipal Stormwater Permit Annual Report for Fiscal Year 2013

October 2013



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List of Acronyms

AASHTO	American Association of State Highway and Transportation Officials	NOAA	National Oceanic and Atmospheric Administration
BMP	Best Management Practice	NPDES	National Pollutant Discharge Elimination System
CESCL	Certified Erosion and Sediment Control Lead	PCB	Polychlorinated Biphenyl
CMMS	Computerized Maintenance Management System	RAC	Research Advisory Committee
CTR	Commute Trip Reduction	RCW	Revised Code of Washington
CWA	Clean Water Act	SMS	Safety Management System
EMS	Environmental Management System	SOP	Standard Operating Procedures
EPA	Environmental Protection Agency	SPC	Stormwater Policy Committee
ESA	Endangered Species Act	SPCC	Spill Prevention, Control, and Countermeasures
GIS	Geographic Information System	SWMPP	Stormwater Management Program Plan
GPS	Global Positioning System	SWPPP	Stormwater Pollution Prevention Plan
HATS	Highway Activity Tracking System	TAPE	Ecology's Technology Assessment Protocol
HRM	Highway Runoff Manual	TESC	Temporary Erosion and Sediment Control
IC/ID	Illicit Connection and Illicit Discharge	TMDL	Total Maximum Daily Load
IDDE	Illicit Discharge Detection and Elimination	TSS	Total Suspended Solids
IVM	Integrated Vegetation Management	UIC	Underground Injection Control
LID	Low Impact Development	USFW	United States Fish and Wildlife
LOS	Level of Service	WAC	Washington Administrative Code
MPET	Maintenance Productivity Enhancement Tool	WRIA	Water Resource Inventory Area
MS4	Municipal Separate Storm Sewer System	WSDOT	Washington State Department of Transportation
NCHRP	National Cooperative Highway Research Program	WSF	Washington State Ferries

Certification and Signature for Washington State Department of Transportation's National Pollutant Discharge Elimination System Municipal Stormwater Permit 2013 Stormwater Report

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



Megan White, P.E.
Environmental Services Office Director
Washington State Department of Transportation

10/31/2013
Date



Chapter 1 - Overview

Federal and State Water Quality Regulations

WSDOT's NPDES Municipal Stormwater Permit History

Washington State Department of Transportation (WSDOT) must comply with federal and state water quality regulations. The Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA), aims to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The Environmental Protection Agency (EPA) enforces the CWA through the National Pollutant Discharge Elimination System (NPDES) program.

Under this program, the EPA issues permits regulating stormwater discharges to receiving water bodies. In Washington State, EPA delegated permitting authority of the NPDES permit program to the Department of Ecology (Ecology). Ecology issued WSDOT our first NPDES municipal stormwater general permits for our stormwater systems in 1995.

On February 4, 2009, Ecology issued WSDOT an NPDES and State Waste Discharge Permit for Municipal Stormwater (permit) to replace our general permits. Compliance with this permit constitutes compliance with the CWA and the State of Washington Water Pollution Control Law (Chapter 90.48 RCW). Ecology modified the permit in March 2012 to incorporate requirements related to newly approved Total Maximum Daily Loads (TMDLs).

To remain compliant with the permit, WSDOT must implement the requirements described in the permit and the permit-required Stormwater Management Program Plan (SWMPP). The SWMPP, approved by Ecology prior to permit issuance, appears as Appendix 7 of the permit. Collectively, the permit and SWMPP describe the necessary actions, procedures, and practices for WSDOT to reduce pollutants in stormwater runoff and receiving water bodies.

Areas Covered by the Permit

Phase I and II Permit Areas

The permit covers stormwater discharges to receiving water bodies from stormwater conveyance systems (municipal separate storm sewer systems, or MS4s) owned or operated by WSDOT in areas covered by the Phase I Municipal Stormwater Permit and the Eastern and Western Washington Phase II Municipal Stormwater Permits. Within these areas, WSDOT owns and operates MS4s located along about 1,600 miles of highways and at 31 maintenance facilities, 11 ferry terminals, 11 rest areas, and 11 park and ride lots. Figure 1 depicts the locations of these facilities. For permit compliance, WSDOT must implement the permit requirements in these areas.

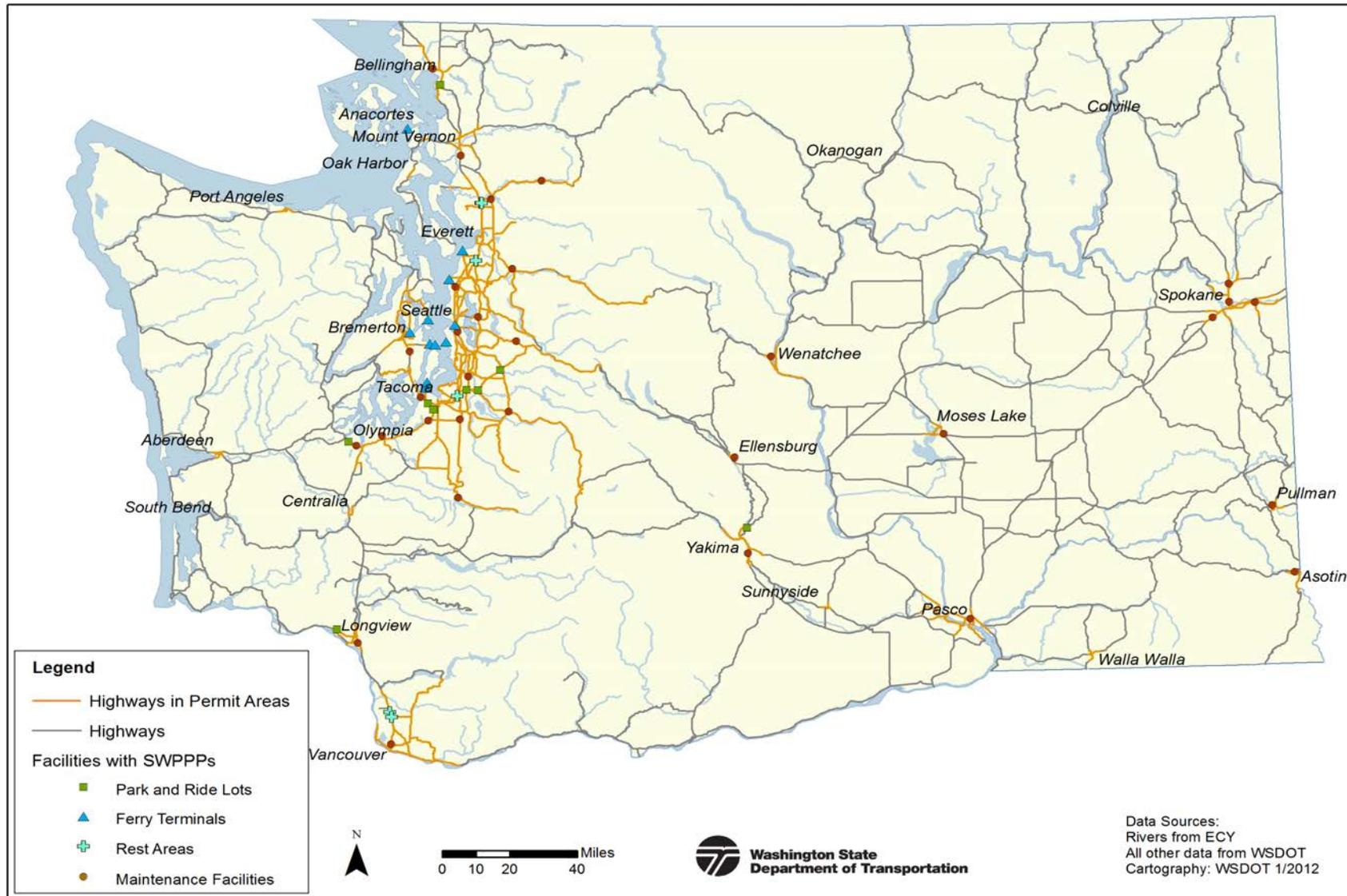
The Phase I Municipal Stormwater Permit covers large MS4s, which include any city or county with a population of 250,000 or greater. It also covers medium MS4s, which include any city or county with a population between 100,000 to 249,999. The Phase I Permit covers King, Pierce, Snohomish, and Clark Counties, and the cities of Seattle and Tacoma.

The Phase II Municipal Stormwater Permits cover certain small MS4s. These include urbanized areas and their adjacent urban fringe areas that together have a population of at least 50,000 and a population density of at least 1,000 people per square mile. Small MS4s covered by a Phase II Permit can also include areas outside an urbanized area if the MS4 discharges cause, or have the potential to cause, adverse effects on water quality. These areas must also have a population of at least 10,000, and a population density of at least 1,000 people per square mile. The Phase II Permits cover 99 cities, and urbanized areas in 11 counties.

TMDL Areas

The permit also covers stormwater discharges to any receiving water body in Washington State for which there is an EPA-approved TMDL with load allocations and actions items assigned to WSDOT. For clarity, a separate map showing the locations of the permit-covered facilities within TMDL areas appears in Chapter 3.

Figure 1 WSDOT Facilities Within Phase I and II Municipal Stormwater Permit Areas



How to Use This Report

Compliance and Information Document

This Stormwater Report serves as WSDOT's annual report, an obligation under the permit. It provides a status update on permit compliance and implementation from July 1, 2012 to June 30, 2013, our reporting period. To include the most accurate information in the Stormwater Report, staff responsible for implementation contribute a status update for their implementation tasks. The Permit Reporting Lead compiles the information and submits the report to Ecology after a series of reviews.

Some of the information in the Stormwater Report feeds into WSDOT's *Gray Notebook*, a quarterly performance measure report. WSDOT also uses the Stormwater Report as a self-audit to evaluate and assess the appropriateness and effectiveness of various programs and activities described in the SWMPP. Should WSDOT identify the need to modify the SWMPP, we include the description and justification for each recommendation we make in the Stormwater Report.

Triggered Reporting Items

Permit Obligations Fulfilled by Other Governmental Entities

Under Special Condition S3 of the permit, WSDOT must notify Ecology if we rely on another governmental entity to satisfy any of our obligations under the permit.

WSDOT's Washington State Ferries Division (WSF) has an agreement with Kitsap Transit and the city of Bremerton to maintain the Bremerton Ferry Terminal. Kitsap Transit satisfies the permit's requirements by maintaining the upper part of the ferry terminal which is predominantly used by busses and pedestrians. The city of Bremerton satisfies the permit's requirements by maintaining the stormwater catch basin and vault system at the terminal.

WSDOT owns several park and ride lots, within areas covered by the permit, that we rely on other governmental entities to operate and maintain. WSDOT has agreements with the following entities to operate and maintain 24 park and ride lots with MS4s within areas covered by the permit:

- Community Transit
- King County Metro
- Kitsap Transit
- Pierce Transit
- Skagit Transit

We also have agreements with the following entities to operate and maintain 14 park and ride lots which may have MS4s within areas covered by the permit:

- Ben Franklin Transit
- C-Tran
- City of Kelso
- City of Kennewick
- City of Yakima
- Community Transit
- Intercity Transit
- Kitsap Transit
- Skagit Transit
- Spokane Transit Authority

The permit requires WSDOT to inventory and document all known MS4s by March 2014. Thus, verifying which of these park and ride lots have MS4s will continue as we complete our inventory.

WSDOT Complied with Standards for Discharges

The permit requires WSDOT to include a summary of any actions taken regarding Special Condition S4 of the permit in our Annual Stormwater Report. These actions include notifying Ecology about any discharge from WSDOT's MS4 that causes or contributes to a known or likely violation of water quality standards in a receiving water body.

In this reporting period, WSDOT had no knowledge of discharges that required Special Condition S4 notification to Ecology. We have not had any incidents requiring notification under this special condition to date.

Notification of Spills

According to General Condition G3 in the permit, if WSDOT knows of a spill into its MS4 which could constitute a threat to human health, welfare, or the environment, we must notify Ecology. The permit also requires WSDOT to notify the Department of Health if the spill might cause bacterial contamination of shellfish. In this reporting period, WSDOT notified Ecology about 20 G3 spills, summarized in Table 1. Most of these were spills from third parties onto state highways. This number is more than in previous years possibly because of our increased efforts to complete our stormwater feature inventory and we improved our spill tracking system.

WSDOT Fully Complied with Permit Obligations

The permit requires WSDOT to notify Ecology if we fail to comply with an obligation of the permit. Under General Condition G20 of the permit, this notification needs to include a description of the non-compliance and the time period for which it is expected to continue. A G20 notification also needs to include actions taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance. In this reporting period, WSDOT complied with all of our permit obligations, thus no non-compliance notifications were necessary.

Table 1 Summary of Spills Requiring G3 Notification to Ecology

Date and Time	Location	Description
8/1/12 at 2:34 pm	SR 5 milepost 164	a semitruck was leaking Sodium Borohydride (3320)
9/21/12 at 6:09 am	SR 18 milepost 22.89	a semitruck collision and fire spilled 70 to 80 gallons of diesel fuel into ditch at Tiger Mountain summit
11/4/12 at 2:34 am	SR 5 milepost 143.79	during a semi-tanker fire, 9,000 gallons of fuel were lost and/or burned
11/21/12 at 9:48 am	SR 509 milepost 25.10	a city light equipment failure cause oil to enter a WSDOT drain
11/29/12 at 1:13 pm	SR 512 milepost 2.23	leaking dumpsters were observed at Washington Recycling, diesel fuel and other engine fluids were leaked into a WSDOT ditch
12/12/12 at 11:50 am	SR 509 milepost 29.80	a semitruck with a hole in its tank leaked 80 gallons of diesel fuel into a WSDOT drain south of the First Ave Bridge
12/18/12 at 12:31 pm	SR 7 milepost 58.18	a WSDOT snowplow blew a hydraulics line, hydraulic fluid entered a storm drain
1/25/13 at 3:50 pm	SR 410 milepost 30-38	a county sheriff reported an oil spill
2/15/13 at 8:59 am	SR 142 milepost 33.80	cooking oil was spilled at Washington Street
2/21/13 at 2:57 pm	SR 18 milepost 22.89	6 gallons of engine oil spilled due to an unsecured load at Tiger Mountain summit.
3/6/13 at 9:45 am	SR 17 and SR 395 intersection	a collision involving a semitruck resulted in a spill of 25 to 30 gallons of diesel fuel
3/15/13 at 6:17 pm	SR 503 milepost 4.30	batteries with tops removed were discovered on the shoulder
3/18/13 at 11:35 am	SR 97 milepost 13.30	a traffic collision resulted in two 50 gallon fuel tanks being punctured and spilling fuel
3/23/13 at 5:51 am	SR 5 milepost 174.61	a WSDOT dump truck lost 15 to 20 gallons of hydraulic fluid on the shoulder and down a drain
3/30/13 at 6:55 pm	SR 20 milepost 65.96	a traffic collision resulted in loss of engine coolant down a storm drain
4/9/13 at 7:44 pm	SR 14 milepost 46	a traffic collision resulted in a diesel spill that covered both lanes
4/10/13 at 6:54 pm	SR 5 milepost 142.05	a traffic collision involving a semitruck hauling 6,000 gallons of glue caused glue to cover 3 lanes and enter the shoulder ditch
4/19/13 at 7:47 pm	City of Everett	6 gallons of antifreeze entered an underground vault maintained by the City of Everett at a city park and ride
5/29/13 at 4:29 am	SR 5 milepost 164	a tow truck operator punctured a semitruck fuel tank while removing the trailer, 70 gallons of diesel fuel was lost, some entered a storm drain
6/1/13 at 6:21 pm	SR 5 milepost 11.94	the fire department reported a large amount of oil on the Marvin Road southbound onramp

Tracking Implementation of Permit Requirements

Helps Keep WSDOT Accountable

WSDOT assigns tasks required by the permit to our staff. The Permit Coordinator regularly reviews our implementation status, interacts with the staff, and sends reminders of approaching deadlines. Externally, the Permit Coordinator interacts with permit regulators, other municipal permit holders, and various stakeholder groups.

The permit requires WSDOT's Annual Reports to include a description of permit implementation status and, if necessary, explanations for why we failed to meet permit deadlines and how we will meet requirements in the future. The Annual Stormwater Report helps track permit implementation and helps keep WSDOT accountable to not only the permit administrators at Ecology, but also policy makers, legislators, advocacy groups, and the general public.

Summary of EPA Permit Compliance Audit and Follow-Up

During the last reporting period (in winter 2012), EPA and Ecology performed an audit of WSDOT's permit compliance. The audit focused on four components of our SWMPP, including stormwater facilities inventory and documentation, construction stormwater pollution prevention, illicit discharge detection and elimination (IDDE), and pollution prevention at maintenance facilities and material storage sites. WSDOT received an inspection report from EPA and Ecology on July 18, 2012. It listed six areas of concern and recommendations on how to address them. Table 2 summarizes the findings as well as follow-up actions we took to address the concerns.

Table 2 Summary of Audit Concerns and Follow-up Actions

Area of Concern Contained in Audit Report	WSDOT's Follow-up Actions
<p>WSDOT needs to ensure that it is on schedule to map all known municipal separate storm sewer outfalls and structural stormwater treatment and flow control best management practices (BMPs) by the end of the Permit term.</p>	<p>WSDOT has already mapped all known existing stormwater BMPs, and continually updates the data to include newly identified and constructed BMPs. As of June 30, 2013, WSDOT mapped outfalls on about 96 percent of the highway miles in the permit area. We remain on track to complete mapping of our discharge points before the March 2014 permit deadline.</p>
<p>WSDOT could improve its procedures to ensure that all illicit connections/ illicit discharges (IC/IDs) are included in the IDDE Report spreadsheet and that IC/IDs are tracked from identification through resolution.</p>	<p>WSDOT tracks all identified potential illicit connections in our IDDE database. An investigation of each potential illicit connection determines whether the connection is authorized or confirmed as illicit. We report the confirmed illicit connections in our Annual Stormwater Report and continue to track them through resolution. WSDOT also continues working with municipalities, Washington State Patrol, Emergency Operations Center, and the Department of Ecology to develop a notification process for faster spill response and notification.</p>
<p>WSDOT did not provide adequate records to demonstrate that appropriate staff had been trained on the identification of IC/IDs, or on procedures for reporting and responding to IC/IDs.</p>	<p>WSDOT provided additional information to Ecology including a list of training courses that include IDDE training information, and the number of staff trained in those courses. Since permit issuance in 2009, WSDOT has trained more than 1,600 employees on IDDE identification and notification procedures. We also now incorporate IDDE training information in two additional training courses required for maintenance staff and began providing an IDDE-specific refresher training course to all maintenance and project design staff.</p>
<p>WSDOT could improve its Fall TESC Effectiveness Assessments.</p>	<p>WSDOT implemented new procedures for its fall assessments requiring written response from construction project offices documenting how they addressed the action items identified during the fall assessment within ten days.</p>
<p>WSDOT needs to ensure that it is on schedule to annually inspect permanent stormwater BMPs by the specified compliance date.</p>	<p>WSDOT completed its first annual inspection of permanent stormwater BMPs by the March 2013 permit deadline.</p>
<p>Concerns pertaining to pollution prevention and housekeeping practices were noted during site visits at WSDOT Maintenance facilities and material storage sites during the audit inspection.</p>	<p>WSDOT completed several capital improvement projects at the Kent and Lakeview maintenance facilities to address specific concerns detailed in the audit inspection report. We have one more retrofit improvement project near completion at the Kent facility. We updated the SWPPPs for the Lakeview maintenance facility to reflect the changes and will update the SWPPP for the Kent facility when all improvements have been completed. In addition to these specific improvements, WSDOT has proposed revisions to our SWMPP as a part of the permit reissuance process to address concerns related to storing sweeping and vector material and winter chemicals at sites within areas covered by the permit. WSDOT continues to evaluate the adequacy of facility SWPPPs and their implementation through site inspections.</p>

Funding for Permit Implementation

The permit requires WSDOT to request adequate resources from the Legislature to maintain compliance with the permit. We must include those budget requests in our Stormwater Report. WSDOT first submits an agency budget request to the Office of Financial Management within the Governor's office. The Governor then submits a transportation budget to the Legislature recommending funding levels and allocations. Table 3 shows the Governor's recommendations to the Legislature for the 2011-2013 Biennium for implementing the permit. It also shows the amount the Legislature appropriated for permit implementation.

Table 3 Budget for 2011-2013 Permit Implementation

Permit Implementation Funds	2011-2013 Biennium
Requested	\$ 15,117,000
Appropriated	\$10,174,000

WSDOT mitigates adverse stormwater runoff effects by building stormwater treatment and flow control best management practices (BMPs) as a part of highway construction projects. During this reporting period, WSDOT spent about \$1.6 billion on our Highway Construction Program statewide. A portion of this amount covered construction of stormwater management systems. Our accounting systems do not track individual stormwater-related expenditures in overall project costs. This makes generating stormwater mitigation costs very difficult. Based on WSDOT's *2013 Project Environmental Mitigation Costs Case Studies* report stormwater mitigation can account up to about 18 percent of an overall project's costs. A specific project's stormwater mitigation costs can depend on the location of the project related to urban areas, whether it is in eastern or western Washington, the size of the project, and its proximity to receiving water bodies, among other factors.

In addition to the appropriated amount in Table 3 and the portion of the Highway Construction Program noted above, several WSDOT programs receive base amounts of ongoing funding to implement permit requirements. The permit requires WSDOT to track the cost of implementing the permit. Table 4 includes our estimate of how much we spent (from the appropriated amount in Table 3 and base ongoing funding) on implementing the permit requirements during this reporting period.

Table 4 Estimated Expenditures for Permit Implementation for July 1, 2012 - June 30, 2013
(Amended November 2013)

Implementation Tasks	Estimated Expenditures for Permit Implementation for this Report Period
Permit Coordination	\$ 82,700
Stormwater Program Management and Oversight	\$ 124,300
Total Maximum Daily Load Management	\$ 123,300
Construction Site Pollution Prevention Management	\$ 116,500
Stormwater Features Inventory	\$ 1,332,400
Illicit Discharge Detection and Elimination	\$ 115,300
Monitoring and Research	\$ 1,279,200
Annual Reporting	\$ 147,300
Washington State Ferries	\$ 68,000
Highway and Facility Maintenance	\$ 18,151,900
Stand-alone Stormwater Retrofit	\$ 632,600
Highway Runoff Program	\$ 169,900
Total	\$ 22,343,400



Chapter 2 - Stormwater Program Management

Stormwater Management Responsibilities

WSDOT Manages Stormwater

Traditionally, WSDOT focused on maintaining safe driving conditions and preserving the condition of roadways. While safety and preservation continue to be top priorities, WSDOT also protects and restores the environment. WSDOT operates and maintains more than 40,000 acres of paved surfaces including highways, rest areas, ferry terminals, maintenance facilities, and park and ride lots. We recognize that stormwater runoff from these transportation facilities can contribute to water quality problems.

To minimize the negative effects of stormwater runoff from our facilities, WSDOT uses operational and structural practices described in our Stormwater Management Program Plan. These stormwater BMPs can prevent or reduce pollution in stormwater runoff and control runoff volumes and peak flows. Managing stormwater that comes from WSDOT facilities helps us fulfill our environmental stewardship commitment, as well as regulatory obligations.

Offices Responsible for Implementation

WSDOT's Headquarters Offices work with the six Region Offices and the Washington State Ferries Division to implement the permit. In the Headquarters Offices, the Environmental Services Office, in coordination with the Stormwater Policy Committee, leads implementation of the permit and guides policy development for stormwater management.

The Headquarters Maintenance and Operations Division and Design Office's Hydraulics Branch provide stormwater-related technical support to the other offices. Region Offices and Washington State Ferries are generally responsible for implementing the permit in the field. However, some headquarters programs perform permit-required actions in the field as well.

Stormwater Policy Committee's Role

WSDOT created the Stormwater Policy Committee (SPC) to:

- Help guide stormwater management policy and deliberations with permitting agencies.
- Provide framework for communication, coordination, and cooperation among the offices responsible for implementing the permit.
- Recommend preferred approaches to meet regulatory obligations.
- Guide preparation of the biennial stormwater work plan.
- Evaluate the Stormwater Management Program Plan's effectiveness.
- Assist in resolving problems and conflicts related to stormwater.

The permit requires the SPC to meet quarterly. In this reporting period, the SPC met:

July 12, 2012

October 10, 2012

January 9, 2013

April 26, 2013

Some of the members of the SPC identify resources necessary for permit implementation and prepare the budget for stormwater management and permit implementation. These members then brief the full committee on the process and decisions made. During this reporting period, WSDOT also used the SPC as a sounding board during the permit reissuance process, including *Highway Runoff Manual* revisions.

Intergovernmental Coordination Benefits WSDOT

WSDOT coordinates with local governments, multiple agencies, tribes, and groups that operate in areas where WSDOT has facilities with MS4s. We find this coordination particularly helpful in identifying areas needing retrofit or maintenance, removing illicit connections, responding to spills, and conducting public outreach and education.

When our stormwater conveyance system connects with a local government's system, the local government may elect to assess a utility fee on WSDOT. These fees contribute to development and implementation of those municipalities' stormwater management programs to address stormwater discharges related to WSDOT. We also have a memorandum of understanding with The Association of Washington Cities that defines maintenance responsibilities for state highways that are also city streets and some of the MS4s associated with the highways located within the cities.

WSDOT continues to support liaison positions with agencies and the tribes. WSDOT provides staff, or funding for staff, at several state and federal agencies who are dedicated to transportation projects. The liaisons assist on issues like early project coordination, the Endangered Species Act (ESA) consultation, and environmental permit review and issuance.

WSDOT also participates in developing TMDLs. Chapter 3 contains more information regarding WSDOT's role in the TMDL development processes.

Stormwater Management Guidance Documents and Manuals

WSDOT revises and updates our manuals and procedures regularly. The permit requires WSDOT to report significant changes, related to stormwater management, made to these documents. During this reporting period, WSDOT only proposed changes to our SWMPP.

Stormwater Management Program Plan

The permit requires WSDOT to implement a SWMPP approved by Ecology. Since we expect our permit to be reissued next year, we worked to significantly revise our SWMPP during this reporting period. The revisions include a new section on spills, a refined approach to stormwater features inventory, and refinements to stormwater retrofit prioritization and construction site inspections. WSDOT used lessons learned during the course of our existing permit's term as well as the findings from our EPA audit in early 2012 to help inform the proposed SWMPP revisions.

Evaluation of Extending Geographic Scope of Permit

Prior to the Phase 1 permit reissuance in January 17, 2007, WSDOT considered options for how to seek future permit coverage and manage stormwater runoff from its facilities. After much deliberation, WSDOT elected to seek municipal permit coverage under its own permit. The resulting permit covers WSDOT facilities in the areas covered by Phase I and II permits, but requires WSDOT to evaluate extending the geographic scope of permit coverage to statewide as part of this year's annual report.

Since then, little has changed to build a compelling case for the need to expand the geographic scope of WSDOT's permit to statewide. For example, one key concern we had in prior deliberations about statewide coverage involved the constraints on our ability to seek remedies to prevent polluted stormwater from flowing onto WSDOT property from adjacent properties outside of areas covered by Phase I and II permits. In areas not covered by permits, Ecology cannot require jurisdictions to adopt the codes needed to enforce remedies for those situations. This concern still exists for us today. Expanding the geographic scope of WSDOT's permit beyond the areas covered by Phase I and II permits would increase WSDOT's exposure to third party liability for such discharges into WSDOT's MS4.

Another concern we have involves the further stress to WSDOT's constrained resources by spreading them thinner across a larger geographic area. Currently, about 1,600 centerline miles of highway are covered by the permit. With statewide coverage, this would increase to about 8,500 centerline miles. WSDOT considers this particularly significant given the resource challenges, constraints, and agency downsizing we have as a result of the prolonged economic downturn.

Resource constraints aside, expanding WSDOT's permit coverage area is not a necessary step to make statewide stormwater management investments which can demonstrate benefits. WSDOT already implements several elements of our SWMPP statewide. This includes implementing the *Highway Runoff Manual*, controlling erosion and sediment at construction sites, performing integrated vegetation management and other maintenance-related pollution prevention activities, conducting stormwater-related research, and constructing stormwater treatment and control facilities. We also perform corrective actions required by applicable TMDLs and implement SWWPPs at ferry terminals in areas outside the Phase I and II permit coverage areas.

In summary, we believe the current geographic scope of the permit, allowing for recent adjustments in the Phase 1 and 2 boundaries, helps WSDOT use our resources efficiently and effectively while allowing us the flexibility to make additional investments as legislative-directed funding allows.

Chapter 3 - Total Maximum Daily Loads

Total Maximum Daily Loads

A TMDL identifies water quality pollution problems in a watershed, specifies how much pollution needs to be reduced or eliminated, and provides targets and strategies to achieve compliance with water quality standards. The EPA requires Ecology to develop a TMDL for each water body that does not meet state water quality standards for a specific pollutant.

TMDLs Included in the Permit

The permit requires WSDOT to comply with applicable EPA-approved TMDLs. Ecology can add new applicable TMDLs to the permit at a minimum of every 18 months. This most recently happened through the March 2012 permit modification, which added 15 TMDLs. The permit currently includes 26 TMDLs statewide. Figure 2 depicts WSDOT facilities within these TMDL areas.

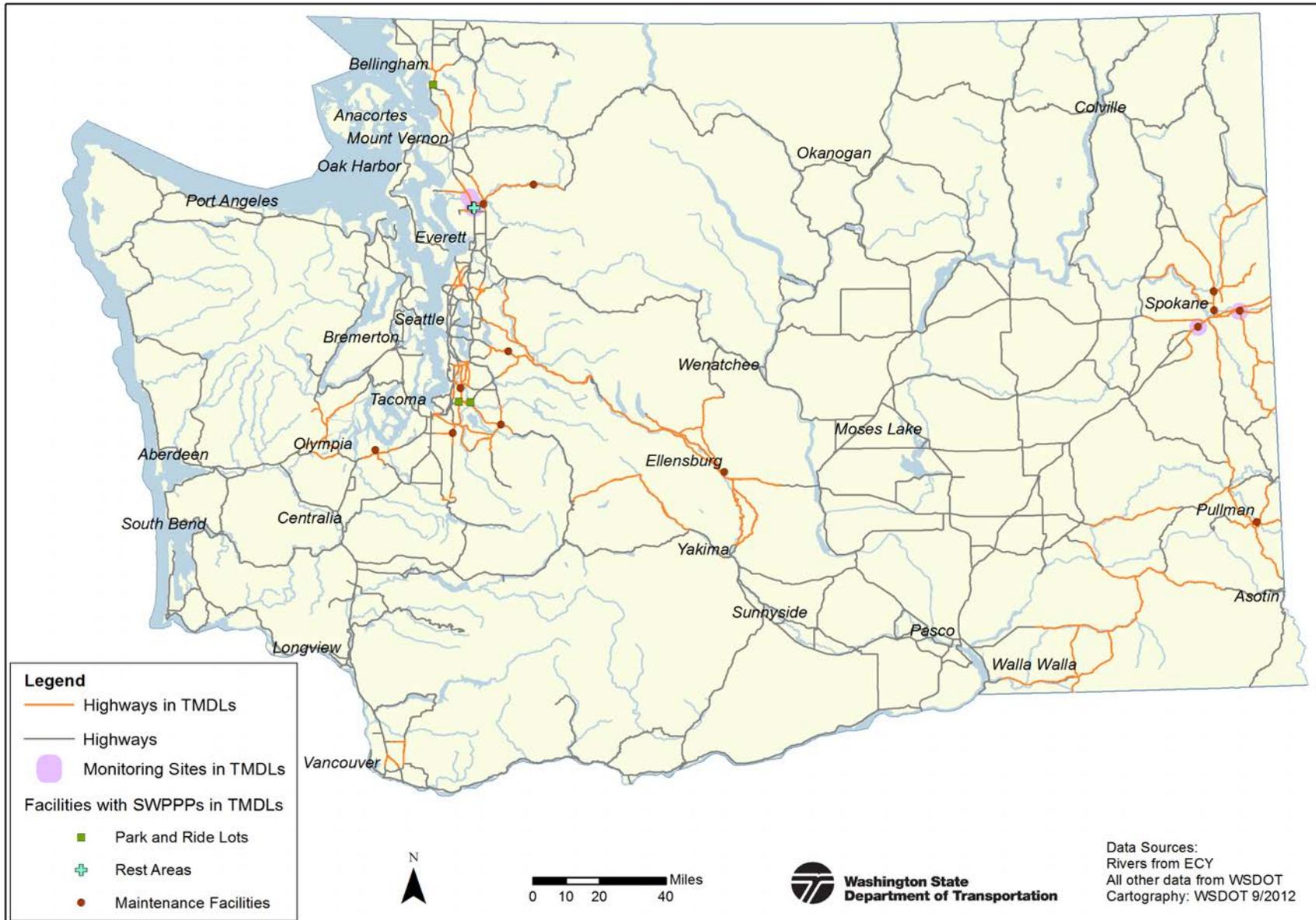
Implementing TMDL Requirements

WSDOT's Programmatic Approach

Originally, WSDOT developed a fecal coliform programmatic approach to streamline the development of TMDL implementation plans and ensure WSDOT's required action items were applicable and appropriate. We revised the programmatic approach to apply to other TMDL pollutants like temperature, sediment, and nutrients. The programmatic approach applies when evidence exists demonstrating WSDOT is a significant contributor of the pollutant of concern in the watershed. Evidence includes stormwater sampling data or other actionable information.

As part of our programmatic approach, we perform discharge inventory, TMDL pollutant-related illicit discharge detection and elimination and source identification, and look for TMDL pollutant-related maintenance issues. WSDOT posts the summary reports of our data collection efforts in TMDL areas and the associated standard operating procedures (SOPs) for completing the work on our TMDL website.

Figure 2 WSDOT Facilities and Monitoring Sites within TMDLs Included in the Permit



WSDOT Performed All Actions Required by TMDLs

As required by the permit, WSDOT summarizes the status of compliance with each of the TMDL-related action items listed in Appendix 3 of the permit in this report. The TMDL Implementation Summary table in Appendix 1 of this report provides this information.

In addition to the information in Appendix 1, the permit requires WSDOT to summarize any relevant actions we implemented that affect stormwater discharges to water body segments subject to TMDLs covered in the permit. Relevant actions include BMP installation, retrofit projects, pollution prevention activities above and beyond the permit requirements, and post-construction stormwater monitoring. WSDOT's post construction stormwater monitoring sites in TMDL areas appear on the map in Figure 2. WSDOT also performed the following relevant actions in TMDL areas covered in the permit during this reporting period:

- Within the Walla Walla TMDL, we partnered with Reser Creek Priority Projects Group and Blue Mountain Land Trust to create a 17 acre mitigation site. This effort included wetland creation and planting.
- In the Spokane River Watershed TMDL, we constructed ponds, drywells and other stormwater treatment BMPs to infiltrate and filter stormwater into the ground along SR 395. WSDOT has permit-required stormwater monitoring sites within this TMDL as well. Figure 2 shows specific monitoring locations and WSDOT's stormwater monitoring annual reports describe the sites and monitoring activities.
- In the Salmon Creek Watershed TMDL, along Highway 502, WSDOT constructed detention ponds, energy dissipaters, flow restrictors and other BMPs to infiltrate and filter stormwater.
- Within the Swamp Creek Basin TMDL, WSDOT has permit-required monitoring sites. Figure 2 shows specific monitoring locations and WSDOT's stormwater monitoring annual reports describe the sites and monitoring activities.

WSDOT's Involvement in TMDL Development

As encouraged in the permit, WSDOT participates in TMDL development. After creating a list of TMDLs under development by Ecology, we prioritize our involvement efforts for each of the TMDLs on the list. WSDOT may attend TMDL development meetings, review and provide comments on draft TMDL documents, and collaborate with Ecology and other TMDL stakeholders. During this reporting period, WSDOT participated in developing the following TMDLs (with the pollutants of concern noted in parentheses):

- Clarks Creek (stormwater flow, dissolved oxygen, and sediment)
- Cranberry, Mills, and Johns Creek (temperature)
- Deschutes River (temperature, dissolved oxygen, fecal coliform, PCBs, pH, phosphorus)
- French Creek and Pilchuck River (temperature, dissolved oxygen, and pH)
- Liberty Bay (fecal coliform)
- Little Spokane River (dissolved oxygen, and pH)
- Palouse River (temperature)
- Skykomish River (temperature)
- Soos Creek (stormwater pilot)
- Squalicum Creek (stormwater pilot)

Chapter 4 - Construction Site Stormwater Pollution Prevention



WSDOT Projects Keep Spill Prevention Plans On Site

WSDOT requires our construction contractors to prepare Spill Prevention, Control, and Countermeasures (SPCC) plans for construction projects. We provide guidance for writing these plans in our *Standard Specifications*, the *Highway Runoff Manual*, and on our hazardous materials website. Each project must submit an SPCC plan and receive approval from WSDOT before construction activity may begin. Contractors must keep a copy of the SPCC plan on site during construction. As required by the permit, WSDOT verifies the SPCC plan is on site during our fall assessments. In the 2012 fall assessments, all 15 of the projects assessed had an SPCC plan on site.

Figure 3

Contractors use several types of erosion control BMPs together at the SR 500 - St. Johns Blvd Interchange project in Vancouver.

WSDOT Works to Prevent Erosion and Control Sediment

Erosion at construction sites can generate excess sediment that can pollute stormwater runoff. If left untreated, stormwater carrying excess suspended sediment can degrade water quality and habitat in receiving water bodies. Erosion can also create dangerous work site conditions and increase the cost and time needed to complete projects. WSDOT uses erosion control BMPs to prevent these adverse effects. We also:

- Provide statewide erosion control training and technical support to staff.
- Develop policy and contract language to ensure permit compliance.
- Perform statewide erosion control assessments of project construction sites.
- Review water quality data collected by projects during construction and submit monthly discharge reports to Ecology.

Temporary Erosion and Sediment Control Plans

WSDOT designers develop temporary erosion and sediment control (TESC) plans to manage risk on construction projects. TESC plans consist of a narrative and site plan sheets establishing when and where the project must use specific BMPs to prevent erosion and control sediment. Chapter 6 of the *Highway Runoff Manual* includes WSDOT's guidelines for designing and implementing TESC plans.

WSDOT provides additional guidance on how to implement TESC plans through our *Standard Specifications*, which govern all highway construction. Projects requiring specialized solutions prepare project-specific special provisions. WSDOT's erosion control specialists also help designers identify BMP solutions for unusually difficult situations.

To ensure designers use the most effective and reliable erosion control BMPs, WSDOT routinely evaluates new products and methods. We introduce new products and methods through changing our *Standard Specifications* and the *Qualified Products List*, a list of resources available to WSDOT engineers.

Certification and Training

WSDOT requires each of our contractors to have a Certified Erosion and Sediment Control Lead (CESCL). This CESCL oversees implementation of spill prevention and erosion and sediment control activities on construction projects. They must receive certification training from a provider approved by Ecology. All WSDOT construction site inspectors must also become certified if they collect discharge samples from construction sites. All of the approved certification training courses include a day in class followed by a day in the field installing BMPs.

Erosion and sediment control BMPs include designs, procedures, and physical products and structures.

A design BMP could consist of designing a project to minimize disturbance of existing vegetation.

A procedural BMP to control erosion might involve phasing project work.

Physical BMPs can include stormwater ponds, erosion control blankets, silt fences, and applying straw mulch for ground cover.

As required by the permit, during the fall assessments, WSDOT verifies the certification status of the CESCL for each project. All 15 of the projects assessed in 2012 confirmed the CESCLs held certifications.

The permit requires training WSDOT personnel and consultants involved in designing or inspecting TESC plans, tracking the number of courses offered, and tracking the number of participants in the courses. In this reporting period, WSDOT held seven *Construction Site Erosion and Sediment Control Courses*. In all, 116 WSDOT personnel and consultants participated. The training covers topics including the regulatory framework for construction activities, spill prevention techniques, factors affecting soil erodibility, proper erosion and sediment control BMPs, and the TESC planning process.

WSDOT Evaluates TESC Effectiveness in Annual Fall Assessments

Between September and November each year, WSDOT performs a fall assessment, officially called the Statewide Erosion Plan Implementation and Effectiveness Assessment. WSDOT assesses all active construction projects posing a moderate to high risk of erosion. We identify these project sites based on the amount of disturbed soil, slope length and gradient, soil type, and proximity to receiving water bodies. The assessments occur in the fall to allow time for projects to correct deficiencies before heavier winter rain, which increases the potential for erosion.

In fall 2012, WSDOT assessed 15 construction projects. We evaluated each site on implementation of TESC plan elements, responsiveness to changing field conditions, and BMP effectiveness. Where we found TESC plan or BMP inadequacies, WSDOT followed up with the project office to provide technical assistance on improving the construction site's preparedness for the wet weather season. The permit requires WSDOT to report a summary of the results of the fall assessment. Table 5 provides this summary for the 2012 fall assessment compared to previous years' fall assessments.

Lessons Learned from 2012 Fall Assessment

In 2012, the performance rates for nine of the twelve fall assessment measures either increased or held stable compared to 2011. Performance rates for three of the fall assessment measures decreased slightly in 2012. One of those, sediment track out, continuously presents challenges. The performance expectation is "no track-out." However, standard BMPs like rock entrances and steel rumble plates are not 100 percent effective at preventing track-out, especially during the rainy season in western Washington. While street sweeping is often used to clean the sediment off the roadway, it does not remove all of the fine sediments. Incorporating tire washes with defined performance expectations into contracts would be more effective at keeping sediment off the roadway to begin with.

Table 5 Results of 2012 Fall Assessment

Fall Assessment Measure	Percent of Projects Found to be Acceptable								Performance Status*
	2005	2006	2007	2008	2009	2010	2011	2012	
Control other pollutants from impacting water quality	95	89	93	100	100	82	89	100	Improved
Storm drain inlet protection	86	93	92	100	86	83	87	100	Improved
Channels for temporary stormwater conveyance stabilized	67	59	92	100	87	83	67	89	Improved
Maintain BMPs	95	44	81	93	88	77	89	87	Stable
Manage project erosion/sediment control BMPs proactively	90	92	90	98	97	93	100	97	Stable
Delineate clearing limits	87	94	90	100	100	100	100	100	Stable
Control flow rates	86	72	93	93	93	100	100	100	Stable
Sediment control BMPs installed on time	82	61	92	93	100	100	100	100	Stable
Dewatering	100	100	100	100	100	100	100	100	Stable
Erosion control BMPs installed on time (stabilize soils)	79	56	83	80	93	86	100	94	Decreased
Access routes prevent tracking of mud onto streets	95	94	81	86	94	86	100	93	Decreased
Protect cut & fill slopes	100	56	83	100	64	71	100	83	Decreased

* "Stable" performance status indicates measures within 5% of the previous years' rating

The performance rate for stabilizing soils and protecting slopes also decreased in 2012. Projects often use hydraulically applied mulch products and biodegradable erosion control blankets to stabilize soils and protect slopes. To ensure proper performance of soil stabilizing and slope protection BMPs, WSDOT revised contract language, standard plans, and training material to ensure projects do the following:

- Install top of slope flow control BMPs to prevent concentrated flows from entering blanketed or mulched areas. Mulches and blankets do not hold up to concentrated flows.
- Allow hydraulically applied mulches to fully cure and apply them evenly and thickly. Hydraulically applied mulches do not adhere well to rocky substrates.
- Prepare soil surfaces so blankets contact the soil and overlap, anchor, and staple the blankets properly. Blankets do not work if they are not contacting the soil properly.
- Apply seeding under, not on top of, blankets and mulches. Seed may also be mixed into a mulch product as the manufacturer recommends.

Chapter 5 - Stormwater Infrastructure

New Facilities

Planning and Designing New Facilities

When WSDOT constructs new transportation facilities or modifies existing transportation facilities, we incorporate stormwater management BMPs to minimize adverse effects of stormwater runoff on receiving water bodies. WSDOT's *Highway Runoff Manual* (HRM) and *Hydraulics Manual* provide consistent design and planning procedures to use statewide to ensure we meet the level of stormwater management established by Ecology's stormwater management manuals.

WSDOT trains staff and consultants who perform stormwater management BMP design work to help ensure they understand and use the design procedures in the HRM. The permit requires WSDOT to report the number of HRM training opportunities we provide and the number of staff who attend. In this reporting period WSDOT offered on-line training classes which trained nine people.

The permit also requires WSDOT to annually audit 10 percent of projects that have consultants involved in stormwater BMP design to check how many of the consultants received HRM training or worked under someone who received the training. In this reporting period, WSDOT audited 100 percent of the projects designed by consultants, and all of them were produced or overseen by someone who completed HRM training.

When selecting stormwater management BMPs for a project, the designer considers treatment and flow control options in light of ongoing maintenance and operation costs as well as other selection criteria. After selecting permanent stormwater management BMPs for a project, the HRM directs the designer to contact the region maintenance office to discuss the BMPs selected. Some types of BMPs require written consent from the Region Maintenance Engineer and the Region Hydraulics Engineer to authorize their use. These processes involve maintenance staff in the stormwater BMP design and approval process, a requirement of the permit.

Based on a survey in September 2012, just 20 of the over 1,100 subscribers to the HRM e-mail list seemed interested in classroom HRM training. Due to this reduced interest in the classroom training, WSDOT held on-line classes instead.

Low Impact Development

The permit requires WSDOT to use Low Impact Development (LID) techniques for new transportation facilities where feasible. LID techniques include non-structural, preventative actions and pollution source reduction approaches. WSDOT's HRM outlines a process for selecting BMPs for new and redeveloped transportation facilities. The process requires designers to investigate the feasibility of using LID and, where feasible, choose LID BMPs before selecting other, non-LID BMPs.

As required by the permit, WSDOT identifies barriers to implementing LID and tries to take actions to remove the barriers that we identify. WSDOT has identified both physical and regulatory barriers to implementing LID. Physical barriers generally relate to site constraints. Our transportation facilities tend to be long and narrow. Thus, in many instances, sufficient area to infiltrate all of the stormwater runoff from our facilities may not exist. Other physical constraints that may be present include soils with slow infiltration rates, high water tables, shallow bedrock, and other features in the soil profile that prevent infiltration through the soil.

Some physical barriers relate to safety constraints. For example, many LID BMPs require soils with high infiltration rates. Often, these soils cannot support the weight of vehicles, making it unsafe to locate them in vehicle recovery zones along the sides of the roads. In addition, some LID BMPs require planting specific vegetation that we may not be able to use because of sight distance and obstruction-free guidelines.

WSDOT identified some regulatory barriers to LID BMPs in their design criteria. In particular, the margins of performance safety factored into BMP design criteria have been arbitrarily set in most cases, with little or no supporting technical or scientific basis. These criteria generally translate into requiring larger areas for siting LID BMPs, which then become physical barriers to implementing them in highway settings due to insufficient area in the right-of-way to infiltrate all of the stormwater runoff.

WSDOT continually works with Ecology to develop new BMPs and revise design standards and modeling techniques so that we can use LID approaches in more locations. We also have begun research to identify better ways to determine infiltration rates in roadside embankments and showed through a research project that sheet flow BMPs are effective on steeper slopes than were previously allowed. We are conducting research on compost leachate to determine which types of compost are best for use in LID BMPs.

LID attempts to mimic natural hydrologic processes, and minimizes the creation of impervious surface and the disturbance of soils and vegetation.

Consulting with the Services

Although no projects met the criteria during this reporting period, the permit requires WSDOT to consult with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service (Services) for projects meeting the following criteria:

- Located in western Washington State, in areas with potential adverse stormwater impacts to ESA-listed fish species.
- Add new impervious surface.
- Not federally funded or not requiring consultation under Section 7 of the ESA.

Stormwater Features Inventory

Stormwater Features Inventory Database

The Stormwater Features Inventory Program uses the Stormwater Features Inventory Database to store and manage stormwater infrastructure data. The Stormwater Features Inventory Database shares information with the Highway Features Database, which WSDOT maintenance crews use to support their BMP and catch basin inspection efforts. Several other offices also have access to the data in the Stormwater Features Inventory Database through Geographic Information System (GIS) software.

Currently, our inventory efforts involve researching and entering information from as-constructed contract plans (as-builts) and other existing data sets into our Stormwater Features Inventory Database. They also include field-based mapping and documentation of new information using Global Positioning System (GPS) units.

As-builts show what was constructed or modified during a project, including discharge points, pipes, drainage inlets, BMPs, and ditches. WSDOT staff use GIS to place the as-built images where they belong on a map (geo-reference). Staff then use GIS to create points, lines, and polygons in the Stormwater Features Inventory Database to represent the individual features of interest from the as-builts. Staff can add information about the points, lines, and polygons in the database as well.

Up to 84 attributes can be associated to each stormwater feature inventoried. Attributes can include physical information, use information, and the accuracy of collection method.

In addition to as-builts, WSDOT staff enter legacy data from WSDOT's previous discharge point inventory efforts, other WSDOT databases, and data shared by municipalities as part of our data sharing and coordination efforts into the Stormwater Features Inventory Database. Once entered in the database, staff perform quality assurance and quality control checks on this data.

WSDOT's field crews locate and document stormwater features using GPS units. Crew members use the GPS units to collect geographic locations of stormwater infrastructure features and manually enter attribute information for each feature. WSDOT performs field inventory in areas where we have no, or minimal, existing information of stormwater infrastructure. In these locations WSDOT finds and locates features of interest. Field crews map the features and document all attribute information using the GPS units for the first time. WSDOT also performs field inventory in areas where we have a base level of data from our office inventory efforts. In these areas, field crews load the stormwater feature locations and attributes into the GPS units and update or confirm the information, as needed, based on field observations.

Progress on Mapping BMPs and Outfalls

The permit requires WSDOT to map and document all known outfalls and structural stormwater treatment and flow control BMPs in the permit coverage area and enter them into the Stormwater Features Inventory Database by March of 2014. WSDOT has mapped all known existing stormwater BMPs, and we continually update the data to include newly identified and constructed BMPs.

WSDOT remains on track to complete mapping of our outfalls before the March 2014 deadline. By the end of this reporting period, WSDOT mapped outfalls on about 96 percent of the highway miles in the permit area. This mapped data combines new inventory work, conducted primarily to meet the permit obligations for mapping, with outfall inventory data, collected prior to the issuance of the permit and recently reviewed by WSDOT.

Figure 4

WSDOT field crews perform stormwater features inventory with a GPS unit.



Tracking New Stormwater BMPs

WSDOT added a requirement in the 2011 HRM requiring all new stormwater BMPs to be marked in the field with signs similar to the delineation markers with stickers (“fish sticks”) we use to identify fish-bearing streams and water bodies.

By March 2014, the permit requires WSDOT to begin entering key features and locations of newly constructed stormwater facilities into a database. WSDOT currently has procedures in place requiring project offices to submit as-builts to the headquarters office as a step in the project closeout process. We then use GIS to manually map and document individual stormwater features from the as-builts in the Stormwater Features Inventory Database as described above.

WSDOT has been researching alternatives to make the as-built submission process more automated and to import the information from the as-builts directly into the Stormwater Features Inventory Database. Our on-going collaborative effort involves WSDOT’s Environmental Services Office, the Computer Aided Engineering Office, the Office of Information Technology, the Transportation Data Office, the Maintenance Office, and the Design and Construction Offices. In this reporting period, WSDOT tested software set up to accomplish this task. The testing failed due to incompatible updates to both of the base software packages. WSDOT has been reevaluating and working on alternative processes that would avoid these problems with future upgrades to the base software. Once we choose a new process, we will construct process tools and test them.

The permit requires WSDOT to audit 10 percent of new projects to verify these facilities get entered in the database correctly beginning in March 2014. WSDOT will include this audit process as part of our field inventory efforts. In the same process described for performing field inventory in areas where we have a base level of data, field crews will load the stormwater facility location and attribute information from the projects being audited into GPS units. Field crews will then verify the information in the database, making corrections if what they find in the field differs from the as-builts.

The permit requires WSDOT to report the number and type of stormwater BMPs built annually. In this reporting period, we constructed 169 BMPs statewide, 115 of which were built within the areas covered by the permit. Table 6 summarizes the number and types of BMPs built in areas covered by the permit. The full list of stormwater BMPs built statewide appears in Appendix 2.

Table 6 Stormwater BMPs Built in Areas Covered by the Permit in the 2013 Reporting Period

Project Name	Region	Infiltration	Dispersion	Biofiltration	Wet Pool	Other	Total
I-5/SR 161/SR 18 - Interchange Improvements	Northwest			4	4	5	13
SR 529/Ebey Slough Bridge - Replace Bridge	Northwest			3		1	4
I-405 NE 116th St Interchange	Northwest			3	2	2	7
SR 9/SR 92 Improve Intersection	Northwest		1		1	4	6
SR 9/SR 531-172nd St NE - Intersection Improvements	Northwest			5	2	2	9
US 395/NSC-Euclid Ave to Francis Ave-Paving Re-bid	Eastern		8	6			14
US 395/NSC – Parksmith Rd Interchange	Eastern	1		6			7
SR 28/East Wenatchee Area - Paving	North Central			2		2	4
SR 507/Vicinity East Gate Rd to 208th St E - Safety	Olympic			2		1	3
SR 500/St Johns Blvd - Build Interchange	Southwest	2		4	4	1	11
SR 14/Camas Washougal - Add Lanes and Build Interchange	Southwest	8	7		2		17
SR 502/I-5 to Battle Ground - Add Lanes	Southwest			2	6	12	20
	Total	11	16	37	21	30	115

1. Infiltration includes: Infiltration Trench, Infiltration Pond, Infiltration Swale, Infiltration Vault, and Drywell.
2. Dispersion includes: Natural Dispersion, and Engineered Dispersion.
3. Biofiltration includes: Biofiltration Swale, Wet Biofiltration Swale, Bioinfiltration Pond, Vegetated Filter Strip, Compost Amended Vegetated Filter Strip, and Media Filter Drain.
4. Wet Pool includes: Constructed Stormwater Treatment Wetland - Detention Pond, Combined Stormwater Treatment Wetland/ Detention Pond, Constructed Stormwater Treatment Wetland, Combined Wet/Detention Pond, and Detention Pond.
5. Other includes: Hydrodynamic Separator, Flow Restrictor, Oil-water separator.

Updated GIS Layers

The permit requires WSDOT to report our updated GIS data layers. In this reporting period, WSDOT updated layers for: artificial discharge points, debris racks, discharge points, drainage inlets, energy dissipaters, flow restrictors, pipe ends, pipes, ditches, roadside slopes, concrete barriers, curbs, stormwater ponds, and stormwater vaults.

Mapping Connection Points

In May 2009, WSDOT began mapping points where our stormwater system connects to other systems along boundaries that we share with municipalities. WSDOT maps connection points at the same time as our outfalls. By the end of this reporting period, we mapped connection points on about 96 percent of the highway miles in the permit area. In this reporting period, WSDOT also coordinated and shared data with:

Aberdeen	Des Moines	Olympia	Tumwater
Algona	Kennewick	Pasco	Vancouver
Asotin	Kent	Pullman	Asotin County
Auburn	Lacey	Puyallup	King County
Bellevue	Lakewood	Renton	Pierce County
Bellingham	Longview	Seattle	Skagit County
Bothell	Mukilteo	Shoreline	Thurston County
Clarkston	New Castle	Tacoma	

Registering Underground Injection Control Facilities

The Underground Injection Control (UIC) Program (Chapter 173-218 WAC) regulates discharges of fluids into UIC wells to prevent groundwater contamination. This regulation, as well as the permit, requires WSDOT to ensure that UIC facilities meet the non-endangerment performance standard. WSDOT did this by registering and assessing all known existing UIC facilities by the required deadlines. We continue registering new UIC facilities with Ecology, another requirement of the regulation.

Retrofits

Why and When Retrofits Occur

Most of WSDOT's highways and facilities were built before the federal CWA and the Washington Water Pollution Control Act were enacted. Thus, most of the existing pavement surfaces do not have facilities to control stormwater flows or treat stormwater runoff before it discharges from our right of way. We address these deficiencies by prioritizing highway segments that either do not have any, or have substandard treatment or flow control, for retrofit.

The permit requires highway projects in the Puget Sound basin that add new impervious surfaces and exceed the threshold to comply with stormwater management requirements to meet more stringent project-triggered retrofit requirements than other regions of the state. For these projects, all existing impervious surfaces within the project limits must be retrofitted, if feasible and cost-effective, in locations identified as medium to high priority for stormwater retrofits.

Three alternatives exist in the event that retrofitting all the existing impervious surface is not feasible or cost-effective. These alternatives include retrofitting a portion of the existing impervious, retrofitting an equivalent amount of existing impervious surface off-site, or transferring money to fund stand-alone retrofit projects in high priority locations. Regardless of the alternative chosen, an amount of money equal to 20 percent of the cost to meet stormwater requirements for the new impervious surface must be spent. For applicable highway projects in the Puget Sound basin in low priority locations, WSDOT must transfer money to fund stand-alone retrofits.

Prioritization Process

The retrofit prioritization process consists of three major steps. Each step builds off the previous one.

Step 1 involves screening the entire state using GIS to identify areas that present greater than average risks for highway stormwater runoff.

Step 2 involves field inventory to identify areas with closed conveyance systems, known high habitat value, and erosion or pollution problems.

Step 3 involves collecting detailed site information to determine drainage areas and estimate costs to retrofit the area.

WSDOT developed a retrofit prioritization process to focus stormwater retrofit investments in areas of the greatest need, maximize immediate benefits by targeting areas with the highest benefits relative to cost, and reduce cost by identifying opportunities to combine retrofits with construction projects. The prioritization process results in assigning rank scores to highway segments.

Stand-alone Retrofit Funding

The permit requires WSDOT to report our biennial budget request for stand-alone stormwater retrofits to the Legislature in our annual stormwater report. The budget request follows the same process described in Chapter 1 for permit implementation funding. Table 7 shows the Governor’s recommendation to the Legislature for the 2011-2013 biennium, how much the Legislature appropriated, and how much we spent on stand-alone stormwater retrofits during the biennium.

Table 7 Stand-alone Retrofit Funding for the 2011-2013 Biennium

Funding Requested	Funding Appropriated	Spent in 2012	Spent in 2013
\$ 8,077,000	\$ 2,489,000	\$ 902,800	\$ 632,600

For projects in the Puget Sound basin meeting the project-triggered retrofit requirement, for which retrofitting all existing impervious surface is deemed infeasible or not cost-effective, the permit requires WSDOT to report the cost information we used to make that determination and describe where and how much retrofitting took place. During this reporting period, two projects needed to develop this cost information. Both projects, located in low priority areas for stormwater retrofit chose the option to transfer money to fund stand-alone retrofit projects in high priority locations. One, the Pilchuck Creek Bridge Replacement project, will transfer \$77,000 to fund stand-alone retrofit projects. The other, the Bickford Ave. and SR 2 Intersection Safety and Culvert Replacement project will transfer \$98,000 to fund stand-alone retrofit projects.

The permit also requires WSDOT to report how much money we transferred from projects in low priority locations in the Puget Sound basin to fund stand-alone retrofit projects in high priority locations. In this reporting period, no money was transferred.

Tracking Retrofits

WSDOT uses the Design Documentation Spreadsheet to track retrofits. We began using this spreadsheet to track the amount of acres retrofitted or reverted back to pervious surfaces on projects designed after June 2010. The spreadsheet, required by the HRM and *Hydraulics Manual*, documents whether a retrofit is stand-alone, project-triggered, or opportunity-based.

The permit requires WSDOT to report the number of stand-alone retrofits we construct. Although we are constructing stand-alone retrofits, none were completed during this reporting period. The permit also requires us to report the number of acres of existing impervious surface retrofitted or reverted to pervious surface through retrofit projects. This information appears in Table 8. The permit requires WSDOT to separately report the acreage of off-site project-triggered retrofit obligations incurred and accomplished through the retrofit alternative option for the Puget Sound basin described above. No projects used this alternative during this reporting period.

Table 8 Acres of Existing Impervious Surface Retrofitted or Reverted to Pervious*

State Route	Mile Post	Region	Project Name	Existing Impervious Surface Retrofitted (acres)	Existing Impervious Surface Reverted to Pervious (acres)	Reason for Retrofit
14	14.47-15.39	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	5.68	0	3.78 acres Project-driven 1.9 acres Opportunity-based
500	0.99-1.45	Southwest	SR 500/St Johns Blvd - Build Interchange	0.92	0	0.31 acres Project-driven 0.61 acres Opportunity-based
28	1.37-1.85	North Central	SR 28/East Wenatchee Area - Paving	8.02	0	Opportunity based
395	164.39-164.98	Eastern	US 395/NSC – Parksmith Rd Interchange	1.02	0	Opportunity based

* Includes projects designed after June 2010. For projects designed prior to June 2010, WSDOT did not track existing impervious surface retrofitted or reverted to pervious.

Illicit Discharge Detection and Elimination

Illicit Discharge Detection and Elimination Program

WSDOT’s Illicit Discharge Detection and Elimination (IDDE) Program identifies and eliminates illicit discharges and illegal connections that could adversely affect our stormwater system or property. WSDOT holds landowners adjacent to our right of way responsible for preventing pollution and treating stormwater before it leaves their property. However, WSDOT does not have regulatory authority over adjacent landowners, so enforcing this responsibility presents challenges. We take whatever steps possible, up to blocking and containing the flow. We also work with Ecology and adjacent cities and counties on issues we cannot resolve directly with a landowner. WSDOT contacts emergency responders when coming upon a potentially hazardous or unknown pollutant.

IDDE Program Improvement

To improve the program’s efficiency and responsiveness during this reporting period we:

- Redesigned the IDDE website for better communication with municipalities and the public.
- Continued development of new Standard Operating Procedures for identification and documentation of potential illicit discharges.
- Worked closely with municipalities on spill and IDDE response.
- Worked with municipalities, Washington State Patrol, Emergency Operations Center, and Ecology to develop a notification process for faster spill response.
- Trained 316 WSDOT staff on how to identify and report IDDE issues.

As required by the permit, WSDOT’s IDDE Program trains discharge inventory field crews as well as maintenance and construction crews to recognize illicit discharges and potential illegal connections. Signs of an illicit discharge can include staining, residues, oily substances, odors, abnormal flow during a dry weather period, turbid waters, or suds.

Figure 5

WSDOT field crews identified this illicit connection on State Route 531.



New Reported Illicit Discharges

The permit requires us to track all issues and seek remediation when necessary. WSDOT verified 13 illegal connections and discovered 29 illicit discharges during this reporting period. Of these, WSDOT resolved all 29 illicit discharges and 7 of the illegal connections. At the end of this reporting period, the unresolved illegal connections remained in the resolution process. A detailed table describing the discharges and connections, actions WSDOT took to eliminate them, and the status of the issues appears in Appendix 3, at the end of this report.

Chapter 6 - Road and Facility Maintenance and Operations

Highway Maintenance and Operations

How the Permit Affects Highway-Related Maintenance

The permit area covers about 1,600 centerline miles of highways, 11 rest areas, 31 maintenance facilities, and 11 park and ride lots. For these areas, the permit requires WSDOT to:

- Continue routine stormwater-related roadway maintenance.
- Annually inspect catch basins and permanent BMPs.
- Maintain catch basins and permanent BMPs and correct deficiencies as applicable.
- Implement Stormwater Pollution Prevention Plans (SWPPPs) at the rest areas, maintenance facilities, and park and ride lots.
- Train maintenance staff on stormwater-related maintenance activities and spill response awareness.

Maintenance Accountability Process

Once a year, WSDOT performs statewide field inspections on randomly chosen sections of highway to determine the Level of Service (LOS) we deliver for specific maintenance activities. The inspections, documentation, and comparison of the results against set statewide targets help WSDOT track progress on service delivery and strategically plan and prepare maintenance and operations budgets.

WSDOT measures LOS with an “A” through “F” scale, similar to school grading. The permit requires WSDOT to report the comparison of the LOS delivered for each stormwater-related maintenance activity with its target. For activities with set LOS targets, we show the comparisons in Table 9.

Table 9 Level of Service Comparisons for Stormwater-Related Maintenance Activities

Maintenance Activity	LOS Target	LOS Delivered
Street Sweeping	B+	A
Ditch Maintenance	B	B+
Culvert Maintenance	D+	C-
Catch Basin Maintenance	D+	C
BMP Maintenance	C	C

Regional Road Maintenance Endangered Species Act Program

WSDOT continues applying the Regional Road Maintenance ESA Program's guidelines for routine road maintenance activities to protect aquatic habitat while meeting roadway safety and maintenance needs.

Spill Prevention and Containment

Collisions or other incidents sometimes result in spills onto the roadway. If WSDOT maintenance staff encounter an incident on the highway, their main role includes managing traffic and only taking emergency actions required to protect human life and property. However, maintenance staff trained to take actions to prevent small quantities of petroleum products from entering receiving water bodies will do so. WSDOT works with the Washington State Patrol, Ecology, and local emergency responders to coordinate any necessary clean-up.

Street Sweeping

WSDOT's mechanical sweepers remove sediment and other debris from paved highway shoulders. This helps prevent these potential pollutant sources from entering stormwater, conveyance and treatment systems, and receiving water bodies. Sweeping frequency depends on debris build-up and the target LOS.

Litter Control

WSDOT maintenance staff pick up large debris and dispose of the bags of litter collected by Adopt-a-Highway volunteers, Ecology Youth Corps work groups, and Department of Corrections work groups. The permit requires WSDOT to report the amount of litter removed from the right-of-way each year. Table 10 shows the amount of litter we disposed during this reporting period compared to previous years.

Table 10 Amount of Litter Collected

Reporting Year	Number of Bags	Cubic Yards	Tons
2010	26,000	36,207	3,621
2011	27,000	48,460	4,846
2012	25,000	34,690	3,469
2013	29,900	38,755	3,876

Snow and Ice Control

WSDOT works to prevent the formation or development of packed snow and ice through a combination of mechanical plowing and applying de-icing agents. In some situations, WSDOT uses sand to provide improved traction. The *Snow and Ice Plan* provides more details on specific goals and guidance for WSDOT's snow and ice control maintenance program.

WSDOT only uses de-icing agents on the *Pacific Northwest Snowfighter Association's* list of approved products. The association provides specifications for the highest quality products which balance protecting the environment and providing the safest possible transportation network for travelers during snow and ice conditions.

The permit requires WSDOT to report the total amount of de-icer materials used statewide. Table 11 shows the amounts used during this reporting period compared to previous years.

Table 11 Total De-icer Materials Used Statewide

Reporting Period	Solid De-icer (tons)	Liquid De-icer (tons)
2009	56,261	23,709
2010	41,225	13,982
2011	73,745	14,489
2012	80,283	9,100
2013	70,030	11,336

Vegetation Management

WSDOT implements locally-based Integrated Vegetation Management (IVM) plans to control undesirable vegetation, while encouraging the growth of desirable plants. IVM plans identify priorities, prescribe treatment methods, and identify areas with specific geographic and environmental management considerations.

Each year, WSDOT reviews and revises the plans based on observations and changing conditions. Throughout the year, area maintenance crews actively participate in reviewing the plans. In the spring, crews receive training to implement the plans. IVM treatment methods include:

- Mowing and trimming.
- Improving soils.
- Planting native and desirable plants.
- Releasing weed-eating insects.
- Selectively applying herbicides.

The permit requires WSDOT to report the amount of herbicides used and number of acres treated annually. Table 12 shows the amounts for this reporting period compared to previous years.

Figure 6

WSDOT uses an IVM approach to maintain plants along highways. This approach incrementally improves the overall health of the roadside.



Table 12 Summary of Herbicides Used and Acres Treated

Reporting Year	Acres Treated	Pounds of Herbicides Applied
2009	22,946	35,041
2010	23,986	42,740
2011	21,953	40,801
2012	23,376	39,029
2013	25,580	46,421

Stormwater System Maintenance and Operations

Ditch and Culvert Maintenance

WSDOT routinely checks and maintains ditches to preserve the same slope, depth, and width with which they were constructed. Ditch maintenance includes inspections and removing sediment and vegetation. WSDOT maintains culverts to ensure they are clean and in good operating condition.

Catch Basin Maintenance

The permit requires WSDOT to annually inspect all known catch basins beginning in March 2011. On April 23, 2012, WSDOT notified Ecology we would be unable to fully comply with this requirement. In our submittal letter, we also notified Ecology of our anticipated inability to achieve full compliance with the catch basin maintenance requirement to correct all deficiencies within six months. As explained in the letter, there was a delay in obtaining adequate funds from the Legislature for the additional equipment and personnel needed to complete the work.

The notification stated we expected to demonstrate a full annual cycle of compliance with these requirements no later than July 1, 2013. WSDOT tracks catch basin inspections, cleanings, and corrective actions with the Highway Activity Tracking System (HATS). To complete our first annual inspections, we conducted almost 26,300 catch basin inspections in the area covered by the permit by June 30, 2013. We also corrected deficiencies identified in the inspections within six months of identifying them.

Treatment and Flow Control BMP Maintenance

The permit requires WSDOT to annually inspect permanent stormwater treatment and flow control BMPs beginning in March 2012. To remain compliant with this requirement, WSDOT must inspect 95 percent of permanent BMP sites each year. WSDOT did this by March 2013, and is now working to perform maintenance within one year on deficiencies identified in the inspections. WSDOT will address BMPs that need more extensive, non-typical repairs as funding becomes available. WSDOT documents BMP inspections as well as deficiencies and maintenance needs identified during inspections in HATS.

Facility Maintenance

Stormwater Pollution Prevention Plans

WSDOT implements SWPPPs to help prevent the contamination of stormwater at rest areas, park and ride lots, and maintenance facilities. The plans identify operational and structural BMPs to use at the facilities. The plans also include site maps of the facilities showing stormwater conveyance systems and sources of possible pollutants. To ensure SWPPP implementation, and to evaluate the effectiveness of the plans, the permit requires WSDOT maintenance staff to perform site inspections twice a year. These include visual inspections of the facility and its stormwater discharges. WSDOT tracks inspections and documents their results in HATS and our Computerized Maintenance Management System (CMMS). In this reporting period, WSDOT conducted SWPPP site inspections twice at all applicable facilities, meeting this permit requirement.

Capital Improvement Assistance to Local Governments

WSDOT manages road waste responsibly and considers it a good practice to construct waste management facilities to accommodate the needs of multiple users. Since 1993, we have worked with local governments to build facilities for stockpiling and screening street sweeping debris and decanting liquids from vactor trucks involved in cleaning catch basins. While WSDOT owns and operates some of these facilities, local governments typically provide the sites and operate the facilities with the help of WSDOT funding.



Figure 7

A WSDOT maintenance employee used a vactor truck to vacuum the sediment and debris out of a catch basin on I-705 under I-5.

During this reporting period, WSDOT partnered with the cities of Spokane Valley, Wenatchee, Chehalis, Kirkland, and Cowlitz and Skagit counties to construct new decant facilities. We anticipate all of these new decant facilities will be finalized and operational in 2014 except for the one in Kirkland. Plans for this decant facility have been canceled due to concerns about New Zealand Mud Snails.

Maintenance Training

The permit requires WSDOT to train 90 percent of new roadway maintenance employees on stormwater related maintenance activities and spill response awareness within one year of employment. Staff who attend the Maintenance Academy Training learn about these and other environmental topics including:

- Overview of the ESA 4(d) program
- Understanding when and how to use BMPs
- Stormwater BMP maintenance
- Compliance monitoring and reporting requirements
- Emergency and unscheduled road maintenance and BMPs for those activities
- Field exercises installing erosion control BMPs
- Spill response

WSDOT requires all new roadway maintenance employees to complete Maintenance Academy Training. In this reporting period, all of the 186 new employees completed the courses in the Academy within one year of their employment with WSDOT.



Chapter 7 - Washington State Ferries

How the Permit Affects WSF

The permit area covers 11 ferry terminals. It requires WSF to implement a programmatic SWPPP at the terminals, maintain stormwater systems and BMPs, and train WSF employees on stormwater regulations and spill containment and cleanup.

Ferry Terminal Maintenance and Operations

Stormwater Pollution Prevention Plan

SMS procedures include internal audits to help identify what works and what needs improvement.

During this reporting period, no formal corrective actions were found to be necessary as a result of the audits.

During the audits, Terminal Supervisors for terminals not covered by the permit and Contract Terminal Supervisors requested more training on stormwater protection at their terminals, indicating system-wide program embracement.

WSF began implementing a programmatic SWPPP at terminals covered by the permit on March 4, 2011. Each terminal keeps a copy of the SWPPP on site and maintains a formal inspection log in the SWPPP document. WSF uses most of the programmatic BMPs in the SWPPP at all of its ferry terminals, regardless of whether they covered by the permit, because the procedures have been integrated into everyday operations through the WSF Safety Management System (SMS).

WSF developed its SMS to meet international standards for safety and environmental management. The stormwater program of the Environmental Management System (EMS), a subsection of the SMS, addresses illicit discharges and potential discharges of hazardous materials. WSF Managers annually assess information collected from SWPPP inspections and use adaptive management to refine the stormwater program. WSF refines the SMS through corrective actions resulting from internal audits.

Sweeping

WSF removes sediment and other debris from ferry terminals by mopping small drips from leaking vehicles daily and mechanically sweeping quarterly. WSF systematically tracks quantities of material being swept up so that we can modify the sweeping schedules if necessary. Through an adaptive management process, WSF increased the sweeping frequency at the Anacortes, Bainbridge, and Seattle terminals to monthly and added vendor and staff parking lots to the surfaces being swept at the Bainbridge terminal.

De-icing

If snow and ice accumulate on ferry terminal surfaces, WSF mechanically picks it up or melts it with de-icing agents. WSF only uses de-icing agents on the *Pacific Northwest Snowfighters Association's* list of approved products. WSF uses washed sand when aided by WSDOT roadway maintenance crews during major snow and ice events. WSF picks up residual de-icers and sand and cleans the area where they were applied to prevent them from entering the stormwater and receiving water bodies. WSF stores sand and de-icing agents inside buildings or under cover at the ferry terminals.

Vegetation Management

WSF manages contracts for maintaining vegetation at the ferry terminals annually through mechanical mowing, trimming, weeding, and minimal spot applications of herbicide to remove noxious weeds. The biofiltration swales at the Anacortes, Tahlequah, and Southworth ferry terminals get trimmed at least twice a year.

Stormwater Facility Maintenance

Stormwater Management Control Structures

Stormwater facilities at ferry terminals include conveyance systems, oil-water separators, catch basins, catch basin inserts, and biofiltration swales. WSF annually inspects stormwater management facilities. If inspections determine a need, contractors vacuum and clean the facilities. During this reporting period, WSF cleaned the conveyance systems at the Bainbridge and Clinton terminals.

Maintenance Productivity Enhancement Tool

WSF uses its Maintenance Productivity Enhancement Tool (MPET) to generate work orders for all maintenance activities for terminals and vessels. MPET tracks and facilitates completion of the maintenance activities, and documents the results. The permit requires revising it as necessary so



Figure 8

Vehicles wait to board a ferry at a terminal in Seattle.

WSF conducts several types of terminal site inspections to ensure the SWPPP is implemented properly.

Terminal employees conduct site inspections daily.

SWPPP stormwater inspectors conduct site inspections twice a month.

Terminal maintenance engineers conduct site inspections annually.

that it can work as an adaptive management tool. WSF schedules corrective maintenance activities in MPET based on needs identified during inspections. During this reporting period, these inspections were changed to occur in the fall. WSF also adjusts preventative maintenance schedules in MPET to maximize the balance between available resources and identified maintenance needs.

Training

WSF takes a programmatic approach to train its staff. This allows them to meet the operational demands of nearly 500 scheduled daily sailings and staff schedules. WSF uses multiple techniques to formally and informally train staff including:

- Self-teaching through manuals.
- Computer-based courses and webinars.
- Videos.
- Lectures and seminars.
- Field procedural training.
- Stormwater inspectors explaining their reports and expectations.

WSF trains terminal supervisors on the job annually and develops training materials for self-taught individual instruction. Terminal supervisors ensure their staff receive training. During this reporting period, the stormwater inspectors received IDDE training from WSDOT and the WSF Environmental Program Manager received IDDE training from Ecology.

New terminal and vessel staff go through extensive training of all WSF procedures before employment. This training covers spill containment and cleanup as well as stormwater control procedures and applicable state and federal regulations, as required by the permit. In this reporting period, WSF hired 30 new employees, all of whom received this introductory training.



Chapter 8 - Monitoring and Research

Stormwater Quality Monitoring Requirements

The permit requires WSDOT to develop and implement a monitoring program to produce scientifically credible data that can help determine the effectiveness of stormwater management strategies and SWPPPs. The monitoring program must include:

- Baseline stormwater monitoring and sediment characterization at 5 highway sites.
- Baseline stormwater monitoring at 2 rest areas, 6 maintenance facilities, and 1 ferry terminal.
- Effectiveness monitoring of 2 types of stormwater treatment BMPs, including 2 sites for evaluating each BMP type.
- Effectiveness monitoring of 1 flow reduction BMP.
- Toxicity testing the seasonal first flush at 3 highway sites and 3 BMP sites.

Figure 9

Stormwater monitoring station at the vegetated filter strip stormwater treatment BMP near Everett.



Progress on Meeting Monitoring Requirements

During this reporting period, WSDOT fully implemented our stormwater monitoring program. The permit requires WSDOT to submit a detailed report on stormwater monitoring data on October 31, 2013. The report must cover data collected between October 1, 2011 and September 30, 2012. We plan to submit the report on time along with this Stormwater Report.

Stormwater Research

Stormwater Research Strategy

WSDOT relies on research to identify innovative, cost-effective solutions for designing, building, and maintaining stormwater management systems. We use our Stormwater Research Strategy to:

- Prioritize research needs related to stormwater.
- Help coordinate and build partnerships within WSDOT and with regional, state, and federal entities to leverage stormwater research resources.
- Provide a clear process for soliciting, submitting, prioritizing, and implementing research proposals related to stormwater.
- Help find solutions that improve the design, constructability, maintainability, cost effectiveness, hydraulic performance, and treatment efficiency of stormwater facilities, stormwater management operations, and maintenance practices.
- Improve the process of compiling, tracking, and disseminating stormwater research findings.

Stormwater Technical Review Committee's Role

The Stormwater Technical Review Committee submits stormwater-related research projects to WSDOT's Research Advisory Committee (RAC) for funding consideration. The RAC reviews the project proposals and recommends projects to the Research Executive Committee for funding. During this reporting period, the Stormwater Technical Review Committee met once and reviewed four project proposals. The Research Executive Committee chose one of the projects, which involves testing compost leachate, for WSDOT to fund.

Coordination Keeps WSDOT Up To Date

WSDOT maintains communication and coordinates with local, state, and national programs to share resources, promote and conduct stormwater research, and stay up to date on stormwater research developments and innovations. During this reporting period, WSDOT staff met with National Oceanic and Atmospheric Administration (NOAA) Fisheries and United States Fish and Wildlife (USFW) researchers to discuss possible research collaboration in the future. We also participated on several National Cooperative Highway Research Program (NCHRP) panels that research flow control BMPs for urban areas and bridges and watershed-based tools for stormwater management. WSDOT participates as a member of the Transportation Research Board's Committee on Hydrology, Hydraulics, and Water Quality, which includes stormwater research in its portfolio. Further, we take part in the American Association of State Highway and Transportation Officials (AASHTO) Stormwater Community of Practice, which may sponsor research efforts.

Status of Current Research Projects

The permit requires WSDOT to report on the status of our research activities and summarize the findings of completed projects. WSDOT completed one stormwater research project during this reporting period. We have several other stormwater research projects in progress.

WSDOT completed the Technical Evaluation Report for our modified media filter drain research project. This project, located along Interstate 405, initially showed the modified media filter drain design did not meet the enhanced treatment performance standards for removing dissolved copper. After WSDOT made design adjustments, approved by Ecology, we found the adjusted configuration met the enhanced treatment criteria.

WSDOT continues work on a stormwater research project that compares the performance of a vegetated filter strip, a compost-amended vegetated filter strip, and a modified compost-blanket vegetated filter strip. This project coincides with the permit-required stormwater monitoring efforts.

Another continuing stormwater research project involves testing BMPs on steep slopes in western Washington. Lab and field testing will begin this fall to determine infiltration rates on typical fill slope embankments and a range of fill slope material that meets our standard specifications. WSDOT's interests include determining how compaction affects the infiltration rates.

WSDOT plans to complete final reports for research projects on stormwater model comparison, stormwater storage, and media filter longevity testing by the end of 2013.

Research Findings Posted Online

The permit requires WSDOT to post our technical reports on our website. WSDOT will post the completed Technical Evaluation Report for the modified media filter drain project on our research website after the Ecology's Technology Assessment Protocol (TAPE) Board of External Reviewers approves it. The WSDOT Library and the Transportation Research Information Services database will also keep copies of this report.



Chapter 9 - Public Outreach, Education, and Involvement

Knowledge and Technology Transfer and Outreach

The permit requires WSDOT to support knowledge and technology transfer related to stormwater management through presentations, publications, and participation in stormwater committees. WSDOT also considers this good practice as it helps us inform development of regulations, guidance, and policy at the national, state, and local levels through our experiences and knowledge.

WSDOT exchanges information related to stormwater with government agencies, consultants, non-profit organizations, and the public through participation in committees, work groups, and action teams. WSDOT's Adopt-a-Highway and Commute Trip Reduction programs, required by the permit, also help educate and involve the public in pollutant source reduction.

Summarization of Efforts

Adopt-a-Highway

WSDOT's Adopt-a-Highway program gives individuals, organized groups, and businesses the opportunity to help keep stormwater clean by picking up the litter and debris along the highways. WSDOT collects and disposes most of the bags filled by individual volunteers and organized groups. Organizations and businesses that sponsor sections of highway often hire contractors to pick up and dispose of the litter in those sections. During this reporting period, 715 volunteer groups picked up litter along Washington state highways. They worked more than 23,000 hours and picked up almost 29,900 bags of litter.

Commute Trip Reduction

WSDOT works with nearly 1,100 local governments and employers to implement Commute Trip Reduction (CTR) techniques. These include subsidies for public transit fares and carpooling, flexible work schedules, and telecommute opportunities. With WSDOT's technical support and help from the online tools available at rideshareonline.com, between 2007 and 2012, employees reduced their driving by 161 million miles annually. In addition, commuters saved over \$30 million in fuel expenses. Removing vehicles from the roadways and reducing the emissions that enter the atmosphere helps improve water quality by reducing the amount of pollutants deposited on the roadway and entering our stormwater systems.

Internet Site

The permit requires WSDOT to maintain and expand our internet sites to help share stormwater management information with the public. We share stormwater-related information by posting the link to our most recent annual Stormwater Report, guidance documents, manuals, and procedures, design tools, research reports, and contact information for staff. During this reporting period, WSDOT made a number of updates to our websites. These included:

- Posting the 2012 Stormwater Report after it was submitted to Ecology.
- Updating several of our Stormwater and Watersheds websites.
- Updating links to newly completed Area Roadside Vegetation Management Plans.
- Posting the results of the Maintenance Program's annual inspections of randomly selected sections of highway.

Public Involvement

In addition to the Adopt-a-Highway and Commute Trip Reduction programs and our web sites, WSDOT involves the public in several other ways. WSDOT welcomes public review and comment on our Roadside Vegetation Management Plans at any time. We also regularly hold public meetings and hearings for specific transportation projects and solicit public review of environmental impact statements and environmental assessments developed for projects.

From 2007 to 2012:

CTR participants reduced their rate of driving alone to work by 3.8 percent.

The average miles traveled by each employee to their work site fell by 5.7 percent.

CTR removed about 16,000 vehicles from the roadways every day.

CTR saved 7.9 million gallons of fuel annually.

Annual greenhouse gas emissions fell by 72,000 metric tons due to CTR.

E-mail Updates

As required by the permit, WSDOT keeps a list of e-mail addresses for people who request to receive announcements regarding HRM updates and training. E-mail updates serve as an effective tool for getting timely information to WSDOT staff, consultants, regulators, and local governments who use the HRM. During this reporting period, e-mail updates included information on changes to the HRM, other regulatory changes, and training opportunities.

Knowledge and Technology Transfer

In addition to sharing information and knowledge with others, WSDOT greatly benefits from the information shared with us during events and from committees and work groups we participate in. During this reporting period WSDOT participated in the following events:

- In September 2012, WSDOT's HRM Program Manager presented about compost amended biofiltration swales at the Sustainable Stormwater Symposium in Portland.
- In October 2012, WSDOT's Permit Coordinator participated in a learning cohort on the maintenance of green stormwater solutions sponsored by the Sightline Institute.
- In January 2013, WSDOT's Permit Coordinator participated in a workshop to explore solutions to vehicle leaks.
- In April 2013, WSDOT's Permit Coordinator and HRM Program Manager participated in a Stormwater Treatment Engineering Workshop sponsored by the Washington SW Center.
- In May 2013, WSDOT convened a Stormwater Resource Agency Summit with USFW, NOAA Fisheries, and WSU to share information on ongoing research efforts and explore collaborative partnerships.

We also participated in the following work groups during this reporting period:

- WSDOT facilitated a statewide working group to develop priority recommendations for road & highway related monitoring and research.
- WSDOT's Permit Coordinator shared WSDOT's approach to prioritizing stormwater retrofits with EPA, Puget Sound Partnership, and other municipal permittees.
- WSDOT's Permit Coordinator participated in the Learning Stormwater Regulation Project sponsored by the Washington Business Alliance to explore and design an efficient framework for facilitating compliance with stormwater regulations.
- WSDOT stormwater feature mapping staff and Permit Coordinator participated in regional efforts to develop a standardized stormwater dictionary.
- WSDOT's Permit Coordinator worked with the Water Environment Federation on an article related to EPA rulemaking in the context of managing stormwater in transportation settings.
- WSDOT's Eastern Region TMDL support staff participated in the Spokane River Regional Toxics Task Force.
- WSDOT's TMDL Lead and Permit Coordinator participated in a TMDL workgroup.

WSDOT also participates in many advisory groups, committees, and partnerships, including:

- Permit coordination and implementation:
 - Phase I Permit Coordinators
 - Puget Sound Regional NPDES Permit Coordinators
 - South Sound Phase II Group
 - Southwest Washington Managers and Coordinators
 - Stormwater Technical Advisory Committee with the cities of Olympia, Lacey, Tumwater, and Thurston County
 - Regional Operations and Maintenance Program (ROADMAP)
 - Street Maintenance Solids Meetings
 - Standard Operating Procedures Working Group

- State and Regional Committees and Advisory Groups:
 - American Public Works Association Stormwater Managers Committee
 - Stormwater Technical Resource Center Advisory Committee
 - Stormwater Workgroup for the Puget Sound
 - TAPE Stakeholder Advisory Group
 - Local Jurisdiction Stormwater Monitoring Caucus
 - American Society of Civil Engineers Water Resources Committee
 - Puget Sound Regional Council Stormwater Charter Committee
 - Water Quality Partnerships
 - Puget Sound Partnership State Agency Caucus
 - Stormwater Retrofit Planning Project for Washington State Water Resource Inventory Area (WRIA) 9 Stakeholder Workshop
 - Hood Canal Coordinating Council Stormwater Workgroup

- National Committees and Advisory Groups:
 - AASHTO
 - Transportation Research Board's NCHRP
 - TransNow
 - Transportation Research Board Committees on Hydrology, Hydraulics and Water Quality, and Landscape and Environmental Design



Table 13 TMDL Implementation Summary Table

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Hangman Creek TMDL (Fecal Coliform, Temperature, TSS/ Turbidity)	Implement fecal coliform programmatic approach ¹ within the TMDL boundary. These efforts will focus identification of illicit sources of bacteria and sediment discharge to WSDOT's stormwater conveyance system. In conducting these activities, WSDOT will coordinate with Phase II municipalities to acquire stormwater discharge point data and illicit discharge information. Refer to Appendix 3 of the permit for specific details on prioritization and geographic scope of inventory efforts.	Complete by March 2014	WSDOT began discharge inventory in 2012. We submitted a preliminary report to Ecology on 2/8/13 summarizing findings from the summer of 2012. We continued inventory efforts and completed them in summer 2013. We will complete a report summarizing findings from the 2013 field work as soon as possible, but no later than March 2014.
	If stormwater discharges that transport bacteria over natural background levels to listed receiving waters are found from sources within WSDOT's right-of-way and control, WSDOT will apply BMPs from their SWMPP or perform remediation to correct bacteria discharges. For run-on sources of bacteria identified by WSDOT that are from outside of WSDOT's right-of-way, WSDOT will notify Ecology and work cooperatively with Ecology, the local jurisdiction, and other parties involved for their resolution.	Initiate remediation within 60 days of completion of discharge inventory	The preliminary report contains details on TMDL concerns found during 2012 field work and follow-up actions taken and/or notification to others where we identified a concern outside WSDOT's right-of-way and control. WSDOT will submit details on findings from 2013 field work to Ecology by March 2014.
	To address TSS/turbidity, WSDOT will work to prevent sediment from entering area waterways along SR 27 (in upper watershed) and SR 195 right-of-ways. WSDOT will prioritize problem areas and work with individual property owners to prevent sediment from entering area waterways.	Initiate efforts by July 2012; then on-going	Efforts initiated in June 2012
	Evaluate whether stormwater discharges contribute to elevated temperature issues identified in the TMDL. If evaluation reveals WSDOT stormwater discharges contribute to the temperature issues, WSDOT will take steps to reduce its adverse thermal stormwater discharge impacts to Hangman Creek or its tributaries.	Complete by March 2014	WSDOT identifies potential temperature issues as part of the discharge inventory process, which began in 2012. Findings will be reported as soon as possible but no later than March 2014.

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Henderson Inlet Watershed TMDL (Fecal Coliform)	Update WSDOT stormwater facilities on Southbound I-5 at milepost 110.	Project scoping and preliminary design to be completed by 3/1/14; Construction expected to be completed by 6/30/2017	WSDOT funded the I-5, West of Carpenter Rd, Stormwater Retrofit project, which will address a portion of the I-5 runoff. We began construction in July 2013 and plan to complete it by Fall of 2013. Another project on WSDOT's stormwater retrofit list will address additional runoff. We completed preliminary project scoping and planning and will construct the project by 6/30/17.
Issaquah Creek Basin TMDL (Fecal Coliform)	Apply fecal coliform programmatic approach ¹ , which includes inventory of highway discharge locations, illicit discharge detection and elimination (IDDE), basic source identification for fecal coliform, and identification of maintenance issues within the TMDL boundary.	Complete initial inventory and provide map of discharge points, IDDE's identified, and potential source locations in 2011.	Findings submitted to Ecology on 12/29/11. Addendum report submitted to Ecology on 9/28/12 to provide an update on identified issues. See WSDOT's TMDL website for the <i>Issaquah Creek TMDL Summary of Inventory Findings Report and Addendum</i> .
	If stormwater discharges that transport bacteria over natural background levels to listed receiving waters are found from sources within WSDOT's right-of-way and control, WSDOT will apply BMPs from their SWMPP or perform remediation to correct bacteria discharges. For run-on sources of bacteria identified by WSDOT that are from outside of WSDOT's right-of-way, WSDOT will notify Ecology and work cooperatively with Ecology, the local jurisdiction, and other parties involved for their resolution.	As needed	<i>Issaquah Creek TMDL Summary of Inventory Findings Report and Addendum</i> contain details on TMDL concerns found and follow-up actions taken and/or notification to others where we identified a concern outside WSDOT's right-of-way and control. No new sources have been identified.
	Provide bacterial pollution information collected where WSDOT's MS4 connects with another jurisdiction's MS4.	As needed	Will implement as needed.

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Little Bear Creek TMDL (Fecal Coliform)	Apply fecal coliform programmatic approach ¹ , which includes inventory of highway discharge locations, illicit discharge detection and elimination (IDDE), basic source identification for fecal coliform, and identification of maintenance issues within the TMDL boundary.	Complete initial inventory and provide map of discharge points, IDDE's identified, and potential source locations in 2011.	Findings submitted to Ecology on 9/1/11. Addendum report submitted to Ecology on 9/28/12 to provide an update on identified issues. See WSDOT's TMDL website for the <i>Little Bear Creek TMDL Summary of Inventory Findings Report</i> .
	If stormwater discharges that transport bacteria over natural background levels to listed receiving waters are found from sources within WSDOT's right-of-way and control, WSDOT will apply BMPs from their SWMPP or perform remediation to correct bacteria discharges. For run-on sources of bacteria identified by WSDOT that are from outside of WSDOT's right-of-way, WSDOT will notify Ecology and work cooperatively with Ecology, the local jurisdiction, and other parties involved for their resolution.	As needed	<i>Little Bear Creek TMDL Summary of Inventory Findings Report</i> and <i>Addendum</i> contain details on TMDL concerns found and follow-up actions taken and/or notification to others where we identified a concern outside WSDOT's right-of-way and control. No new sources have been identified.
	Provide bacterial pollution information collected where WSDOT's MS4 connects with another jurisdiction's MS4.	As needed	Will implement as needed.
Nisqually River Tributaries TMDL (Fecal Coliform and Dissolved Oxygen)	Install a pet waste station on the dike at McAllister Creek or close access to the dike.	Complete no later than March 2010; Provide replacement bags as needed.	Installation completed 3/4/10; Replacement bags provided as needed
	Maintain WSDOT-controlled tide gates every other year per WSDOT maintenance program.	2010, 2012, 2014	Inspection completed in November 2012.
	Participate in annual adaptive management meetings.	Annually	Not applicable during the reporting period.

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Oakland Bay, Hammersley Inlet, and Selected Tributaries TMDL (Fecal Coliform)	Work with Ecology, Squaxin Island Tribe, and Mason County to determine potential sources of fecal coliform within WSDOT's right-of-way and control on a limited number of high priority Highway 3 stormwater discharge locations to Oakland Bay. ²	On-going	Site visit conducted with Ecology, Squaxin Island Tribe, and Mason County on 2/2/12; On-going correspondence via e-mail.
	Inventory highway discharge locations, implement pollutant source identification, and identification of illicit sources of bacteria to WSDOT's stormwater conveyance system within the TMDL boundary. Refer to Appendix 3 of the permit for specific details on prioritization and geographic scope of inventory efforts.	Submit budget request to the Office of Financial Management and the Governor for funding to implement this action in the 2013-15 biennium; Complete implementation by 2015.	WSDOT submitted a letter to Ecology on 10/11/12 stating that we do not need to request additional funds to complete this work as we will use existing resources to complete the work within the established timelines. WSDOT will complete inventory as soon as possible, but no later than 2015.
	If stormwater discharges that transport bacteria over natural background levels to listed receiving waters are found from sources within WSDOT's right-of-way and control, WSDOT will apply BMPs from their SWMPP or perform remediation to correct bacteria discharges. For run-on sources of bacteria identified by WSDOT that are from outside of WSDOT's right-of-way, WSDOT will notify Ecology and work cooperatively with Ecology, the local jurisdiction, and other parties involved for their resolution.	As needed based on discharge inventory and source identification findings.	Will implement as needed.
	Present how WSDOT's illicit discharge program works to the OBCWD Advisory Committee once the program is developed.	Complete no later than November 2009	Completed 11/09

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Palouse River Watershed TMDL (Fecal Coliform)	Implement fecal coliform programmatic approach ¹ within the TMDL boundary. These efforts will focus identification of illicit sources of bacteria and sediment discharge to WSDOT's stormwater conveyance system. Refer to Appendix 3 of the permit for specific details on prioritization and geographic scope of inventory efforts.	Complete by March 2015	Not started yet.
	If stormwater discharges that transport bacteria over natural background levels to listed receiving waters are found from sources within WSDOT's right-of-way and control, WSDOT will apply BMPs from their SWMPP or perform remediation to correct bacteria discharges. For run-on sources of bacteria identified by WSDOT that are from outside of WSDOT's right-of-way, WSDOT will notify Ecology and work cooperatively with Ecology, the local jurisdiction, and other parties involved for their resolution.	Initiate remediation within 60 days of completion of discharge inventory	Will implement as needed.
Samish Bay Watershed TMDL (Fecal Coliform)	Participate in TMDL adaptive management process.	On-going	On-going
South Fork Palouse River TMDL (Fecal Coliform)	Implement fecal coliform programmatic approach ¹ within the TMDL boundary. These efforts will focus identification of illicit sources of bacteria and sediment discharge to WSDOT's stormwater conveyance system. Refer to Appendix 3 of the permit for specific details on prioritization and geographic scope of inventory efforts.	Complete by March 2014	Not started yet.
	If stormwater discharges that transport bacteria over natural background levels to listed receiving waters are found from sources within WSDOT's right-of-way and control, WSDOT will apply BMPs from their SWMPP or perform remediation to correct bacteria discharges. For run-on sources of bacteria identified by WSDOT that are from outside of WSDOT's right-of-way, WSDOT will notify Ecology and work cooperatively with Ecology, the local jurisdiction, and other parties involved for their resolution.	Initiate remediation within 60 days of completion of discharge inventory	Will implement as needed.
	Inspect underside of Highway 195 bridge in Colfax for pigeon nests and feces and take any necessary action to prevent pigeons from roosting there.	With annual bridge inspection; initiate action to prevent pigeon roosting within 90 days of annual inspection	Inspection completed 4/13/13. No evidence of roosting pigeons was found.

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
South Prairie Creek Watershed TMDL (Fecal Coliform and Temperature)	Apply fecal coliform programmatic approach ¹ , which includes inventory of highway discharge locations, illicit discharge detection and elimination (IDDE), basic source identification for fecal coliform, and identification of maintenance issues within the TMDL boundary. WSDOT will use \$20K to implement IDDE and source identification beginning July 2010. Any remaining money will be used to remediate fecal coliform sources within the right-of-way or, if needed, to implement the fecal coliform programmatic approach.	Complete initial inventory in 2010	Discharge inventory completed on 8/4/10. WSDOT submitted a map of discharge points, IDDEs, and sources to Ecology on 3/10/11.
	If stormwater discharges that transport bacteria over natural background levels to listed receiving waters are found from sources within WSDOT's right-of-way and control, WSDOT will apply BMPs from their SWMPP or perform remediation to correct bacteria discharges. For run-on sources of bacteria identified by WSDOT that are from outside of WSDOT's right-of-way, WSDOT will notify Ecology and work cooperatively with Ecology, the local jurisdiction, and other parties involved for their resolution.	As needed	No new sources have been identified.
	Participate in annual adaptive management meetings.	Annually	Not applicable during the reporting period.
Spokane River Watershed TMDL (Dissolved Oxygen)	Inventory highway stormwater discharge points within WSDOT's right-of-way inside the NPDES Phase II coverage area. Inventory will include the identification of illicit discharges to WSDOT's stormwater conveyance system and identification of phosphorous and ammonia sources.	Complete by March 2014	Discharge inventory began in March 2012. Additional field work performed in summer 2013. WSDOT will complete a report summarizing findings as soon as possible, but no later than March 2014.
	If phosphorus and ammonia sources are found, WSDOT will apply best management practices from their SWMPP or perform remediation to correct the situation.	As needed based on discharge inventory and source identification findings	WSDOT will submit details on findings from the 2013 field work, and follow-up actions taken and/or notification to others where we identified a concern outside WSDOT's right-of-way and control to Ecology by March 2014.

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Stillaguamish River Watershed TMDL (Fecal Coliform, Dissolved Oxygen, pH, Mercury, Arsenic and Temperature)	Apply fecal coliform programmatic approach ¹ , which includes inventory of highway discharge locations, illicit discharge detection and elimination (IDDE), basic source identification for fecal coliform, and identification of maintenance issues within the TMDL boundary.	Complete initial inventory and provide map of discharge points, IDDE's identified, and potential source locations in 2012.	Findings submitted to Ecology on 12/28/12. Addendum report submitted to Ecology on 5/29/13 to provide an update on identified issues. See WSDOT's TMDL website for the <i>Stillaguamish River Watershed TMDL Summary of Inventory Findings Report</i> .
	If stormwater discharges that transport bacteria over natural background levels to listed receiving waters are found from sources within WSDOT's right-of-way and control, WSDOT will apply BMPs from their SWMPP or perform remediation to correct bacteria discharges. For run-on sources of bacteria identified by WSDOT that are from outside of WSDOT's right-of-way, WSDOT will notify Ecology and work cooperatively with Ecology, the local jurisdiction, and other parties involved for their resolution.	As needed	<i>Stillaguamish River TMDL Summary of Inventory Findings Report</i> and <i>Addendum</i> contain details on TMDL concerns found and follow-up actions taken and/or notification to others where we identified a concern outside WSDOT's right-of-way and control. No new sources have been identified.
	Provide bacterial pollution information collected where WSDOT's MS4 connects with another jurisdiction's MS4.	As needed	Will implement as needed.
	Install pet waste management stations with educational signage at I-5 rest areas.	Install by 2013	Installed 3/11

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Swamp Creek Basin TMDL (Fecal Coliform)	Apply fecal coliform programmatic approach ¹ , which includes inventory of highway discharge locations, illicit discharge detection and elimination (IDDE), basic source identification for fecal coliform, and identification of maintenance issues within the TMDL boundary.	Complete initial inventory and provide map of discharge points, IDDE's identified, and potential source locations in 2011.	Findings submitted to Ecology on 6/1/11. Addendum report submitted to Ecology on 9/28/12 to provide an update on identified issues. See WSDOT's TMDL website for the <i>Swamp Creek TMDL Summary of Inventory Findings Report</i> .
	If stormwater discharges that transport bacteria over natural background levels to listed receiving waters are found from sources within WSDOT's right-of-way and control, WSDOT will apply BMPs from their SWMPP or perform remediation to correct bacteria discharges. For run-on sources of bacteria identified by WSDOT that are from outside of WSDOT's right-of-way, WSDOT will notify Ecology and work cooperatively with Ecology, the local jurisdiction, and other parties involved for their resolution.	As needed	<i>Swamp Creek TMDL Summary of Inventory Findings Report</i> and <i>Addendum</i> contain details on TMDL concerns found and follow-up actions taken and/or notification to others where we identified a concern outside WSDOT's right-of-way and control. No new sources have been identified.
	Provide bacterial pollution information collected where WSDOT's MS4 connects with another jurisdiction's MS4.	As needed	Will implement as needed.
Teanaway River TMDL (Temperature)	Maintain roads and roadside stormwater conveyance ditches to prevent entry of sediment into area waterways.	On-going	On-going
Totten, Eld and Skookum Inlets Tributaries TMDL (Fecal Coliform and Temperature)	Apply fecal coliform programmatic approach ¹ , which includes inventory of highway discharge locations, illicit discharge detection and elimination (IDDE), basic source identification for fecal coliform, and identification of maintenance issues within the TMDL boundary.	Complete by March 2014	Findings submitted to Ecology on 6/4/13. See WSDOT's TMDL website for the <i>Totten/Eld and Skookum Inlets Tributaries TMDL Summary of Inventory Findings Report</i> .
	If stormwater discharges that transport bacteria over natural background levels to listed receiving waters are found from sources within WSDOT's right-of-way and control, WSDOT will apply BMPs from their SWMPP or perform remediation to correct bacteria discharges. For run-on sources of bacteria identified by WSDOT that are from outside of WSDOT's right-of-way, WSDOT will notify Ecology and work cooperatively with Ecology, the local jurisdiction, and other parties involved for their resolution.	Initiate remediation within 60 days of completion of discharge inventory	<i>Totten/Eld and Skookum Inlets Tributaries TMDL Summary of Inventory Findings Report</i> contains details on TMDL concerns found and follow-up actions taken and/or notification to others where we identified a concern outside WSDOT's right-of-way and control.
Tucannon River Watershed TMDL (Temperature)	Maintain roads and roadside stormwater conveyance ditches to prevent entry of sediment into area waterways. ³	On-going	On-going

TMDL Implementation Summary Table

Appendix 1

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Upper Yakima River Watershed TMDL (Suspended Sediment, and Organochlorine Pesticide)	Maintain roads and roadside stormwater conveyance ditches to prevent sediment from entering area waterways.	On-going	On-going
Walla Walla River Watershed TMDL (Fecal Coliform, PCBs, Chlorinated Pesticide, Temperature, pH and Dissolved Oxygen)	The US 12 project will re-route 97 percent of the highway's traffic volume to the plateau located well above the Walla Walla River.	Dependent on funding	Phase six of the project is complete. Phase seven is in design but funding for construction has not been obtained.
	Where feasible, WSDOT will implement infiltration and/or dispersion to address the pollutants covered under this TMDL.	On-going	On-going
	Follow the current Integrated Roadside Vegetation Management Plan (South Central Region, Area 4) within the Walla Walla TMDL boundary.	On-going	On-going
Bear-Evans TMDL (Fecal Coliform, Dissolved Oxygen and Temperature) Green River TMDL (Temperature) Newaukum Creek TMDL (Temperature) Puyallup River Watershed TMDL (Fecal Coliform) Salmon Creek Watershed TMDL (Temperature) Snoqualmie River TMDL (Temperature) Whatcom, Squalicum and Padden Creek Basins TMDL (Temperature) Upper Naches Watershed TMDL (Temperature)	Implement WSDOT's NPDES municipal permit obligations that address the TMDL-listed pollutants.	On-going	On-going

1. For information regarding WSDOT's fecal coliform programmatic approach, please refer to WSDOT's TMDL website.
2. This work may include but is not limited to, site visits, data review, and collaborative problem solving. If sources are identified within WSDOT's control, WSDOT will develop a plan and initiate efforts to apply best management practices from their SWMPP or perform remediation to correct the situations.
3. WSDOT implements the Regional Road Maintenance ESA Program (<http://www.wsdot.wa.gov/Maintenance/Roadside/ESA.htm>) covering routine maintenance activities related to aspects of WSDOT's stormwater facilities and stream crossings.

Table 14 Stormwater Facilities Built Statewide During the 2013 Reporting Period

State Route	Beginning Mile Post	Region	Project Name	BMP Type	In Permit Area
009	25.77	Northwest	SR 9/SR 531-172n St NE - Intersection Improvements	Media Filter Drain	Yes
009	25.77	Northwest	SR 9/SR 531-172n St NE - Intersection Improvements	Media Filter Drain	Yes
009	25.84	Northwest	SR 9/SR 531-172n St NE - Intersection Improvements	Media Filter Drain	Yes
009	25.9	Northwest	SR 9/SR 531-172n St NE - Intersection Improvements	Media Filter Drain	Yes
009	26.08	Northwest	SR 9/SR 531-172n St NE - Intersection Improvements	Detention Pond	Yes
009	26.13	Northwest	SR 9/SR 531-172n St NE - Intersection Improvements	Media Filter Drain	Yes
009	26.09	Northwest	SR 9/SR 531-172n St NE - Intersection Improvements	Flow Restrictor	Yes
531	9.85	Northwest	SR 9/SR 531-172n St NE - Intersection Improvements	Detention Vault	Yes
531	9.85	Northwest	SR 9/SR 531-172n St NE - Intersection Improvements	Flow Restrictor	Yes
529	6.09	Northwest	SR 529/Ebey Slough Bridge - Replace Bridge	Vegetated Filter Strip	Yes
529	6.11	Northwest	SR 529/Ebey Slough Bridge - Replace Bridge	Bioswale	Yes
529	5.99	Northwest	SR 529/Ebey Slough Bridge - Replace Bridge	Bioswale	Yes
529	6.46	Northwest	SR 529/Ebey Slough Bridge - Replace Bridge	Stormfilter (TM)	Yes
405	19.9	Northwest	I-405 NE 116th St Interchange	Combined Stormwater Treatment Wetland/ Detention Pond CO.02	Yes
405	19.9	Northwest	I-405 NE 116th St Interchange	Flow Restrictor	Yes
405	19.8	Northwest	I-405 NE 116th St Interchange	Detention Vault FC.03	Yes
405	19.8	Northwest	I-405 NE 116th St Interchange	Flow Restrictor	Yes
405	19.89	Northwest	I-405 NE 116th St Interchange	Media Filter Drain RT.07	Yes
405	19.89	Northwest	I-405 NE 116th St Interchange	Media Filter Drain RT.07	Yes
405	19.8	Northwest	I-405 NE 116th St Interchange	Media Filter Drain RT.07	Yes
9	17.46	Northwest	SR 9/SR 92 Improve Intersection	Filtterra Bioretention System	Yes
9	17.5	Northwest	SR 9/SR 92 Improve Intersection	Filtterra Bioretention System	Yes
9	17.5	Northwest	SR 9/SR 92 Improve Intersection	Filtterra Bioretention System	Yes
9	17.77	Northwest	SR 9/SR 92 Improve Intersection	Detention Pond - C0.01	Yes
9	17.77	Northwest	SR 9/SR 92 Improve Intersection	Flow Restrictor	Yes
92	0.1	Northwest	SR 9/SR 92 Improve Intersection	Natural Dispersion - FC.01	Yes

State Route	Beginning Mile Post	Region	Project Name	BMP Type	In Permit Area
005	141.34	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	CSTW	Yes
005	141.28	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	Flow Restrictor	Yes
018	2.65B	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	Flow Restrictor	Yes
018	2.65B	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	CSTW	Yes
018	See Note	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	Media Filter Drain	Yes
018		Northwest	I-5/SR 161/SR 18 - Interchange Improvements	Media Filter Drain	Yes
005	142.33	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	CSTW	Yes
005	142.32	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	Flow Restrictor	Yes
018	2.51B	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	Media Filter Drain	Yes
018	0.23	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	CSTW	Yes
018	0.27	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	Flow Restrictor	Yes
018	0.47	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	Media Filter Drain	Yes
005	140.65	Northwest	I-5/SR 161/SR 18 - Interchange Improvements	Flow Restrictor	Yes
395	164.78	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Engineered Dispersion Area	Yes
395	162.19	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Engineered Dispersion Area	Yes
395	162.35	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Engineered Dispersion Area	Yes
395	163.1	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Engineered Dispersion Area	Yes
395	165.02	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Engineered Dispersion Area	Yes
395	162.26	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Engineered Dispersion Area	Yes
395	162.51	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Engineered Dispersion Area	Yes
395	162.56	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Engineered Dispersion Area	Yes
395	162.08	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Bioinfiltration Pond	Yes
395	162.14	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Bioinfiltration Pond	Yes
395	162.36	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Bioinfiltration Pond	Yes
395	162.66	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Bioinfiltration Pond	Yes
395	162.27	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Bioinfiltration Pond	Yes
395	164.58	Eastern	NSC- Freya St to Farwell Rd SB Additional Lanes Rebid	Bioinfiltration Pond	Yes
395	164.56	Eastern	US 395/NSC – Parksmith Rd Interchange	Drywell	Yes

State Route	Beginning Mile Post	Region	Project Name	BMP Type	In Permit Area
395	164.53	Eastern	US 395/NSC – Parksmith Rd Interchange	Bioinfiltration Pond	Yes
395	164.47	Eastern	US 395/NSC – Parksmith Rd Interchange	Bioinfiltration Pond	Yes
395	164.39	Eastern	US 395/NSC – Parksmith Rd Interchange	Bioinfiltration Pond	Yes
395	164.39	Eastern	US 395/NSC – Parksmith Rd Interchange	Bioinfiltration Pond	Yes
395	164.28	Eastern	US 395/NSC – Parksmith Rd Interchange	Bioinfiltration Pond	Yes
395	164.43	Eastern	US 395/NSC – Parksmith Rd Interchange	Bioinfiltration Pond	Yes
028	1.85	North Central	SR 28/East Wenatchee Area - Paving	Energy Dissapator	Yes
028	1.82	North Central	SR 28/East Wenatchee Area - Paving	Energy Dissapator	Yes
028	1.37	North Central	SR 28/East Wenatchee Area - Paving	Bioswale	Yes
028	1.81	North Central	SR 28/East Wenatchee Area - Paving	Bioinfiltration Pond	Yes
005	88.24	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Media Filter Drain	No
005	88.38	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Media Filter Drain	No
005	88.62	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Media Filter Drain	No
005	88.73	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Media Filter Drain	No
005	88.41	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Wetland Pond	No
005	88.37	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Wetland Pond	No
005	88.1	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Wetland Pond	No
005	88.38	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Infiltration Pond	No
005	88.26	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Infiltration Pond	No
005	88.39	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Infiltration Pond	No
005	88.45	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Infiltration Pond	No
005	88.1	Olympic	I-5/Grand Mound to Maytown Stage Two - Replace Interchange	Infiltration Pond	No
507	42.13	Olympic	SR 507/8th Ave. to 208th St E - Safety	Vegetated Filter Strip	Yes
507	42.22	Olympic	SR 507/8th Ave. to 208th St E - Safety	Vegetated Filter Strip	Yes
507	42.21	Olympic	SR 507/8th Ave. to 208th St E - Safety	Energy Dissapator	Yes
097	44.64	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	44.77	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	44.89	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No

State Route	Beginning Mile Post	Region	Project Name	BMP Type	In Permit Area
097	45.07	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	45.18	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	45.27	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	45.40	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	45.43	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	45.46	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	45.48	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	45.58	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	45.91	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	46.28	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	46.39	South Central	US 97/Satus Creek Vicinity - Paving	Energy Dissapator	No
097	44.50	South Central	US 97/Satus Creek Vicinity - Paving	Engineered Dispersion	No
097	44.50	South Central	US 97/Satus Creek Vicinity - Paving	Engineered Dispersion	No
097	45.12	South Central	US 97/Satus Creek Vicinity - Paving	Engineered Dispersion	No
097	45.41	South Central	US 97/Satus Creek Vicinity - Paving	Engineered Dispersion	No
097	45.90	South Central	US 97/Satus Creek Vicinity - Paving	Engineered Dispersion	No
097	45.93	South Central	US 97/Satus Creek Vicinity - Paving	Engineered Dispersion	No
097	46.25	South Central	US 97/Satus Creek Vicinity - Paving	Engineered Dispersion	No
097	45.13	South Central	US 97/Satus Creek Vicinity - Paving	Infiltration Pond	No
097	45.41	South Central	US 97/Satus Creek Vicinity - Paving	Infiltration Pond	No
097	45.46	South Central	US 97/Satus Creek Vicinity - Paving	Infiltration Pond	No
097	45.62	South Central	US 97/Satus Creek Vicinity - Paving	Infiltration Pond	No
410	107.58	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Engineered Dispersion	No
410	107.69	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Engineered Dispersion	No
410	107.76	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Engineered Dispersion	No
410	107.79	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Engineered Dispersion	No
410	107.95	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Engineered Dispersion	No
410	108.02	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Engineered Dispersion	No

Statewide Stormwater BMP Table

Appendix 2

State Route	Beginning Mile Post	Region	Project Name	BMP Type	In Permit Area
410	108.08	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Engineered Dispersion	No
410	108.14	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Engineered Dispersion	No
410	107.84	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Natural Dispersion	No
410	107.95	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Natural Dispersion	No
410	108.00	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Natural Dispersion	No
410	108.14	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Natural Dispersion	No
410	108.19	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Natural Dispersion	No
410	108.24	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Natural Dispersion	No
410	108.37	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Natural Dispersion	No
410	108.37	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Natural Dispersion	No
410	107.81	South Central	SR 410/Nile Valley Landslide - Reconstruct Route	Infiltration Pond	No
502	2.48	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	CSTW/Det. Pond	Yes
502	2.86	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	CSTW/Det. Pond	Yes
502	3.61	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	CSTW/Det. Pond	Yes
502	4.45	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	CSTW/Det. Pond	Yes
502	4.7	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	CSTW/Det. Pond	Yes
502	5.97	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	CSTW/Det. Pond w/ Oil Contaminant Boom	Yes
502	6.02	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Oil Containment Boom	Yes
502	2.51	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Flow Restrictor	Yes
502	3.66	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Flow Restrictor	Yes
502	4.49	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Flow Restrictor	Yes
502	4.7	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Flow Restrictor	Yes
502		Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Flow Restrictor	Yes
502	2.52	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Energy Dissapator	Yes
502	2.87	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Energy Dissapator	Yes
502	3.66	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Energy Dissapator	Yes
502	4.5	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Energy Dissapator	Yes
502	4.7	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Energy Dissapator	Yes

State Route	Beginning Mile Post	Region	Project Name	BMP Type	In Permit Area
502		Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Energy Dissapator	Yes
502	4.06	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Media Filter Drain	Yes
502	4.18	Southwest	SR 502/I-5 to Battle Ground - Add Lanes	Media Filter Drain	Yes
014	12.82	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Natural Dispersion Area	Yes
014	13.23	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Natural Dispersion Area	Yes
014	13.23	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Natural Dispersion Area	Yes
014	13.52	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Natural Dispersion Area	Yes
014	13.53	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Natural Dispersion Area	Yes
014	13.62	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Natural Dispersion Area	Yes
014	13.62	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Natural Dispersion Area	Yes
014	14.41	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Wet Pond	Yes
014	14.64	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Wet Pond	Yes
014	14.47	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Infiltration Pond	Yes
014	14.58	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Infiltration Pond	Yes
014	14.61	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Infiltration Pond	Yes
014	14.81	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Infiltration Pond	Yes
014	14.78	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Infiltration Pond	Yes
014	15.03	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Infiltration Pond	Yes
014	15.04	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Infiltration Pond	Yes
014	15.22	Southwest	SR 14/Camas Washougal - Add Lanes and Build Interchange	Infiltration Pond	Yes
500	0.99	Southwest	SR 500/St Johns Blvd - Build Interchange	CSTW/Infiltration Pond	Yes
500	1.08	Southwest	SR 500/St Johns Blvd - Build Interchange	Sedimentation Pond	Yes
500	1.23	Southwest	SR 500/St Johns Blvd - Build Interchange	Sedimentation Pond	Yes
500	1.24	Southwest	SR 500/St Johns Blvd - Build Interchange	Infiltration Trench	Yes
500	1.34	Southwest	SR 500/St Johns Blvd - Build Interchange	Media Filter Drain	Yes
500	1.48	Southwest	SR 500/St Johns Blvd - Build Interchange	Media Filter Drain	Yes
500	1.34	Southwest	SR 500/St Johns Blvd - Build Interchange	Infiltration Trench	Yes
500	1.56	Southwest	SR 500/St Johns Blvd - Build Interchange	Media Filter Drain	Yes

State Route	Beginning Mile Post	Region	Project Name	BMP Type	In Permit Area
500	1.29	Southwest	SR 500/St Johns Blvd - Build Interchange	Media Filter Drain	Yes
500	1.41	Southwest	SR 500/St Johns Blvd - Build Interchange	Sedimentation Pond	Yes
500	1.09	Southwest	SR 500/St Johns Blvd - Build Interchange	Flow Restrictor	Yes



Table 15 Summary of IDDE Issues and Remediation Activities

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Current Status
Northwest	6/14/2012	Connection	Highway: 532 Milepost: 3.68	Inventory Crew	Fixed/Removed	Resolved
Northwest	6/14/2012	Discharge	Highway: 5 Milepost: 157.85	Traffic Accident	Cleaned and Removed	Resolved
Northwest	6/19/2012	Discharge/Spill	Highway: 525 Milepost: 8.42	State Ferry Worker	Cleaned	Resolved
Northwest	6/29/2012	Spill/Discharge	Highway: 5 Milepost: 256	Traffic Accident	Removed	Resolved
Northwest	7/6/2012	Spill/Discharge	Highway: 405 Milepost: 14.66	Maintenance Crew	Cleaned and Removed	Resolved
Olympic	7/12/2012	Connection	Highway: 5 Milepost: 102.84	Maintenance Crew	Removed	Resolved
Northwest	7/18/2012	Discharge	Highway: 5 Milepost: 211.88	Inventory Crew	Contacted Landowner	Resolved
Northwest	8/1/2012	Spill/Discharge	Highway: 5 Milepost: 164	Traffic Accident	Removed/Cleaned	Resolved
North Central	8/22/2012	Connection	Highway: 2 Milepost: 117.8	Inventory Crew		In Progress
Olympic	8/23/2012	Discharge	Highway: 167 Milepost: 1.7	Inventory Crew	Contacted Landowner	Resolved
Northwest	9/21/2012	Spill/Discharge	Highway: 18 Milepost: 22.89	State Patrol	Cleaned/Removed by Contractor	Resolved
Northwest	9/25/2012	Discharge	Highway: 99 Milepost: 51.9	Inventory Crew	Contacted Local Jurisdiction	Resolved
Northwest	10/22/2012	Spill/Discharge	Highway: 5 Milepost: 152.37	Notified by Local Jurisdiction		Resolved
Northwest	11/4/2012	Spill/Discharge	Highway: 5 Milepost: 143.79	State Patrol	Cleaned Removed by WSDOT	Resolved
Northwest	11/21/2012	Spill/Discharge	Highway: 509 Milepost: 25.1	Seattle City Light	Cleaned and removed by Ecology	Resolved
Northwest	11/28/2012	Connection	Highway: 522 Milepost: 8.8	Maintenance Crew	In Permitting Process	In Progress

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Current Status
Olympic	11/29/2012	Discharge	Highway: 512 Milepost: 2.23	Notified by Local Jurisdiction	Removed Cleaned Up by Landowner	Resolved
Olympic	12/18/2012	Spill/Discharge	Highway: 7 Milepost: 58.18	Maintenance Crew	Cleaned and Removed by WSDOT	Resolved
Northwest	12/12/2012	Spill/Discharge	Highway: 99 Milepost: 26.80	Maintenance Crew	Cleaned and Removed by Contractor	Resolved
Northwest	12/10/2012	Connection	Highway: 20 Milepost: 59.41	Maintenance Crew	Under Observation	In Progress
Northwest	12/4/2012	Connection	Highway: 705 Milepost: 0.38	Maintenance Crew	Contacted Landowner	Resolved
Northwest	1/7/2013	Connection	Highway: 542 Milepost: 0.25	Inventory Crew		In Progress
Olympic	1/10/2013	Connection	Highway: 7 Milepost: 51.31	Maintenance Crew	Resolved in verification Process	Resolved
Olympic	1/17/2013	Connection	Highway: 101 Milepost: 352.63	Inventory Crew	Contacted Landowner	Resolved
Northwest	1/25/2013	Spill/Discharge	Highway: 410 Milepost: 30	Pierce County Sheriff	Cleaned and Removed	Resolved
Southwest	2/15/2013	Spill/Discharge	Highway: 142 Milepost: 33.8	Washington Sate Patrol	Clean and Removed	Resolved
Northwest	2/21/2013	Spill/Discharge	Highway: 18 Milepost: 22.89	Washington Sate Patrol	Cleaned/Removed by Contractor	Resolved
Northwest	2/23/2013	Spill/Discharge	Highway: 5 Milepost: 174.61	Maintenance Crew	Cleaned and Removed	Resolved
South Central	3/6/2013	Spill/Discharge	Highway: 17 Milepost: 7	Washington Sate Patrol	Cleaned and Removed	Resolved
Southwest	3/15/2013	Spill/Discharge	Highway: 503 Milepost: 4.3	Washington Sate Patrol	Cleaned and Removed by Ecology	Resolved
Southwest	3/18/2013	Spill/Discharge	Highway: 97 Milepost: 13.3	Maintenance Crew		Resolved
Northwest	3/20/2013	Connection	Highway: 9 Milepost: 6.83	Notified by Local Jurisdiction	Contacted Local Jurisdiction	Resolved

Detailed IDDE Issues Table

Appendix 3

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Current Status
Eastern	3/22/2013	Spill/Discharge	Highway: 195 Milepost: 22.39	Washington Sate Patrol	Cleaned and Removed	Resolved
Northwest	3/30/2013	Spill/Discharge	Highway: 20 Milepost: 65.96	Maintenance Crew		Resolved
Southwest	4/9/2013	Spill/Discharge	Highway: 14 Milepost: 46	Washington Sate Patrol	Cleaned and Removed by Responsible Party	Resolved
Northwest	4/10/2013	Connection	Highway: 202 Milepost: 10.37	Maintenance Crew	Contacted Local Jurasdiction	Resolved
Northwest	4/10/2013	Spill/Discharge	Highway: 5 Milepost: 142.05	Maintenance Crew	Cleaned and Removed by WSDOT	Resolved
Northwest	4/19/2013	Spill/Discharge	Highway: 5 Milepost: 189.12	City of Everett	Turned over to the Local Jurisdiction	Resolved
Northwest	5/9/2013	Discharge	Highway: 167 Milepost: 22.31	Inventory Crew	Contacted Local Jurasdiction and State Patrol	Resolved
Northwest	41415	Connection	Highway: 20 Milepost: 49.6	Maintenance Crew		In Progress
Olympic	6/1/2013	Spill/Discharge	Highway: 5 Milepost: 111.94	Washington Sate Patrol	Cleaned and Removed by WSDOT and Fire Department	Resolved
Northwest	6/4/2013	Connection	Highway: 516 Milepost: 5.5	Inventory Crew	Contacted Local Jurasdiction	Resolved

