

2012 Stormwater Report

NPDES Municipal Stormwater Permit Annual Report for Fiscal Year 2012

October 2012



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List of Acronyms

AASHTO	American Association of State Highway and Transportation Officials	NCHRP	National Cooperative Highway Research Program
BMP	Best Management Practice	NPDES	National Pollutant Discharge Elimination System
CABS	Compost Amended Biofiltration Swale	PCB	Polychlorinated Biphenyl
CESCL	Certified Erosion and Sediment Control Lead	QAPP	Quality Assurance Project Plan
CETIS	Comprehensive Environmental Toxicity Information System	RAC	Research Advisory Committee
CMMS	Computerized Maintenance Management System	RCW	Revised Code of Washington
CTR	Commute Trip Reduction	ROADMAP	Regional Operations and Maintenance Program
CWA	Clean Water Act	SMS	Safety Management System
EMS	Environmental Management System	SPC	Stormwater Policy Committee
EPA	Environmental Protection Agency	SPCC	Spill Prevention, Control, and Countermeasures
ESA	Endangered Species Act	SWMPP	Stormwater Management Program Plan
GIS	Geographic Information System	SWPPP	Stormwater Pollution Prevention Plan
GPS	Global Positioning System	TAPE	Ecology's Technology Assessment Protocol
HATS	Highway Activity Tracking System	TESC	Temporary Erosion and Sediment Control
HRM	Highway Runoff Manual	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	WAC	Washington Administrative Code
LOS	Level of Service	WRIA	Water Resource Inventory Area
MPET	Maintenance Productivity Enhancement Tool	WSDOT	Washington State Department of Transportation
MS4	Municipal Separate Storm Sewer System	WSF	Washington State Ferries

Certification and Signature for Washington State Department of Transportation's National Pollutant Discharge Elimination System Municipal Stormwater Permit 2012 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

10/15/2012
Date



Chapter 1 - Overview

NPDES Municipal Stormwater Permit

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. Amendments to the CWA in 1987 added stormwater regulations. The Environmental Protection Agency (EPA) enforces the CWA through the National Pollutant Discharge Elimination System (NPDES) program.

Under this program, the EPA can issue permits regulating stormwater discharges to receiving surface water bodies. In Washington State, EPA delegated permitting authority of the NPDES permit program to the Department of Ecology. In 1995, the Department of Ecology issued WSDOT our first NPDES municipal stormwater general permits for our stormwater systems within the state's Phase I jurisdictions.

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

To remain compliant, WSDOT must implement the requirements described in the permit and the permit-required Stormwater Management Program Plan (SWMPP). The SWMPP, approved by the Department of 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 the discharge of pollutants in stormwater runoff to receiving surface water bodies.

Area Covered by Permit

Phase I and II Permit Areas

The permit covers stormwater discharges to receiving surface water bodies from stormwater conveyance systems (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.

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. This includes King, Pierce, Snohomish, and Clark Counties, and the cities of Seattle and Tacoma.

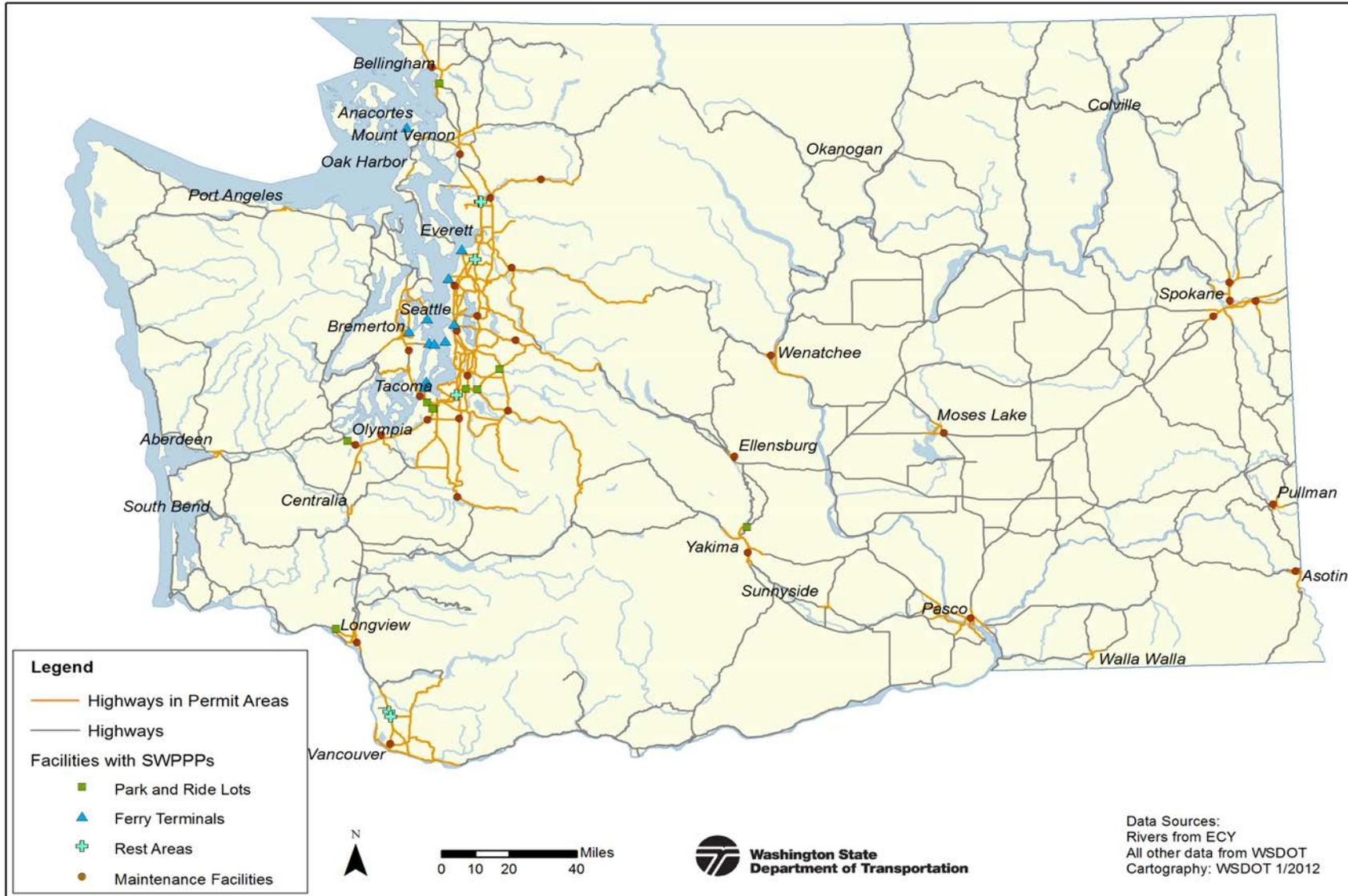
The Phase II Municipal Stormwater Permits cover certain small MS4s. These include urbanized areas and their adjacent urban fringe areas that together have a population of at least 50,000 and a population density of at least 1,000 people per square mile. Small MS4s covered by a Phase II Permit can also 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. Phase II Permits cover 99 cities, and urbanized areas in 11 counties.

Within the areas described above, WSDOT owns and operates MS4s located along about 1,600 miles of highways, as well as at several facilities including 31 maintenance facilities, 11 ferry terminals, 11 rest areas, and 11 park and ride lots. Figure 1 depicts the locations of these facilities. The permit requires WSDOT to implement the obligations in the permit and SWMPP in these locations.

TMDL Areas

The permit also covers stormwater discharges to any receiving surface 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 SWMPP implementation from July 1, 2011 to June 30, 2012, our reporting period. To include the most accurate information in the Stormwater Report, staff responsible for implementation contribute a status update for their assigned task or tasks. After the Permit Reporting Lead compiles the information into the Stormwater Report, the report goes through a series of reviews.

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

Responsibilities of the Permittee

Under Special Condition S3 of the permit, WSDOT must notify the Department of 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.

WSF also has an agreement with the King County Ferry District to operate and maintain the Vashon Island passenger-only ferry terminal.

WSDOT owns several park and ride lots that we rely on other governmental entities to operate and maintain. During this reporting period, we reviewed the list of entities that operate and maintain our park and ride lots and determined which ones we have written agreements with. WSDOT will provide these agreements upon request. We also began verifying which of those park and ride lots have MS4s.

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

Compliance 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 the Department of 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 surface water body.

In this reporting period, WSDOT had no knowledge of discharges that required Special Condition S4 notification to the Department of 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 the Department of 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 the Department of Ecology about the following five G3 spills:

- On July 27, 2011 at 6:04 pm, a semitruck rollover crash released 30 gallons of fuel into a WSDOT retention pond near highway 99 at mile post 26.
- On December 12, 2011 at 3:20 pm, a sewage to storm drain cross connection was found in the City of Bellevue MS4 which discharges to WSDOT's MS4 near I-405 at mile post 13.7.
- On January 10, 2012 at 12:30 pm, an estimated 5-10 gallons of fuel spilled at the Lakeview Maintenance Facility fueling station and entered a City of Lakewood catch basin.
- On February 17, 2012 at 9:06 am, large amounts of fire truck foam (Ansulite 3% AFF (AFC-3-A)) discharged into a WSDOT ditch while servicing the truck on highway 512 at mile post 2.7.
- On March 5, 2012 at 8:44 am, Snoqualmie Public Utilities reported a gas station dumping 55 gallon drums of contaminated water with gas into a WSDOT ditch at the Snoqualmie Pass Summit on highway 906.

Non-compliance Notification

The permit requires WSDOT to notify the Department of Ecology in the event 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 submitted four G20 notifications.

Three of the notification letters, sent on October 20, 2011, November 29, 2011, and January 13, 2012, notified the Department of Ecology that WSDOT would be unable to fully comply with the obligations for implementing our monitoring program. These letters also set new timelines for fulfilling the obligations, which we have met. Chapter 8 contains more details regarding these G20 notifications.

The fourth notification letter, sent on April 23, 2012, notified the Department of Ecology that WSDOT could not fully comply with the obligations for annually inspecting all of our catch basins. Again, we set a new timeline for fulfilling these obligations, and expect to demonstrate a full annual cycle of compliance by July 1, 2013. Chapter 6 contains more details regarding this G20 notification.

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 the Department of Ecology, but also policy makers, legislators, advocacy groups, and the general public.

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 1 shows the Governor's recommendations to the Legislature for the 2011-2013 Biennium for implementing the permit. It also shows the amounts the Legislature approved for permit implementation.

Table 1 Governor's Budget and Legislature Approvals for 2011-2013 Permit Implementation

Permit Implementation Funds	2011-2013 Biennium
Requested	\$ 15,117,000
Approved	\$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 \$2.13 billion on our Highway Construction Program statewide, a portion of which covered stormwater-related expenditures.

However, 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 *2009 Project Environmental Mitigation Costs Case Studies* report stormwater mitigation can account for between about 2 to 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 approved amounts in Table 1 and the construction project budget, 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 and SWMPP. Table 2 shows an estimate of how much WSDOT spent implementing the permit and SWMPP requirements during this reporting period.

Table 2 Estimated Expenditures for Permit Implementation for July 1, 2011 - June 30, 2012

Implementation Tasks	Estimated Expenditures for Permit Implementation for this Report Period
Permit Coordination	\$92,500
Stormwater Program Management and Oversight	\$137,400
Total Maximum Daily Load Management	\$113,600
Construction Site Pollution Prevention Management	\$132,100
Stormwater Features Inventory	\$517,800
Illicit Discharge Detection and Elimination	\$119,100
Stormwater Retrofit Prioritization	\$0
Monitoring and Research	\$1,056,200
Annual Reporting	\$78,100
Washington State Ferries	\$103,800
Highway and Facility Maintenance*	\$15,356,400
Stand-alone Stormwater Retrofit	\$902,800
Highway Runoff Program	\$201,100
Total	\$18,810,900

* Includes implementation costs for permit-required highway and facility maintenance activities plus costs for three new vector trucks used to help implement permit requirements.



Chapter 2 - Stormwater Program Management

Stormwater Management Responsibilities

WSDOT Manages Stormwater

Traditionally, WSDOT's stormwater management program focused on maintaining safe driving conditions and preserving the condition of roadways. While safety and preservation continue to be top priorities, WSDOT has also made protecting and restoring the environment an important goal. With our highways, rest areas, ferry terminals, maintenance facilities, and park and ride lots, WSDOT operates and maintains more than 40,000 acres of paved surfaces statewide. WSDOT recognizes 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 manages stormwater by implementing activities described in our Stormwater Management Program Plan, including BMPs. Stormwater BMPs consist of structural or operational practices that can prevent or reduce pollution in stormwater runoff, control runoff volumes and peak flows, or perform both functions. 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, the Mega Projects Office, 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, initiates 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

The Environmental Services Office Resource Programs Branch Manager chairs the Stormwater Policy Committee (SPC). WSDOT created the 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.

A subset of the SPC members work on preparing the budget for stormwater management and permit implementation. The budget preparation efforts help WSDOT set implementation priorities and identify the resources necessary to support permit implementation. This subset of SPC members briefs the full committee on the process and outcomes.

The permit requires the SPC to meet quarterly. In this reporting period, the SPC met on July 6, 2011, November 2, 2011, January 12, 2012, and April 12, 2012.

Intergovernmental Coordination

WSDOT coordinates with local governments, multiple agencies, tribes, and groups that operate in areas where there are WSDOT 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 stormwater 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.

As required by the permit, WSDOT continues to support liaison positions with agencies and the tribes. WSDOT's Resource Agency Liaison Program provides staff, or funding for staff, at several state and federal agencies who are dedicated to transportation projects. The liaisons assist WSDOT and local transportation agencies on issues like early project coordination, the Endangered Species Act (ESA) consultation, and environmental permit review and issuance. WSDOT has a similar program for tribes.

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. The summaries below describe the relevant changes to our manuals.

Stormwater Management Program Plan

The permit requires WSDOT to implement a Stormwater Management Program Plan approved by the Department of Ecology. The Department of Ecology approved a revised SWMPP during our permit modification in March, 2012 and included it as Appendix 7 of the permit. The plan describes the necessary actions, procedures, and practices for WSDOT to carry-out to reduce the discharge of pollutants in stormwater runoff to receiving surface water bodies. Major revisions during this reporting period included:

- Changing language to more accurately reflect WSDOT's culvert maintenance strategy.
- Making language referring to correcting BMP deficiencies consistent with Phase I Municipal Stormwater Permits.
- Reducing ferry terminal sweeping frequency based on an adaptive management response.

Highway Runoff Manual

WSDOT's *Highway Runoff Manual* (HRM) establishes minimum requirements and provides uniform technical guidance for planning and designing stormwater management facilities for new and redeveloped state highways and facilities.

In November, 2011, WSDOT issued a revised HRM. Most of the changes fixed typographical errors and inconsistencies in the text. We added a few new BMP designs including a compost amended biofiltration swale and bioretention area. We also changed the allowable slope for some BMPs based on a completed research project looking at BMPs on steep slopes in Eastern Washington. We revised the design guidance for constructed stormwater wetlands to help ensure successful installation and establishment. Finally, we created a summary page for each BMP showing design considerations, capital costs, and relative operation and maintenance costs.

Chapter 3 - Total Maximum Daily Loads

Total Maximum Daily Loads

A TMDL identifies pollution problems in a watershed, specifies how much pollution needs to be reduced or eliminated, and provides targets and strategies to achieve clean water. The EPA requires Washington State Department of Ecology to develop a TMDL for each water body segment 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. The Department of Ecology can add new applicable TMDLs to the permit every 18 months. This most recently happened through the March 2012 permit modification, which added 15 new TMDLs. The permit now includes 26 TMDLs statewide. Figure 2 depicts WSDOT facilities within these TMDL areas.

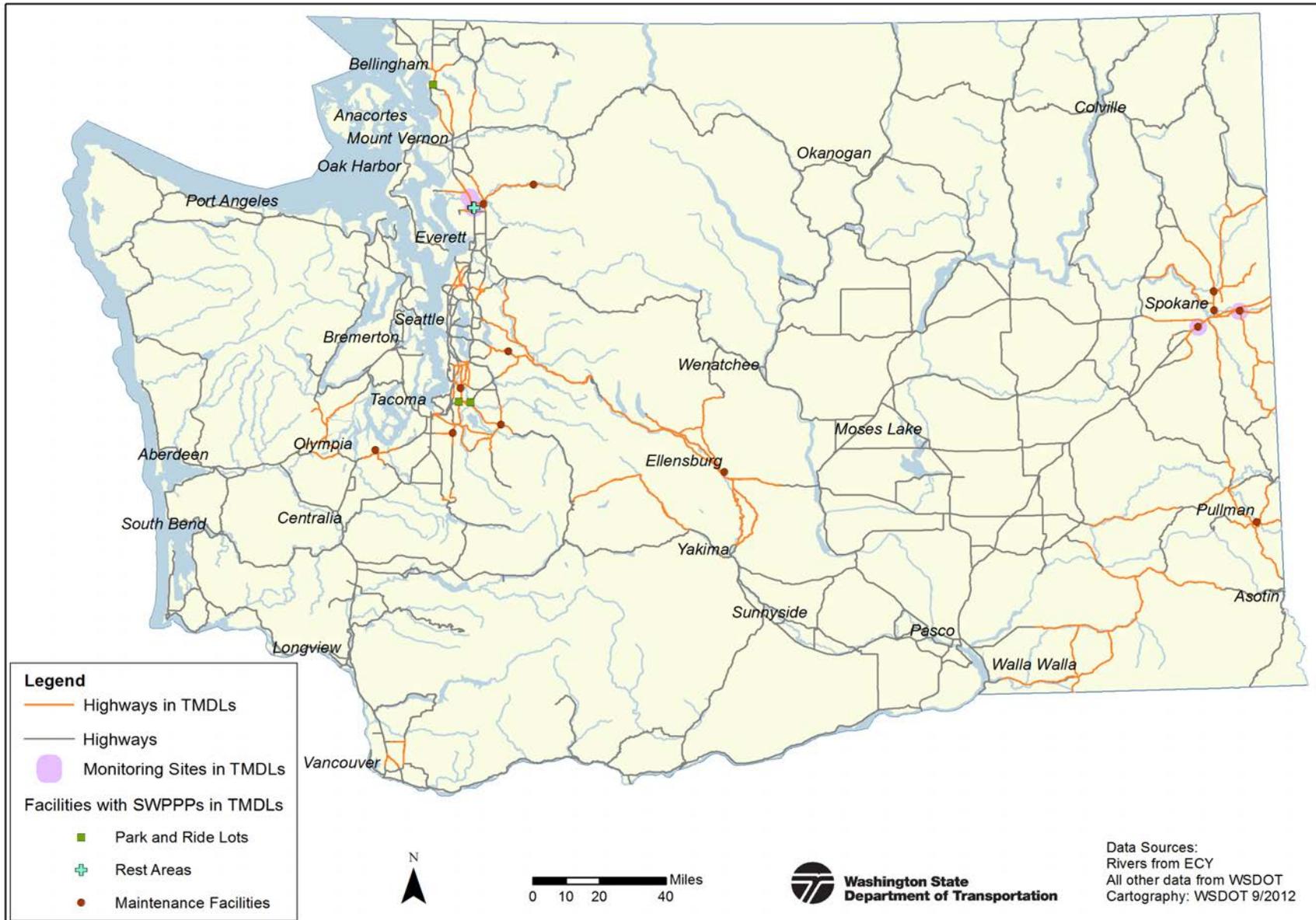
Implementing TMDL Requirements

TMDL Program

The TMDL program focuses on compliance with action items and timelines included in the 26 TMDLs in the permit. For eight of the TMDLs, WSDOT's required actions consist of compliance with permit obligations that address the TMDL pollutant. Nine TMDLs require WSDOT to implement actions above and beyond our normal permit obligations. The remaining nine TMDLs require WSDOT to apply our programmatic approach to address fecal coliform. Appendix 3 of the permit lists the action items required by each TMDL and includes a flow chart describing our fecal coliform programmatic approach.

During this reporting period, the TMDL program developed an internal website which provides guidance related to impaired water bodies for WSDOT staff. We also created a data layer of impaired water bodies, basin plans, and TMDLs for Geographic Information Systems (GIS). In addition, WSDOT added TMDL-related stormwater design considerations to Chapter 5 of the HRM.

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



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 the Department of Ecology, we prioritized our involvement efforts for each of the TMDLs on the list. WSDOT attended TMDL development meetings, reviewed and provided comments on draft TMDL documents, and collaborated with the Department of Ecology and other TMDL stakeholders. During this reporting period, WSDOT participated in developing the following TMDLs:

- Clarks Creek (stormwater flow)
- Deschutes River (temperature, dissolved oxygen, fecal coliform, PCBs, pH, phosphorus)
- Liberty Bay (fecal coliform)
- Little Spokane River (fecal coliform, temperature, turbidity)
- Sinclair-Dyes Inlets Tributaries (fecal coliform)
- Soos Creek (stormwater pilot)
- South Fork Palouse River (fecal coliform)
- Squalicum Creek (stormwater pilot)

Implementation Status for Existing TMDLs

The permit requires WSDOT to summarize our status of compliance with each of the TMDL-related action items listed in Appendix 3 of the permit. The TMDL Implementation Summary table in Appendix 1 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 performed the following relevant actions in five of the TMDL areas currently covered in the permit during this reporting period:

- Within the Nisqually River Tributaries TMDL, we removed some of the curb and catch basins along I-5 to allow stormwater runoff to disperse along the vegetated shoulders of the roadway as part of a stand-alone retrofit project.
- Within the Spokane River Watershed TMDL, we constructed ponds, bioswales, and other stormwater treatment BMPs to infiltrate and filter stormwater into the ground along I-90. We also constructed a stormwater treatment pond along Highway 2. WSDOT has a permit-required stormwater monitoring site within this TMDL as well. Figure 2 shows specific monitoring locations, and Chapter 8 describes the site and monitoring activities.
- In the Whatcom, Squalicum, and Padden Creek Basins TMDLs, we constructed media filter drains along I-5 to treat stormwater.
- In the Puyallup River Watershed TMDL, along Highway 410, WSDOT constructed stormwater treatment wetlands and flow restrictors to treat stormwater and reduce stormwater flows.
- In the Swamp Creek Basin TMDL, WSDOT constructed media filter drains, a vault, and a pond to treat stormwater. We also have a permit-required monitoring site within this TMDL. Figure 2 shows specific monitoring locations, and Chapter 8 describes the site and monitoring activities.

Chapter 4 - Construction Site Stormwater Pollution Prevention

Spill Prevention, Control, and Countermeasures

WSDOT requires its construction contractors to prepare a Spill Prevention, Control, and Countermeasures (SPCC) plan for each construction project. We provide guidance for writing these plans in our *Standard Specifications*, the HRM, and on the WSDOT Hazardous Materials Program’s 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.

The permit requires WSDOT to verify the SPCC plan is available on site. During our Statewide Erosion Plan Implementation and Effectiveness Assessment (fall assessment), WSDOT verifies whether a SPCC plan exists on site for each project. In the 2011 fall assessment, all nine of the projects assessed had an SPCC plan on site.

Erosion and Sediment Control

Erosion Control Program

Erosion at construction sites can increase the cost and time needed to complete projects. Erosion can also create dangerous work site conditions and generate excess sediment that can enter stormwater runoff. If left untreated, stormwater carrying excess suspended sediment can degrade water quality and habitat in receiving surface water bodies.

WSDOT’s Erosion Control Program primarily focuses on preventing sediment and other pollutants associated with construction activity from adversely affecting soil, air, and water quality.

Figure 3

Contractors use several types of erosion control BMPs together at the SR 500 - St. Johns Blvd Interchange project in Vancouver (October 2011).



The Erosion Control Program also:

- Trains site designers and inspectors to proactively prevent erosion.
- Provides training and technical assistance to construction staff.
- Develops contract language to ensure construction contractors control erosion effectively.
- Performs statewide erosion control assessments of project construction sites.
- Checks and reports water quality data collected by projects during construction to ensure compliance with permit requirements.

Temporary Erosion and Sediment Control Plans

WSDOT requires trained designers to develop a temporary erosion and sediment control (TESC) plan for each construction project. 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.

WSDOT's TESC Planning Tool helps designers develop consistent, complete, and contractually enforceable plans. The tool prompts designers to review requirements, analyze risks, select BMPs to address those risks, and identify contractual tools. We designed the tool to help ensure consistency in the TESC plan formats. The tool automatically organizes and generates the narrative of the plan, and checks that all sections required in the plan are complete. WSDOT redeveloped the tool as a web application in May 2012 to enhance its usability and effectiveness.

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.

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.

Certification and Training

WSDOT requires each of its general 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 the Department of 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.

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 offered 10 *Construction Site Erosion and Sediment Control Courses*. In all, 125 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.

As required by the permit, during the fall assessment, WSDOT verifies the certification status of the CESCL for each project. All nine of the projects assessed in 2011 confirmed the CESCLs held certifications.

Annual Fall Assessment

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 surface water bodies. The assessments occur in the fall to allow time for deficiencies to be corrected before heavier winter rain, which can increase the potential for erosion.

In fall 2011, WSDOT assessed nine construction projects. We evaluated each site on implementation of TESC plan elements, responsiveness to changing field conditions, and BMP effectiveness. Where TESC plan or BMP inadequacies were found, 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 3 provides the summary for the 2011 fall assessment compared to previous years' fall assessments.

Table 3 Results of 2011 Fall Assessment

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

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

Lessons Learned from 2011 Fall Assessment

Compared to 2010, projects improved performance in TESC plan implementation and BMP performance. In 2010, four assessment measures decreased in performance status. In 2011, only one assessment measure had decreased performance. Although the numbers represent an overall positive trend, we identified several ways to improve conveyance channel stabilization.

WSDOT made several changes to our *Standard Specifications*. We edited specifications for BMP use and installation to be more performance-based and we changed the check dam specification to improve overall performance in conveyance stabilization. We also added a new specification for outlet protection, which will likely improve overall performance in outlet stabilization.

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 HRM and *Hydraulics Manual* provide consistent design and planning procedures to use statewide to ensure we meet the level of stormwater management established by the Department of Ecology's stormwater management manuals.

During this reporting period, 11 consultants and 10 employees from local governments attended WSDOT's HRM training. In addition, 3 consultants completed our HRM training online.

WSDOT trains the 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 held two HRM trainings and trained 44 WSDOT staff.

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 as well as ongoing maintenance and operation costs. 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 help involve maintenance staff in the stormwater BMP design and approval process, a requirement of the permit.

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 transportation facilities. The process guides designers to investigate the feasibility of using LID and choose LID BMPs before other, non-LID BMPs.

As required by the permit, WSDOT identifies barriers to implementing LID and tries to take actions to remove those 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.

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. Sight distance and obstruction-free guidelines can also limit WSDOT's planting options.

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 to infiltrate all of the stormwater runoff.

WSDOT continually works with the Department of Ecology to develop new BMPs and revise design standards and modeling techniques so that we can use LID 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.

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

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.
- Adding new impervious surface.
- Not federally funded or not requiring consultation under Section 7 of the ESA.

During this reporting period, WSDOT submitted “no effect” documentation to the Services for the Highway 12, Mossyrock intersection project which added new impervious surface in a right turn lane. The Services had no comments on this project.

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 programs also have access to the data in the Stormwater Features Inventory Database through the Highway Features Database or through GIS.

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.

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.

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.

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 Discharge Points

The permit requires WSDOT to map and document all known discharge points 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 discharge points before the March 2014 deadline. By the end of this reporting period, WSDOT mapped outfalls on about 69 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 crew performing stormwater discharge point inventory with a GPS unit (September 2011).



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 set up software to accomplish this task. We anticipate testing of the software and automation process will begin by spring of 2013.

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 209 BMPs statewide, 138 of which were built within the areas covered by the permit. Table 4 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 4 Stormwater BMPs Built in Areas Covered by the Permit in the 2012 Reporting Period

Project Name	Region	Infiltration ¹	Dispersion ²	Biofiltration ³	Wet Pool ⁴	Other ⁵	Total
I-5 / 196th St (SR 524) Interchange SB Braided Ramp	Northwest	2		3	1		6
I-5 / Downtown Bellingham On/Off Ramp	Northwest			2			2
I-5 / SB 128th St SW I/C Channelization	Northwest			1			1
I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Olympic	1		19	1		21
I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Olympic			9	2	1	12
I-5/SR 16 Interchange - Rebuild Interchange WBNV	Olympic				5	5	10
I-5/SR 432 Talley Way Interchanges - Rebuild Interchanges	Southwest			1	6		7
I-82/Valley Mall Blvd Interchange - Rebuild Interchange	South Central	14	4				18
I-90 Two Way Transit HOV Operations - Stage 3	Northwest			2			2
I-90/ Spokane POE	Eastern		3	2		1	6
I-90/Sullivan Rd to Barker Rd - Additional Lanes	Eastern	1	9				10
Southbound 320th St Off-Ramp Channelization	Northwest			1			1
SR 303/Manette Bridge Bremerton Vicinity - Replace Bridge	Olympic	2					2
SR 410/214th Ave E to 234th - Add Lanes	Olympic				3	3	6
SR 522 / US 2 Interchange Flyover Ramp	Northwest	2		1	1		4
SR 7/Elbe Safety Rest Area - New Facility	Olympic	2					2
SR 823/Selah Vicinity - Re-route Highway	South Central	1				2	3
SR 9 / Lundeen Parkway to SR 93	Northwest	1			1		2
US 12/SR 124 Intersection - Build Interchange	South Central	8	12				20
US 395/NSC-US 2 to Wandermere and US 2 Lowering - New Alignment	Eastern			2	1		3
	Total	34	28	43	21	12	138

1. Infiltration includes: Bioinfiltration Trench, Infiltration Pond, Infiltration Swale, Infiltration Vault, and Drywell.

2. Dispersion includes: Natural Dispersion, and Engineered Dispersion.

3. Biofiltration includes: 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, the Stormwater Features Inventory Program updated discharge point, stormwater BMP, and stormwater monitoring site data layers for GIS. In addition, the Roadside Features Inventory Program updated the culvert, ditch, drainage inlet, and roadside slope layers that the Stormwater Features Inventory Program uses as a basis for continued inventory efforts.

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 discharge points. By the end of this reporting period, we mapped connection points on about 69 percent of the highway miles in the permit area. In this reporting period, WSDOT also coordinated and shared data with:

Aberdeen	Lake Stevens	Poulsbo	Kitsap County
Arlington	Liberty Lake	Seattle	Snohomish County
Bainbridge Island	Marysville	Snohomish	Spokane County
Bremerton	Mill Creek	Spokane	Thurston County
Burien	Monroe	Spokane Valley	Puyallup Tribe
East Wenatchee	Moses Lake	Tukwila	Squaxin Tribe
Ellensburg	Mukilteo	Tumwater	Department of Ecology
Everett	Olympia	Wenatchee	EPA
Granite Falls	Port Angeles	Clark County	
Lacey	Port Orchard	King County	

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. This requires WSDOT to register all known existing UIC facilities with the Department of Ecology by February 2011, which we did, and assess all known existing UICs to determine if they meet the non-endangerment standard by February 2013. The regulations also require ongoing registration of new UIC facilities. WSDOT developed a UIC Registration and Assessment Database and anticipates completing the non-endangerment assessments on time.

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 older 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 different project-triggered retrofit requirements than in the rest 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 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.

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.

Prioritization Process

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 designating areas as low, medium, and high priority. WSDOT’s stand-alone stormwater retrofit program retrofits areas in order of their priority ranking score.

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 5 shows the Governor’s recommendation to the Legislature for the 2011-2013 biennium, how much the Legislature approved, and how much we spent on stand-alone stormwater retrofits during the first half of the biennium.

Table 5 Stand-alone Retrofit Funding for the 2011-2013 Biennium

Funding Requested	Funding Approved	Spent in 2012
\$ 8,077,000	\$ 2,489,000	\$ 902,800

WSDOT builds retrofits to address stormwater treatment and flow control deficiencies of older pavement surfaces.

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, there were no applicable retrofit projects pertaining to this reporting requirement.

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 projects were applicable to this requirement. However, WSDOT identified applicable planned projects related to this requirement and expects to transfer funds from these projects in the future.

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. A database, under development, will replace the spreadsheet. The database will allow WSDOT to easily query information the permit requires us to report.

The permit requires WSDOT to report the number of stand-alone retrofits we construct. During this reporting period, WSDOT completed two stand-alone retrofit projects. 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 6. 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 6 Acres of Existing Impervious Surface Retrofitted or Reverted to Pervious*

State Route	Mile Post	Region	County	Project Name	Existing Impervious Surface Retrofitted (acres)	Existing Impervious Surface Reverted to Pervious (acres)	Reason for Retrofit
5	113.5 - 119.74	Olympic	Thurston/Pierce	I-5/Meridian Rd to Pendleton Ave	23.8	0	Stand-alone
16	12.51 - 14.6	Olympic	Pierce	SR 16/Wollochet Dr to Burnham Dr	3.4	0	Stand-alone

* 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 the Department of Ecology and municipalities 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:

- Began developing a new Standard Operating Procedure for identification and documentation of potential illicit discharges.
- Worked closely with municipalities on spill and IDDE response.
- Worked with municipalities, Washington State Patrol, and the Department of Ecology to develop a notification process for faster spill response.
- Trained more WSDOT staff on how to identify and report IDDE issues.
- Incorporated IDDE training in maintenance BMP training.

Figure 5

WSDOT field crews identified this illicit connection on State Route 531 (2011).



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.

New Reported Illicit Discharges

The permit requires us to track all issues and seek remediation when necessary. WSDOT verified 98 illegal connections and discovered 16 illicit discharges during this reporting period. Of these, WSDOT resolved 15 illicit discharges and 17 illegal connections. At the end of this reporting period, the unresolved illicit discharge and 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

Maintenance and Operations

How the Permit Affects Maintenance

The permit 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.

Highway Maintenance and Operations

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 grading. The permit requires WSDOT to report the comparison of the LOS delivered for each stormwater-related maintenance activity with its target. We show these comparisons in the subsections below for activities with set LOS targets.

Regional Road Maintenance Endangered Species Act Program

WSDOT applies 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 surface water bodies will do so. WSDOT works with the Washington State Patrol, the Department of 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 surface water bodies. Sweeping frequency depends on debris build-up and the target LOS.

Street Sweeping LOS Comparison: Target: B+ Delivered: A-

Litter Control

WSDOT maintenance staff pick up large debris and dispose 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 7 shows the amount of litter we disposed during this reporting period compared to previous years. In addition, contractors hired by Adopt-a-Highway sponsors picked up and disposed almost 5,600 bags of litter during this reporting period.

Table 7 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

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 8 shows the amounts used during this reporting period compared to previous years.

Table 8 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

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 9 shows the amounts for this reporting period compared to previous years.

Table 9 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

Figure 6

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



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.

Ditch Maintenance LOS Comparison: Target: B Delivered: B

WSDOT maintains culverts to ensure they are clean and in good operating condition.

Culvert Maintenance LOS Comparison: Target: D+ Delivered: C-

Catch Basin Maintenance

The permit requires WSDOT to annually inspect all known catch basins beginning in March 2011. It also requires WSDOT to correct any deficiencies identified during the inspections within six months. On April 23, 2012, WSDOT notified the Department of Ecology we would be unable to fully comply with this requirement. In our submittal letter, we also notified the Department of 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.

Based on the inspection and maintenance work we completed between March 2011 and March 2012, we estimate about 27,500 catch basins exist in areas covered by the permit. By March 2012, we inspected 16,750 catch basins. By the end of the reporting period in June 2012, we inspected another 8,102 catch basins. We expect 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). In the future, the HATS records can help provide justification for less frequent

inspections in areas where the records show maintenance standards can still be met. The maintenance needs for catch basins depend on debris build-up and the target LOS.

Catch Basin Maintenance LOS Comparison: Target: D+ Delivered: C

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. We have begun an inspection program for permanent stormwater BMPs and expect to complete inspections by the permit's March 2013 deadline.

WSDOT documents BMP inspections as well as deficiencies and maintenance needs identified during inspections in HATS. The records in HATS may be able to help provide justification for less frequent inspections if they show maintenance standards can still be met. WSDOT will address BMPs that need more extensive, non-typical repairs through our stand-alone retrofit program.

The maintenance schedule for treatment and flow control BMPs depends on the accumulation of trash, debris, oil, and sediment as well as the LOS target.

BMP Maintenance LOS Comparison: Target: C Delivered: C

Facility Maintenance

Stormwater Pollution Prevention Plans

WSDOT implements SWPPPs to help prevent the contamination of stormwater at rest areas, park and ride lots, maintenance facilities, and ferry terminals. 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.



Figure 7

A WSDOT maintenance employee used a vacuum truck to vacuum the sediment and debris out of a catch basin and tried to uncover another manhole on I-705 under I-5 (October 2012).

During this reporting period, WSDOT conducted SWPPP refresher trainings.

In all, 72 new and existing maintenance employees received this training.

The permit requires WSDOT to implement individual SWPPPs at rest areas with MS4s and at maintenance facilities that have equipment storage, refueling stations, areas where repairs on heavy equipment and vehicles occur, and MS4s. The permit also requires WSDOT to implement a programmatic SWPPP for park and ride lots with MS4s that we own and operate. WSDOT began implementing all of its individual SWPPPs for the rest areas and maintenance facilities and the programmatic SWPPP for the park and ride lots that we own and operate before the March 2011 deadline.

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 considers it a good practice to manage road waste responsibly and 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 vector 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.

During this reporting period, WSDOT had discussions with Spokane County, City of Spokane Valley, City of Wenatchee, Skagit County, Cowlitz County, and cities in north King County about constructing street waste management facilities in those areas. We still have an agreement with Cowlitz County to construct a vector decant and street sweeping facility, however permitting issues have delayed construction of the facility. The municipalities WSDOT worked with plan to construct street waste facilities next biennium.

Maintenance Training

The permit requires WSDOT to train 90 percent of new 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 maintenance employees to complete Maintenance Academy Training. In this reporting period, all of the 96 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 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.

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

During this reporting period, WSF found that weekly stormwater inspections at the terminals have resulted in improved cleanliness and timely corrections.

No formal corrective actions were found to be necessary as a result of the audits.

The improvements at the terminals prompted an adaptive management response to modify inspections at the terminals. Now, the two WSF inspectors will each inspect all the ferry terminals once a month instead of weekly.

Ferry Terminal Maintenance and Operations

Stormwater Pollution Prevention Plan

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 weekly inspection log in the SWPPP document. WSF uses most of the programmatic BMPs in the SWPPP at all of its ferry terminals because the procedures have been integrated into the WSF Safety Management System (SMS).

WSF bases its SMS on international standards for safety, security, and pollution prevention. SMS policies and procedures integrate safety, security, and environmental management into everyday operations. The Environmental Management System (EMS), a subsection of the SMS, addresses illicit discharges and potential discharges of hazardous materials. WSF refines the SMS through adaptive management as WSF staff provide recommendations and internal and external audits identify areas requiring improvement.

Sweeping

WSF removes sediment and other debris from ferry terminals by mopping small drips from leaking vehicles and mechanically sweeping. Staff clean up small leaks daily. In fall 2011, WSF finalized a sweeping contract and contractors began sweeping the terminal holding areas quarterly. The contractors report the quantities of material being swept up so WSF can modify the schedules. Through an adaptive management process, WSF increased the sweeping frequency at the Anacortes and Bainbridge 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 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 surface water bodies. WSF stores sand and de-icing agents on pallets, 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.

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. Although no revisions were made to MPET during this reporting period, the permit requires revising it as necessary so that it can work as an adaptive



Figure 8

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

management tool. WSF schedules corrective maintenance activities in MPET based on needs identified during inspections. WSF also adjusts preventative maintenance schedules in MPET to maximize the balance between available resources and identified maintenance needs.

Training

Weekly terminal inspections occurred between October 2011 and April 2012.

Stormwater Terminal Inspectors documented the inspections in a formal checklist and reviewed them with the Terminal Supervisor.

Terminal Supervisors documented in the inspection logs when identified corrections were made.

WSF reviewed the inspection logs as part of the 2012 SMS internal audit to ensure compliance with permit requirements.

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, individually, and develops training materials for self-taught individual instruction. Terminal supervisors ensure their staff receive training.

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. WSF hired 32 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.

Progress on Meeting Monitoring Requirements

Prior to beginning the monitoring program, the permit requires WSDOT to submit and obtain approval from the Department of Ecology for Quality Assurance Project Plans (QAPPs) for each component above. QAPPs describe study objectives and procedures necessary to achieve those objectives. Developing and implementing a thorough QAPP helps ensure the collected data and analysis results are representative, accurate, and complete.

WSDOT submitted draft QAPPs to the Department of Ecology on September 2, 2010, meeting the September 6, 2010 permit deadline. The Department of Ecology gave us conditional approvals for the draft QAPPs and required us to submit finalized QAPPs by September 6, 2011. We met this deadline, submitting the final QAPPs on September 2, 2011. We received an approval letter from the Department of Ecology on September 16, 2011.

The permit requires WSDOT to fully implement our monitoring program by September 6, 2011. On October 20, 2011, WSDOT notified the Department of Ecology we would be unable to fully comply with this deadline. As we explain in our notification, state government hiring and equipment purchase freezes delayed our ability to hire and train monitoring support staff and establish fully functional monitoring sites. In the notification letter, WSDOT suggested specific timelines for implementing our monitoring program.

On November 29, 2011, WSDOT notified the Department of Ecology we would be unable to fully comply with the timelines defined in our October 20, 2011 notification letter. WSDOT determined it was necessary to use a phased approach to fully implement our monitoring program and produce scientifically credible data that represents discharges from WSDOT's various land uses.

In the November 29, 2011 letter, we suggested an extension to the previously defined timeline for fully implementing our monitoring program at our rest area, maintenance facility, and ferry terminal sites. We also committed to providing a revised schedule by January 15, 2012 for implementing highway and BMP site monitoring. WSDOT notified the Department of Ecology that with these extended timelines, we anticipated being unable to meet the conditions that specify the number of storms to be sampled per year.

As we had committed in the November 29, 2011 notification letter, WSDOT sent the Department of Ecology a follow up notification letter on January 13, 2012 including a revised schedule for implementing highway and BMP site monitoring. During this reporting period, WSDOT met all of the commitments and timelines defined in the November 29, 2011 and January 13, 2012 notification letters. WSDOT is now fully implementing our stormwater monitoring program and preparing for toxicity sampling and 2012 wet season sampling.

Full implementation of our monitoring program began at the sites listed on the following dates:

- November 30, 2011 (WSDOT had committed to this date for these sites)
 - Northbound Smokey Point Rest Area, near Arlington
 - Ballinger Maintenance Facility, in Shoreline
 - Bainbridge Island Ferry Terminal



Figure 9

Stormwater monitoring station at the vegetated filter strip stormwater treatment BMP near Everett (December 2010).

- February 27, 2012 (WSDOT had committed to March 1, 2012 for these sites)
 - Southbound Smokey Point Rest Area, near Arlington
 - Lakeview Maintenance Facility, in Lakewood
 - Vancouver Maintenance Facility, in Vancouver
 - Euclid Maintenance Facility, in Wenatchee
 - Geiger Maintenance Facility, in Spokane
 - Clarkston Maintenance Facility, in Clarkston
- May 1, 2012 (WSDOT had committed to this date for this site)
 - Highway runoff, BMP effectiveness, highway and BMP toxicity site, Southbound I-5 at milepost 210, near Pilchuck Creek
- May 2, 2012 (WSDOT had committed to June 15, 2012 for this site)
 - Rural highway and BMP toxicity site, Southbound Highway 9 at milepost 18, near Marysville
- June 15, 2012 (WSDOT had committed to this date for these sites)
 - Highway runoff, BMP effectiveness, highway and BMP toxicity site, Northbound I-5 at milepost 197, near Everett
 - Highway runoff site, Westbound I-90 at milepost 289, near Spokane

The permit requires WSDOT to develop and begin populating and maintaining a monitoring database container and link it to the Stormwater Features Inventory Database by March 5, 2012. WSDOT met these requirements by using the following four databases.

- The EQUIS™ database stores field activity, sample, and chemistry data. WSDOT uses it to plan sampling, track samples, electronically record field data, and produce data reports. EQUIS™ stores geographic coordinates of monitoring sample locations which act as links to the Stormwater Features Inventory Database through GIS.

- The StreamTrac database stores and manages hydrologic data, including precipitation, stage, and water temperature data. WSDOT uses this database daily to make decisions about where and when to sample.
- The Comprehensive Environmental Toxicity Information System™ (CETIS™) database stores toxicity data. WSDOT has not collected any permit-required toxicity data yet and will continue to make refinements to this database until we do.
- The Weather Forecasting Database stores forecasting data used to make decisions about whether storm events are qualifying events as defined by the permit.

The permit requires WSDOT to monitor for certain herbicides at highway sites if applied near the monitoring site vicinity. If WSDOT applies the herbicide in the monitoring site drainage area, we must also monitor for it during annual sediment and first flush toxicity sampling. Our *QAPP for Baseline Monitoring of WSDOT Highway Runoff* includes the list of herbicides applied at our highway monitoring sites from 2008 to 2011. This list needs to be updated at least annually. Table 10 shows the modified list of herbicides used in 2012 at our highway monitoring sites.

Table 10 Herbicides Applied near Stormwater Monitoring Sites

Site Name	Herbicides applied*
I-5 Everett	glyphosate (non-aquatic)
I-5 Pilchuck Creek	glyphosate (non-aquatic)
SR 9 Marysville	glyphosate (non-aquatic)
I-90 Spokane	Diuron and glyphosate (non-aquatic)

* Includes herbicides used and required to be monitored as listed in Special Condition 7 of the permit.

Lessons Learned from Monitoring Implementation

WSDOT found developing a statewide stormwater monitoring program to be a complex endeavor. The primary lessons learned from implementation of our monitoring program include:

- The success of a monitoring program depends on a phased approach to implementation. An all-at-once approach does not allow for the iterative learning and adaptation necessary for a successful stormwater monitoring effort.
- Establishing a monitoring program takes considerable time and planning. The WSDOT statewide stormwater monitoring program took more than three years to develop.
- Involve experts early in the process to facilitate timely implementation of the monitoring program. In the first few years of program development, WSDOT had difficulties due to a statewide hiring freeze and contracting restraints. Once essential staff and access to consultant expertise were established, significant gains were made in developing the program.
- Purchase equipment early in the development of the program. The current resource constrained fiscal environment created challenges to meeting the infrastructure and equipment needs of our monitoring program. In addition, the availability of specialized equipment and customization needs delayed the deployment of equipment to the field.
- Managing stormwater monitoring data successfully requires several customized databases that need to be integrated to work together. The process of integration and customization requires expertise and experience with each database to be able to develop a system to manage data effectively and efficiently.

Stormwater Research

Stormwater Research Strategy Tool

WSDOT relies on research to identify innovative, cost-effective solutions for designing, building, and maintaining stormwater management systems. We use a 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

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 twice and reviewed six project proposals. The Research Executive Committee chose one of the projects, which involves testing the longevity of a Media Filter Drain, for WSDOT to fund.

Coordination

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 participated on three National Cooperative Highway Research Program (NCHRP) panels related to stormwater research.

WSDOT also 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.

WSDOT's specific stormwater research priorities tend to shift every few years. However, the following four core research areas will likely remain the same:

Characterizing the properties of stormwater runoff.

Characterizing the environmental effects of stormwater runoff.

Developing methods to avoid, minimize, buffer, or mitigate stormwater runoff effects.

Developing new procedures and design tools.

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 Compost Amended Biofiltration Swale (CABS) Evaluation with Herrera Environmental Consultants. This project, located along State Route 518, included water quality and flow control testing on a CABS. The findings showed the CABS removed total suspended solids, total and dissolved metals (particularly copper and zinc), and oils from stormwater. The Department of Ecology found the results significant enough to grant the CABS a General Use Level Designation for basic and enhanced treatment and a Conditional Use Level Designation for oil control.

WSDOT continues its work on a research project which involves monitoring a modified media filter drain on Interstate 405. Initial monitoring showed the modified media filter drain design did not meet the enhanced treatment performance standards for removing dissolved copper. WSDOT made design adjustments, approved by the Department of Ecology, and continues to monitor the effectiveness of the adjusted design.

Another continuing WSDOT research project related to stormwater involves comparing 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 described above at the Everett and Pilchuck Creek BMP monitoring sites.

Of the four research projects we reported as newly funded last year, WSDOT started two: Steep Slope BMPs for western Washington, and Stormwater Model Comparison. We expect to begin the third, Stormwater Storage, in the fall. The fourth project, LID and Transportation Stormwater Practices, we actually noted in our 2010 Stormwater Report. During this reporting period, we also started on the newly funded Media Filter Longevity Testing research project.

Dissemination of Research Findings

The permit requires WSDOT to post our technical reports on our website. WSDOT will be posting the completed Technical Evaluation Report for CABS on our research website. The WSDOT Library and the Transportation Research Information Services database will also keep copies of this report.

Chapter 9 - Public Outreach, Education, and Involvement

Permit Requires 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 along the highways. WSDOT collects and disposes most of the bags filled by volunteers. Organizations and businesses that sponsor sections of highway usually hire contractors to pick up and dispose of the litter in those sections.

Currently, 1,100 volunteer groups and 187 sponsors have adopted sections of Washington state highways. Volunteer groups and sponsors submit activity reports to help WSDOT track how many hours volunteers work and how much litter they pick up. In this reporting period, volunteers reported working more than 19,000 hours and picking up more than 25,000 bags of litter. Contractors hired by sponsors picked up an additional 5,600 bags of litter. While this is fewer bags than reported last year, contractors explain that less litter accumulates on the highway sections that have been adopted and regularly cleaned compared to unadopted sections.

Commute Trip Reduction

WSDOT works with 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, CTR employers continue to outperform the state and nation in reducing drive-alone commuting.

WSDOT set a goal to reduce the number of trips made by people driving alone solely for their commute by 10 percent between 2007 and 2012. We also set a goal to reduce the number of miles each employee travels to their work site by 13 percent between 2007 and 2012. Between 2007 and 2010, CTR participants reduced their miles travelled by about 160 million miles. Each year, that equals about 71,500 metric tons of greenhouse gas emissions and about 8 million gallons of fuel each year. Removing vehicles from the roadways and reducing the emissions that enter the atmosphere, in turn, 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 information with the public. We share stormwater-related information by posting links to our annual Stormwater Reports, guidance documents, manuals, and procedures, design tools, research, and contact information for staff.

During this reporting period, WSDOT made a number of updates to our websites. These included:

- Posting the 2011 Stormwater Report after it was submitted to the Department of Ecology.
- Posting the 2011 HRM, along with descriptions of changes made to it.
- 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.
- Posting the March, 2012 issue of the Gray Notebook, WSDOT's quarterly accountability report, which includes a section about stormwater activities performed.

In this reporting period, the CTR employee survey showed that compared to the 2010 survey:

The drive alone rate to work sites participating in CTR fell by 5 percent.

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

CTR removed about 15,700 vehicles from the roadways each morning.

Annual carbon dioxide emissions fell by 68,700 metric tons.

Annual fuel consumption fell by 7.5 million gallons.

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. As required by the Department of Ecology, the 2010 permit modification process included a public comment and review period. WSDOT also welcomes public review and comment on our Roadside Vegetation Management Plans at any time. We regularly hold public meetings and hearings for specific transportation projects and solicit public review of environmental impact statements and environmental assessments developed for projects.

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. Regular 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

WSDOT publishes our completed research projects. Descriptions of research projects published during this reporting period appear in Chapter 8. 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.

In March 2012, WSDOT's Permit Coordinator and State Pavement Engineer participated in a learning cohort on permeable pavements sponsored by the Sightline Institute. Our Permit Coordinator also participated in a learning cohort sponsored by the Sightline Institute on building support for green infrastructure in June 2012.

One of the best ways to share knowledge and technology between agencies, organizations, and the private sector is through actively participating in work groups, advisory groups, committees, and partnerships.

WSDOT participates in many of these groups 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
 - Phase I Monitoring

- 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
 - Technology Assessment Protocol - Ecology (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

- 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 11 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	Discharge inventory began in 2012. A map of findings will be completed 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	Will implement as needed
	Work to prevent agricultural encroachment to address TSS/turbidity in the following prioritized order: Highway 27 right-of-way in upper watershed, then Highway 195 right-of-way.	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.
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. Construction will likely begin in June or July 2013 and scheduled completion by the end of 2013.

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Issaquah Creek Basin TMDL (Fecal Coliform)²	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. Developed standard report format and resubmitted findings to Ecology on 3/29/12. See WSDOT's TMDL website for the Issaquah Creek TMDL Summary of Inventory Findings Report.
	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	Issaquah Creek TMDL Summary of Inventory Findings Report contains details on TMDL concerns found and follow-up actions taken and/or notification to others where a concern has been identified but occurred outside WSDOT's right-of-way and control.
	Provide bacterial pollution information collected where WSDOT's MS4 connects with another jurisdiction's MS4.	As needed	Will implement as needed
Little Bear Creek TMDL (Fecal Coliform)²	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. Developed standard report format and resubmitted findings to Ecology on 3/29/12. See WSDOT's TMDL website for the Little Bear Creek TMDL Summary of Inventory Findings Report.
	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	Little Bear Creek TMDL Summary of Inventory Findings Report contains details on TMDL concerns found and follow-up actions taken and/or notification to others where a concern has been identified but occurred outside WSDOT's right-of-way and control.
	Provide bacterial pollution information collected where WSDOT's MS4 connects with another jurisdiction's MS4.	As needed	Will implement as needed

TMDL Implementation Summary Table

Appendix 1

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Nisqually River Tributaries TMDL (Fecal Coliform and Dissolved Oxygen)²	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	Not applicable this reporting period
	Participate in annual adaptive management meetings.	Annually	Completed 6/6/12
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. ³	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.	Due to pending budget reductions in 2013-2015, WSDOT withheld the request for additional inventory funds. This work will be done within established timelines using existing resources.
	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.	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)²	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 3/6/12. 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)²	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. A map of discharge points, IDDEs and sources was submitted to the Department of 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	Will implement as needed
	Participate in annual adaptive management meetings.	Annually	Completed 6/6/12
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. A map of findings will be completed 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	As needed

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Stillaguamish River Watershed TMDL (Fecal Coliform, Dissolved Oxygen, pH, Mercury, Arsenic and Temperature)²	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.	WSDOT began discharge inventory on 5/27/09 and completed it on 4/25/11. We reviewed and updated some segments and completed this work on 6/13/12. Follow-up work on IDDE's, sources and field verification still under way. WSDOT will complete a map of discharge points, IDDEs and sources as soon as possible, but no later than December 31, 2012.
	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	Will implement as needed
	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 3/2011

TMDL Implementation Summary Table

Appendix 1

TMDL Name	WSDOT's Required Actions	Implementation Deadlines	Status of Compliance
Swamp Creek Basin TMDL (Fecal Coliform)²	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. Developed standard report format and resubmitted findings to Ecology on 3/29/12. See WSDOT's TMDL website for the Swamp Creek TMDL Summary of Inventory Findings Report.
	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	Swamp Creek TMDL Summary of Inventory Findings Report contains details on TMDL concerns found and follow-up actions taken and/or notification to others where a concern has been identified but occurred outside WSDOT's right-of-way and control.
	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)²	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	WSDOT began inventory work within the TMDL boundary on 4/14/10, but a focused effort has 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 necessary
Tucannon River Watershed TMDL (Temperature)	Maintain roads and roadside stormwater conveyance ditches to prevent entry of sediment into area waterways. ⁴	On-going	On-going

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	On-going
	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. Action item language modified for March 2012 permit modification.
3. 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.
4. 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 12 Stormwater Facilities Built Statewide During the 2012 Reporting Period

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
002	14.22	L	147.2	Northwest	SR 522 / US 2 Interchange Flyover Ramp	Pond	64,464 ft2	Yes	2012
002	14.45	R	45	Northwest	SR 522 / US 2 Interchange Flyover Ramp	Media Filter Drain	200 ft	Yes	2012
002	14.47	R	102.9	Northwest	SR 522 / US 2 Interchange Flyover Ramp	Infiltration pond	6,000 ft2	Yes	2012
002	295.98		514	Eastern	US 395/NSC-US 2 to Wandermere and US 2 Lowering - New Alignment	Pond		Yes	2012
005	13.45	L	110	Southwest	I-5/ SR 501 Ridgefield Interchange	Detention Pond	0.09 Ac.	No	2012
005	13.48	L	104	Southwest	I-5/ SR 501 Ridgefield Interchange	Media Filter Drain	400 L.F.	No	2012
005	13.6	L	104	Southwest	I-5/ SR 501 Ridgefield Interchange	Media Filter Drain	757 L.F.	No	2012
005	13.62	L	30	Southwest	I-5/ SR 501 Ridgefield Interchange	Media Filter Drain	2891 L.F.	No	2012
005	13.62	R	30	Southwest	I-5/ SR 501 Ridgefield Interchange	Media Filter Drain	2901 L.F.	No	2012
005	14.1	R	104	Southwest	I-5/ SR 501 Ridgefield Interchange	Media Filter Drain	345 L.F.	No	2012
005	14.11	L	104	Southwest	I-5/ SR 501 Ridgefield Interchange	Media Filter Drain	367 L.F.	No	2012
005	14.19	R	200	Southwest	I-5/ SR 501 Ridgefield Interchange	Media Filter Drain	722 L.F.	No	2012
005	14.21	R	104	Southwest	I-5/ SR 501 Ridgefield Interchange	Media Filter Drain	491 L.F.	No	2012
005	14.22	L	104	Southwest	I-5/ SR 501 Ridgefield Interchange	Media Filter Drain	192 L.F.	No	2012
005	14.22	L	400	Southwest	I-5/ SR 501 Ridgefield Interchange	Detention Pond	0.98 Ac.	No	2012
005	14.24	R	300	Southwest	I-5/ SR 501 Ridgefield Interchange	Detention Pond	0.82 Ac.	No	2012
005	14.37	L	104	Southwest	I-5/ SR 501 Ridgefield Interchange	Media Filter Drain	330 L.F.	No	2012
005	36.8	L	118	Southwest	I-5/SR 432 Talley Way Interchanges - Rebuild Interchanges	Media Filter Drain	527 L.F.	Yes	2012
005	36.92	L	200	Southwest	I-5/SR 432 Talley Way Interchanges - Rebuild Interchanges	SWTW/Det. Pond	0.35 Ac.	Yes	2012
005	37.1	L	150	Southwest	I-5/SR 432 Talley Way Interchanges - Rebuild Interchanges	SW Treatment Wetland	3581 s.f.	Yes	2012
005	83.81	L	120	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Detention Pond	1.72 Ac.	No	2012
005	84.26	R	60	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Media Filter Drain	2176 L.F.	No	2012

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
005	84.5	L	60	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Media Filter Drain	240 L.F.	No	2012
005	84.69	L	60	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Media Filter Drain	1471 L.F.	No	2012
005	85.07	L	60	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Media Filter Drain	358 L.F.	No	2012
005	85.17	L	60	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Media Filter Drain	475 L.F.	No	2012
005	85.19	R	120	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Detention Pond	0.73 Ac.	No	2012
005	85.68	L	60	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Media Filter Drain	877 L.F.	No	2012
005	85.88	L	950	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Detention Pond	2.82 Ac.	No	2012
005	86.03	R	60	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Media Filter Drain	2709 L.F.	No	2012
005	86.28	L	130	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Detention Pond	1.52 Ac.	No	2012
005	86.34	R	60	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Media Filter Drain	170 L.F.	No	2012
005	86.34	R	60	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Media Filter Drain	2310 L.F.	No	2012
005	86.68	L	400	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Detention Pond	6.04 Ac.	No	2012
005	87.15	R	60	Southwest	I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C - Add Lanes	Media Filter Drain	1240 L.F.	No	2012
005	114.33	L		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Detention Pond		Yes	2012
005	114.4	L		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
005	114.44	L		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012

Statewide Stormwater BMP Table

Appendix 2

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
005	114.49	L		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
005	114.57	N/A		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
005	115.01	L		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
005	115.12	L		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
005	115.44	N/A		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
005	115.7	N/A		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
005	115.71	N/A		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
005	115.73	N/A		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
005	116.12	L		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Bioswale w/Under drain		Yes	2012
005	116.13	N/A		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
005	116.34	L		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Bioswale w/Under drain		Yes	2012
005	116.38	L		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Bioswale		Yes	2012
005	116.41	L		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Bioswale w/Under drain		Yes	2012
005	132.38	R		Olympic	I-5/SR 16 Interchange - Rebuild Interchange WBNV	SW Treatment Wetland		Yes	2012
005	132.38	R		Olympic	I-5/SR 16 Interchange - Rebuild Interchange WBNV	Flow Restrictor		Yes	2012
005	136.64	L		Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Media Filter Drain		Yes	2012

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
005	136.73	L		Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Media Filter Drain		Yes	2012
005	137.55	L		Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Media Filter Drain		Yes	2012
005	137.76	L		Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Media Filter Drain		Yes	2012
005	138.06	L		Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Media Filter Drain		Yes	2012
005	138.69	L		Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Media Filter Drain		Yes	2012
005	138.78	L		Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Media Filter Drain		Yes	2012
005	138.79	R		Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Media Filter Drain		Yes	2012
005	139.06	R		Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Media Filter Drain		Yes	2012
005	143.92	L	100	Northwest	Southbound 320th St Off-Ramp Channelization	Media Filter Drain		Yes	2012
005	181.75	N/A	0	Northwest	I-5 / 196th St (SR 524) Interchange SB Braided Ramp	Media Filter Drain	992 ft	Yes	2012
005	181.85	N/A	0	Northwest	I-5 / 196th St (SR 524) Interchange SB Braided Ramp	Media Filter Drain	647 ft	Yes	2012
005	181.92	L	0	Northwest	I-5 / 196th St (SR 524) Interchange SB Braided Ramp	Vault	3648 ft2	Yes	2012
005	181.98	N/A	0	Northwest	I-5 / 196th St (SR 524) Interchange SB Braided Ramp	Media Filter Drain	777 ft	Yes	2012
005	182.45	L	108	Northwest	I-5 / 196th St (SR 524) Interchange SB Braided Ramp	Pond	9707 ft2	Yes	2012
005	185.15	L	0	Northwest	I-5 / 196th St (SR 524) Interchange SB Braided Ramp	Vault	3740 ft2	Yes	2012
005	186.43	L	528	Northwest	I-5 / SB 128th St SW I/C Channelization	Media Filter Drain	163 feet long	Yes	2012

Statewide Stormwater BMP Table

Appendix 2

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
005	252.18	R	20	Northwest	I-5 / Downtown Bellingham On/Off Ramp	Media Filter Drain	230' x 3'	Yes	2012
005	254	R	21.3	Northwest	I-5 / Downtown Bellingham On/Off Ramp	Media Filter Drain	180' x 4'	Yes	2012
005				Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Detention Pond		Yes	2012
005				Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	SW Treatment Wetland		Yes	2012
005				Olympic	I-5/Port of Tacoma Rd to King Co Line - Add HOV Lanes	Flow Restrictor		Yes	2012
007	17.11	R	61.5	Olympic	SR 7/Elbe Safety Rest Area - New Facility	Vault		Yes	2012
007	17.12	R	44.7	Olympic	SR 7/Elbe Safety Rest Area - New Facility	Vault		Yes	2012
009	16.59	L	139	Northwest	SR 9 / Lundeen Parkway to SR 92	SWTW/Det. Pond	15,333 ft ³ 136,877 ft ³	Yes	2012
009	17.11	L	77	Northwest	SR 9 / Lundeen Parkway to SR 92	Vault	65' x 22'x7'	Yes	2012
012	294.95	L	110	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	10969 s.f.	Yes	2012
012	295.15	L	195	South Central	US 12/SR 124 Intersection - Build Interchange	Infiltration pond	1807 s.f.	Yes	2012
012	295.25	L	850	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	6500 s.f.	Yes	2012
012	295.3	L	350	South Central	US 12/SR 124 Intersection - Build Interchange	Infiltration pond	1800 s.f.	Yes	2012
012	295.3	L	600	South Central	US 12/SR 124 Intersection - Build Interchange	Infiltration pond	1593 s.f.	Yes	2012
012	295.32	R	60	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	9970 s.f.	Yes	2012
012	295.36	R	100	South Central	US 12/SR 124 Intersection - Build Interchange	Infiltration pond	821 s.f.	Yes	2012
012	295.42	R	600	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	4860 s.f.	Yes	2012
012	295.42	R	400	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	7512 s.f.	Yes	2012
012	295.42	L	800	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	22613 s.f.	Yes	2012
012	295.42	L	250	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	18596 s.f.	Yes	2012
012	295.45	R	1140	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	9780 s.f.	Yes	2012
012	295.51	R	840	South Central	US 12/SR 124 Intersection - Build Interchange	Infiltration pond	1148 s.f.	Yes	2012
012	295.53	R	500	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	17748 s.f.	Yes	2012
012	295.55	R	200	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	8250 s.f.	Yes	2012

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
012	295.61	R	150	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	18394 s.f.	Yes	2012
012	295.76	R	1040	South Central	US 12/SR 124 Intersection - Build Interchange	Natural Dispersion	4750 s.f.	Yes	2012
012	296.38	R	500	South Central	US 12/SR 124 Intersection - Build Interchange	Infiltration pond	2193 s.f.	Yes	2012
012	296.55	L	500	South Central	US 12/SR 124 Intersection - Build Interchange	Infiltration pond	1215 s.f.	Yes	2012
012	296.59	L	820	South Central	US 12/SR 124 Intersection - Build Interchange	Infiltration pond	674 s.f.	Yes	2012
014	25.92	R	25	Southwest	SR 14/Cape Horn Bridge Vicinity to Cape Horn Rd - Safety Improvements	CAVFS	160 s.f.	No	2012
014	25.93	R	19	Southwest	SR 14/Cape Horn Bridge Vicinity to Cape Horn Rd - Safety Improvements	CAVFS	700 s.f.	No	2012
014	26.29	R	30	Southwest	SR 14/Cape Horn Bridge Vicinity to Cape Horn Rd - Safety Improvements	Bioswale	100 L.F.	No	2012
016	0.08	N/A		Olympic	I-5/SR 16 Interchange - Rebuild Interchange WBNV	SW Treatment Wetland		Yes	2012
016	0.08	N/A		Olympic	I-5/SR 16 Interchange - Rebuild Interchange WBNV	Flow Restrictor		Yes	2012
016	0.19	N/A		Olympic	I-5/SR 16 Interchange - Rebuild Interchange WBNV	SW Treatment Wetland		Yes	2012
016	0.19	N/A		Olympic	I-5/SR 16 Interchange - Rebuild Interchange WBNV	Flow Restrictor		Yes	2012
016	0.36	R		Olympic	I-5/SR 16 Interchange - Rebuild Interchange WBNV	SW Treatment Wetland		Yes	2012
016	0.36	R		Olympic	I-5/SR 16 Interchange - Rebuild Interchange WBNV	Flow Restrictor		Yes	2012
016	0.42	L		Olympic	I-5/SR 16 Interchange - Rebuild Interchange WBNV	Detention Pond		Yes	2012
016	0.42	L		Olympic	I-5/SR 16 Interchange - Rebuild Interchange WBNV	Flow Restrictor		Yes	2012
016	12.52	R		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Bioswale		Yes	2012
016	12.61	R		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Bioswale w/Under drain		Yes	2012

Statewide Stormwater BMP Table

Appendix 2

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
016	12.69	R		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Bioswale		Yes	2012
016	12.73	R		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Bioswale w/Under drain		Yes	2012
016	14.5	N/A		Olympic	I-5/Meridian Rd to Pendleton Ave - Stormwater Retrofit	Compost Amended Vegetated Filter Strip		Yes	2012
020	26.6	L	40.2	Northwest	SR 20 / Libbey Rd Vic to Sidney St Vic	Bioswale	533'	No	2012
020	75.82	R	75.37	Northwest	SR 20 / Red Cabin Cr - CED	Vegetated Filter Strip	165'	No	2012
020	75.82	L	31	Northwest	SR 20 / Red Cabin Cr - CED	Vegetated Filter Strip	95'	No	2012
020	75.86	L	31	Northwest	SR 20 / Red Cabin Cr - CED	Vegetated Filter Strip	84'	No	2012
022	1.5	L	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	34200 s.f.	No	2012
022	1.5	R	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	34200 s.f.	No	2012
022	1.71	L	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	11520 s.f.	No	2012
022	1.71	R	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	11520 s.f.	No	2012
022	1.88	L	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	2800 s.f.	No	2012
022	1.88	R	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	2800 s.f.	No	2012
022	2.04	L	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	12120 s.f.	No	2012
022	2.04	R	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	12120 s.f.	No	2012
022	2.17	L	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	12120 s.f.	No	2012
022	2.43	L	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	32640 s.f.	No	2012
022	2.43	R	20	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Natural Dispersion	32640 s.f.	No	2012

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
022	2.61	L	18	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Infiltration Trench	1350 s.f.	No	2012
022	2.66	L	18	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Infiltration Trench	855 s.f.	No	2012
022	2.7	L	18	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Infiltration Trench	900 s.f.	No	2012
022	2.78	L	18	South Central	SR 22/I-82 to Toppenish - Safety Improvements	Infiltration Trench	915 s.f.	No	2012
027	40.76	R	20	Eastern	Pine Creek Bridge Replacement	Continuous Inflow Bio-filtration Swale	0.21 Acres	No	2012
027	40.92	R	7	Eastern	Pine Creek Bridge Replacement	Vegetated Filter Strip	.72 Acres	No	2012
027	40.98	L	7	Eastern	Pine Creek Bridge Replacement	Vegetated Filter Strip	.32 Acres	No	2012
027	41.06	R	7	Eastern	Pine Creek Bridge Replacement	Vegetated Filter Strip	.22 Acres	No	2012
027	41.08	L	7	Eastern	Pine Creek Bridge Replacement	Vegetated Filter Strip	.44 Acres	No	2012
027	41.17	R	20	Eastern	Pine Creek Bridge Replacement	Continuous Inflow Bio-filtration Swale	.02 Acres	No	2012
082	36	L	40	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration Trench	1200 s.f.	Yes	2012
082	36.19	L	200	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Natural Dispersion	86310 s.f.	Yes	2012
082	36.23	R	150	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	34006 s.f.	Yes	2012
082	36.23	L	400	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	1480 s.f.	Yes	2012
082	36.25	R	210	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	828 s.f.	Yes	2012
082	36.26	R	150	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	1539 s.f.	Yes	2012
082	36.27	R	295	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	4306 s.f.	Yes	2012
082	36.28	R	500	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	2633 s.f.	Yes	2012

Statewide Stormwater BMP Table

Appendix 2

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
082	36.28	R	450	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	2633 s.f.	Yes	2012
082	36.3	R	325	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	1324 s.f.	Yes	2012
082	36.3	R	650	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	2505 s.f.	Yes	2012
082	36.3	R	125	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	13205 s.f.	Yes	2012
082	36.3	L	250	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Natural Dispersion	2991 s.f.	Yes	2012
082	36.33	R	210	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	7507 s.f.	Yes	2012
082	36.34	L	250	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Natural Dispersion	87060 s.f.	Yes	2012
082	36.4	L	250	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Natural Dispersion	62250 s.f.	Yes	2012
082	36.67	R	50	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration pond	2861 s.f.	Yes	2012
082	36.72	L	40	South Central	I-82/Valley Mall Blvd Interchange - Rebuild Interchange	Infiltration Trench	1200 s.f.	Yes	2012
090	30.63	R	65	Northwest	I-90, Eastbound Ramps to SR 202 Roundabout	Detention Pond	6916 CF	No	2007
090	30.61	R	86.89	Northwest	I-90, Eastbound Ramps to SR 202 Roundabout	Bioswale	100 L.F.	No	2007
090	7.02	L	32	Northwest	I-90 Two Way Transit HOV Operations - Stage 2	Bioswale	110' x 4.4'	Yes	2012
090	8.04	L	35	Northwest	I-90 Two Way Transit HOV Operations - Stage 2	Bioswale	185' x 4.5'	Yes	2012
090	292.27	L		Eastern	I-90/Sullivan Rd to Barker Rd - Additional Lanes	Engineered Dispersion		Yes	2012
090	292.31	L		Eastern	I-90/Sullivan Rd to Barker Rd - Additional Lanes	Engineered Dispersion		Yes	2012

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
090	292.7	L		Eastern	I-90/Sullivan Rd to Barker Rd - Additional Lanes	Engineered Dispersion		Yes	2012
090	292.73	R		Eastern	I-90/Sullivan Rd to Barker Rd - Additional Lanes	Engineered Dispersion		Yes	2012
090	292.79	L		Eastern	I-90/Sullivan Rd to Barker Rd - Additional Lanes	Engineered Dispersion		Yes	2012
090	292.91	L	136	Eastern	I-90/Sullivan Rd to Barker Rd - Additional Lanes	Infiltration pond		Yes	2012
090	293.08	R		Eastern	I-90/Sullivan Rd to Barker Rd - Additional Lanes	Engineered Dispersion		Yes	2012
090	293.08	R		Eastern	I-90/Sullivan Rd to Barker Rd - Additional Lanes	Engineered Dispersion		Yes	2012
090	293.1	L		Eastern	I-90/Sullivan Rd to Barker Rd - Additional Lanes	Engineered Dispersion		Yes	2012
090	293.56	L		Eastern	I-90/Sullivan Rd to Barker Rd - Additional Lanes	Engineered Dispersion		Yes	2012
090	297.95	L	85	Eastern	I-90/ Spokane POE	Natural Dispersion	0.7 Ac	Yes	2012
090	297.95	L	71	Eastern	I-90/ Spokane POE	Natural Dispersion	1.87 Ac	Yes	2012
090	298.25	L	225	Eastern	I-90/ Spokane POE	Bio-infiltration Pond (IN.01)	3.3 Ac-ft	Yes	2012
090	298.25	L	315	Eastern	I-90/ Spokane POE	Oil/ Water Separator	2000 Gal	Yes	2012
090	298.45	L	265	Eastern	I-90/ Spokane POE	Bio-infiltration Pond (IN.01)	4.3 Ac-ft	Yes	2012
090	298.53	L	102	Eastern	I-90/ Spokane POE	Natural Dispersion	0.25 Ac	Yes	2012
303	2.91	R	1790	Olympic	SR 303/Manette Bridge Bremerton Vicinity - Replace Bridge	Vault		Yes	2012
303	2.91	R	3250	Olympic	SR 303/Manette Bridge Bremerton Vicinity - Replace Bridge	Vault		Yes	2012
395	167.5		326	Eastern	US 395/NSC-US 2 to Wandermere and US 2 Lowering - New Alignment	Bioswale		Yes	2012
395	167.53		55	Eastern	US 395/NSC-US 2 to Wandermere and US 2 Lowering - New Alignment	Bioswale		Yes	2012
395	263.11	R	93	Eastern	US 395/North of Orient - Unstable Slope	Engineered Dispersion		No	2012
410	15.75	L	136.3	Olympic	SR 410/214th Ave E to 234th - Add Lanes	SW Treatment Wetland		Yes	2012

Statewide Stormwater BMP Table

Appendix 2

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
410	15.75	L	136.3	Olympic	SR 410/214th Ave E to 234th - Add Lanes	Flow Restrictor		Yes	2012
410	16.1	L	1675	Olympic	SR 410/214th Ave E to 234th - Add Lanes	SW Treatment Wetland		Yes	2012
410	16.1	L	1675	Olympic	SR 410/214th Ave E to 234th - Add Lanes	Flow Restrictor		Yes	2012
410	16.6	L	1060	Olympic	SR 410/214th Ave E to 234th - Add Lanes	SW Treatment Wetland		Yes	2012
410	16.6	L	1060	Olympic	SR 410/214th Ave E to 234th - Add Lanes	Flow Restrictor		Yes	2012
432	9.92	L	200	Southwest	I-5/SR 432 Talley Way Interchanges - Rebuild Interchanges	SW Treatment Wetland	4676 s.f.	Yes	2012
432	9.92	R	200	Southwest	I-5/SR 432 Talley Way Interchanges - Rebuild Interchanges	SW Treatment Wetland	4469 s.f.	Yes	2012
432	9.99	R	350	Southwest	I-5/SR 432 Talley Way Interchanges - Rebuild Interchanges	SWTW/Det. Pond	0.25 Ac.	Yes	2012
432	10.04	R	130	Southwest	I-5/SR 432 Talley Way Interchanges - Rebuild Interchanges	SWTW/Det. Pond	0.28 Ac.	Yes	2012
501	19.74	L	200	Southwest	I-5/ SR 501 Ridgefield Interchange	Bioswale	200 L.F.	No	2012
501	19.98	L	150	Southwest	I-5/ SR 501 Ridgefield Interchange	SW Treatment Wetland	0.13 Ac.	No	2012
522	24.22	L	144	Northwest	SR 522 / US 2 Interchange Flyover Ramp	Infiltration pond	34,800 ft2	Yes	2012
530	59.08	L		Northwest	SR 530 / Sauk River [CED] Bank Erosion Realign Roadway	Natural Dispersion	116'	No	2012
530	59.18	R	30	Northwest	SR 530 / Sauk River [CED] Bank Erosion Realign Roadway	Bioswale	250'	No	2012
530	59.35	R		Northwest	SR 530 / Sauk River [CED] Bank Erosion Realign Roadway	Natural Dispersion	558'	No	2012
530	59.41	L		Northwest	SR 530 / Sauk River [CED] Bank Erosion Realign Roadway	Natural Dispersion	940'	No	2012
530	59.43	R		Northwest	SR 530 / Sauk River [CED] Bank Erosion Realign Roadway	Natural Dispersion	565'	No	2012
530	59.5	R	14	Northwest	SR 530 / Sauk River [CED] Bank Erosion Realign Roadway	Media Filter Drain	175' x 3'	No	2012
530	59.65	R	15.1	Northwest	SR 530 / Sauk River [CED] Bank Erosion Realign Roadway	Media Filter Drain	252' x 3'	No	2012
530	59.67	R		Northwest	SR 530 / Sauk River [CED] Bank Erosion Realign Roadway	Natural Dispersion	400'	No	2012

State Route	Beginning Mile Post	Offset Direction	Offset Distance	Region	Project Name	BMP Type	Facility Size	In Permit Area	Data Year
530	59.73	R	50	Northwest	SR 530 / Sauk River [CED] Bank Erosion Realign Roadway	Vegetated Filter Strip	405' x 15'	No	2012
530	59.87	L		Northwest	SR 530 / Sauk River [CED] Bank Erosion Realign Roadway	Natural Dispersion	157'	No	2012
542	8.88	R	153	Northwest	SR 542 / Everson Goshen Rd Vic to SR 9 Vic	Retention Pond	6,578 c.f.	No	2012
542	8.88	R	153	Northwest	SR 542 / Everson Goshen Rd Vic to SR 9 Vic	Detention Pond	11,951 c.f.	No	2012
823	1.13	L	28	South Central	SR 823/Selah Vicinity - Re-route Highway	Infiltration Trench	3710 s.f.	Yes	2012
823	1.13	L	28	South Central	SR 823/Selah Vicinity - Re-route Highway	Vault		Yes	2012
823	1.22	L	28	South Central	SR 823/Selah Vicinity - Re-route Highway	Vault		Yes	2012

Table 13 Summary of IDDE Issues and Remediation Activities

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Other Information	Current Status
Olympic	7/7/2011	Connection	Highway: 410 Milepost: 20	Discovered while performing inventory	Contacted Landowner		Permitted
Northwest	8/2/2011	Connection	Highway: 522 Milepost: 13.63	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/2/2011	Connection	Highway: 524 Milepost: 13.52	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Utility Permit Exists	In Progress
Northwest	8/15/2011	Connection	Highway: 5 Milepost:182.95	Discovered while performing inventory	In permitting process	No Landowner To Contact	In Progress
Northwest	8/15/2011	Connection	Highway: 5 Milepost: 183.94	Discovered while performing inventory	In permitting process	No Landowner To Contact	In Progress
Northwest	8/15/2011	Connection	Highway: 5 Milepost: 183.95	Discovered while performing inventory	In permitting process	Landowner Found	In Progress
Northwest	8/15/2011	Connection	Highway: 99 Milepost: 52.08	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Utility Permit Exists	In Progress
Northwest	8/15/2011	Connection	Highway: 99 Milepost: 52.1	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Utility Permit Exists	In Progress
Northwest	8/15/2011	Connection	Highway:99 Milepost: 52.12	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Landowner To Contact	In Progress
Northwest	8/15/2011	Connection	Highway: 99 Milepost: 52.26	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Landowner To Contact	In Progress
Northwest	8/15/2011	Connection	Highway: 99 Milepost: 52.29	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Landowner To Contact	In Progress
Northwest	8/15/2011	Connection	Highway: 524 Milepost: 5.99	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Landowner To Contact	In Progress
Northwest	8/15/2011	Connection	Highway: 524 Milepost: 6.02	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Landowner To Contact	In Progress
Northwest	8/15/2011	Connection	Highway: 524 Milepost: 6.02	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Landowner To Contact	In Progress
Northwest	8/15/2011	Connection	Highway: 524 Milepost: 6.04	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Landowner To Contact	In Progress
Northwest	8/15/2011	Connection	Highway: 524 Milepost: 7.41	Discovered while performing inventory	Looked at by WSDOT Utility Office	Land Owner Found	In Progress

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Other Information	Current Status
Northwest	8/15/2011	Connection	Highway: 525 Milepost: 0.74	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Landowner To Contact	In Progress
Northwest	8/23/2011	Connection	Highway: 99 Milepost: 50.01	Discovered while performing inventory	Looked at by WSDOT Utility Office		Resolved
Northwest	8/23/2011	Connection	Highway: 99 Milepost: 50.05	Discovered while performing inventory	Looked at by WSDOT Utility Office		Resolved
Northwest	8/23/2011	Connection	Highway: 99 Milepost: 50.12	Discovered while performing inventory	Looked at by WSDOT Utility Office		Resolved
Northwest	8/23/2011	Connection	Highway: 99 Milepost: 50.22	Discovered while performing inventory	Looked at by WSDOT Utility Office		Resolved
Northwest	8/23/2011	Connection	Highway: 99 Milepost: 50.28	Discovered while performing inventory	Looked at by WSDOT Utility Office		Resolved
Northwest	8/23/2011	Connection	Highway: 99 Milepost: 50.37	Discovered while performing inventory	Contacted Landowner		In Progress
Northwest	8/23/2011	Connection	Highway: 99 Milepost: 50.39	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Utility Permit Exists	In Progress
Northwest	8/23/2011	Connection	Highway: 99 Milepost: 50.39	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Utility Permit Exists	In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 50.47	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 50.87	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 50.89	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 50.92	Discovered while performing inventory	Contacted Landowner	Landowner failed to resolve	In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 50.94	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 50.99	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.03	Discovered while performing inventory	In permitting process		In Progress

Detailed IDDE Issues Table

Appendix 3

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Other Information	Current Status
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.05	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.07	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.16	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.19	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.23	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.23	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.24	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.27	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.38	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.42	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.52	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.57	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.66	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/24/2011	Connection	Highway: 99 Milepost: 51.67	Discovered while performing inventory	In permitting process		In Progress
Northwest	8/31/2011	Discharge/Spill	Highway: 9 Milepost: 1.61	Discovered while performing inventory	Talked with landowner	Cleaned by WSDOT	Resolved
Northwest	9/6/2011	Connection	Highway: 99 Milepost: 51.77	Discovered while performing inventory	In permitting process		In Progress

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Other Information	Current Status
Northwest	9/6/2011	Connection	Highway: 99 Milepost: 51.86	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/6/2011	Connection	Highway: 99 Milepost: 51.9	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Utility Permit Exists	In Progress
Northwest	9/6/2011	Connection	Highway: 99 Milepost: 51.92	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Utility Permit Exists	In Progress
Northwest	9/6/2011	Connection	Highway: 525 Milepost: 2.68	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Utility Permit Exists	In Progress
Northwest	9/6/2011	Connection	Highway: 525 Milepost: 2.89	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/6/2011	Connection	Highway: 525 Milepost: 3.05	Discovered while performing inventory	Looked at by WSDOT Utility Office	No Utility Permit Exists	In Progress
Northwest	9/6/2011	Connection	Highway: 525 Milepost: 3.21	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/6/2011	Connection	Highway: 525 Milepost: 3.25	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/6/2011	Connection	Highway: 525 Milepost: 3.26	Discovered while performing inventory	Looked at by WSDOT Utility Office		Resolved
Northwest	9/6/2011	Connection	Highway: 525 Milepost: 3.26	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 2.26	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 2.24	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 1.97	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 0.61	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 0.87	Discovered while performing inventory	In permitting process		Resolved
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 3.67	Discovered while performing inventory	In permitting process		In Progress

Detailed IDDE Issues Table

Appendix 3

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Other Information	Current Status
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 3.77	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 3.82	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 3.87	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 0.17	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/8/2011	Connection	Highway: 9 Milepost: 0.4	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/8/2011	Discharge/Spill	Highway: 9 Milepost: 1.97	Discovered while performing inventory	Contacted local jurisdiction and ecology		Resolved/ Removed
Northwest	9/12/2011	Connection	Highway:522 Milepost: 12.08	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/12/2011	Connection	Highway: 522 Milepost: 12.16	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/12/2011	Connection	Highway: 522 Milepost: 12.74	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/12/2011	Connection	Highway: 522 Milepost: 12.75	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/12/2011	Connection	Highway: 522 Milepost: 13.17	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/12/2011	Connection	Highway: 522 Milepost: 13.16	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/12/2011	Connection	Highway: 524 Milepost: 13.45	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/12/2011	Connection	Highway: 524 Milepost: 13.52	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/14/2011	Connection	Highway: 5 Milepost: 183.97	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/14/2011	Connection	Highway: 524 Milepost: 6.01	Discovered while performing inventory	Looked at by WSDOT Utility Office		Permitted

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Other Information	Current Status
Northwest	9/14/2011	Connection	Highway: 524 Milepost: 6.03	Discovered while performing inventory	Looked at by WSDOT Utility Office		Permitted
Northwest	9/14/2011	Connection	Highway: 524 Milepost: 6.05	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/14/2011	Connection	Highway: 525 Milepost: 1.1	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/14/2011	Connection	Highway: 525 Milepost: 1.82	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/14/2011	Connection	Highway: 525 Milepost: 1.9	Discovered while performing inventory	In permitting process		In Progress
Northwest	9/14/2011	Connection	Highway: 525 Milepost: 1.99	Discovered while performing inventory	In permitting process		In Progress
Olympic	10/10/2011	Connection	Highway: 510 Milepost: 5.08	Discovered while performing inventory	Looked at by WSDOT Utility Office		Permitted
Northwest	11/23/2011	Connection	Highway: 9 Milepost: 1.93	Found during construction inspection	In permitting process		Resolved
Olympic	11/30/2011	Connection	Highway: 99 Milepost: 1.42	Discovered while performing inventory	In permitting process		In Progress
Olympic	11/30/2011	Connection	Highway: 167 Milepost: 4.5	Discovered while performing inventory	Contacted Landowner		Removed
Olympic	12/5/2011	Discharge/Spill	Highway: 410 Milepost: 15.95	Found during construction inspection	Contacted Landowner and County		Resolved
Northwest	12/15/2011	Connection/ Discharge	Highway: 405 Milepost: 13.7	Discovered from communications with local jurisdiction			Removed
Northwest	12/20/2011	Discharge/Spill	Highway: 9 Milepost: 1.95	Found during construction inspection	Contacted County		Resolved
Northwest	12/21/2011	Connection	Highway: 9 Milepost: 17.9	Discovered by WSDOT staff	Contacted local jurisdiction		In Progress

Detailed IDDE Issues Table

Appendix 3

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Other Information	Current Status
Southwest	1/12/2012	Discharge/Spill	Highway: 411 Milepost: 3.8	Discovered while performing inventory			Resolved
Olympic	2/1/2012	Connection	Highway: 510 Milepost: 4.83	Discovered while performing inventory	Looked at by WSDOT Utility Office		Permitted
Northwest	2/1/2012	Connection	Highway: 90 Milepost: 17.6	Discovered while performing inventory	Worked with local jurisdiction		Resolved
Olympic	2/6/2012	Connection	Highway: 7 Milepost: 35.97	Discovered while performing inventory	Contacted Landowner		Removed
Southwest	2/12/2012	Discharge/Spill	Highway: 5 Milepost: 2	Discover during maintenance activity	Cleaned by WSDOT and WSP		Removed
Northwest	2/13/2012	Discharge/Spill	Highway: 5 Milepost: 170.15	Discovered during traffic accident	Cleaned by consultant		Removed
Olympic	2/14/2012	Connection	Highway: 161 Milepost: 4.2	Discovered during utility work	Contacted county and landowner		In Progress
Northwest	2/15/2012	Connection	Highway: 5 Milepost: 154.11	Discovered during construction activities	Contacted local jurisdiction/landowner		In Progress
Olympic	2/21/2012	Discharge/Spill	Highway: 512 Milepost: 2.7	Discover during maintenance activity	contacted department of Ecology		Removed
Northwest	2/22/2012	Discharge/Spill	Highway: 520 Milepost: 6.5	Discovered during traffic accident	Contacted Ecology and local jurisdiction	Cleaned by consultant	Removed
South Central	3/5/2012	Discharge/Spill	Highway: 906 Milepost: 0.33	ERTS referral	Worked with Ecology and local jurisdiction		Removed
North Central	4/18/2012	Connection	Highway: 2 Milepost: 117.58	Discover during maintenance activity	In permitting process		In Progress
North Central	4/18/2012	Connection	Highway: 2 Milepost: 130.31	Discover during maintenance activity	In permitting process		In Progress
Northwest	5/7/2012	Discharge/Spill	Highway: 164 Milepost: 5.2	Discovered while performing inventory	Contacted Ecology	Sediment no longer present	In Progress
Northwest	5/14/2012	Discharge/Spill	Highway: 2 Milepost: 1.14	ERTS referral		Non WSDOT issues, not on WSDOT property	Resolved
Northwest	6/14/2012	Connection	Highway: 532 Milepost: 3.68	Discovered while performing inventory	WSDOT maintenance corrected the issue	Break in berm caused field to drain to WSDOT ditch	In Progress

Region	Date Verified	Type of Discharge	Location	Discovery	Action Taken	Other Information	Current Status
Northwest	6/14/2012	Discharge/Spill	Highway: 5 Milepost: 157.85	Discovered during traffic accident	Contacted Ecology		Removed
North Central	6/16/2012	Connection	Highway: 2 Milepost: 119.32	Discover during maintenance activity	WSDOT maintenance removed the connection		Removed
Northwest	6/19/2012	Discharge/Spill	Highway: 525 Milepost: 8.42	Ferry worker	Contacted local jurisdiction		Removed
Northwest	6/19/2012	Discharge/Spill	Highway: 525 Milepost: 8.42	Discovered by WSDOT staff			Removed