

State of Washington
Joint Transportation Committee



Draft Final Report for
EFFECTIVE COST
RECOVERY STRUCTURE
FOR WSDOT,
JURISDICTIONS, AND
EFFICIENCIES IN
STORMWATER
MANAGEMENT

December 2011

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EXECUTIVE SUMMARY

Under state law (RCW 90.03.525), a local government may recover expenses for managing stormwater runoff from state highways within its boundaries by charging the Washington State Department of Transportation (WSDOT) a stormwater fee. WSDOT charges are set at a percentage of the fee that each jurisdiction charges other property owners. Before WSDOT pays the fee, the jurisdiction must submit an application identifying the cost of managing state highway stormwater runoff and showing how the fee revenue will be used to directly address state highway runoff. This study was initiated to “identify ways to improve the process by which cities are reimbursed by the Washington State Department of Transportation (WSDOT) for managing stormwater runoff from state highways within city boundaries, and to make stormwater management of these facilities more efficient.”¹

A. STUDY OVERVIEW

Revised Code of Washington (RCW) 90.03.525 authorizes the charging of state highways for the impacts of their stormwater runoff on local systems. Specifically, rates charged are limited to “thirty percent of the rate for comparable real property”, with some exceptions, to acknowledge “the traditional and continuing expenditures of the department of transportation for the construction, operation, and maintenance of storm water control facilities designed to control surface water or storm water runoff from state highway rights-of-way”. The calculation basis for the thirty percent limitation is unknown. There is no similar statutory provision of other developed property.

Revenues from the state for highway impacts “must be used solely for storm water control facilities that directly reduce state highway runoff impacts or implementation of best management practices that will reduce the need for such facilities.” Local jurisdictions must submit both a “plan for the expenditure of the charges for that calendar year” as well as a progress report “on the use of charges assessed for the prior year” in order for the state to pay the charges. In that context, the purposes of this study are to:

- ◆ Understand the stormwater relationship between WSDOT and local jurisdictions;
- ◆ Solicit feedback from jurisdictions on improvements in stormwater management and cost recovery;
- ◆ Develop options for efficiencies in cost recovery and stormwater management; and

¹ May 24, 2011 Request for Proposals to Identify an Effective Cost Recovery Structure for Cities, and Efficiencies in Stormwater Management.

- ◆ Understand the impacts of National Pollutant Discharge Elimination System (NPDES) permitting requirements on the stormwater relationship between WSDOT and local jurisdictions.

To meet these objectives, the study produced the following:

- ◆ A “Stormwater 101 Guide”;
- ◆ An inventory of state highways subject to the federal Clean Water Act;
- ◆ A survey of jurisdictions that impose stormwater fees to WSDOT, or otherwise manage stormwater from state highways;
- ◆ Case studies of jurisdictions;
- ◆ Recommendations for efficiency improvements; and
- ◆ Implementation recommendations.

The 2011 Washington State Legislature directed the Joint Transportation Committee (JTC) to undertake this study in ESHB 1175. The consultants worked closely with a staff workgroup made up of representatives of the Association of Washington Cities, WSDOT, the Departments of Ecology and Commerce, JTC staff, House and Senate Transportation Committee staff, and other state agencies and stakeholders.

B. STORMWATER 101 GUIDE

The “Stormwater 101” guide is intended to provide (1) a basic definition of stormwater and its components, (2) a summary of the regulations impacting stormwater management, and (3) stormwater program funding options and common practices. The document is targeted for use as background for legislators, other public officials, and the general public.

B.1 Stormwater Background

Stormwater is runoff from precipitation (rain, snow) across the land surface, generally exacerbated by development. Impervious surfaces such as roofs, roads and highways, parking lots and sidewalks prevent water from soaking into the ground or being taken up by vegetation. Runoff contributes to flooding and erosion, picks up pollutants, and flows into pipes, ditches, streams, and other receiving water bodies.

B.2 Stormwater Regulatory Environment

Although many regulations affect the practice of stormwater management, the primary driver is the federal Clean Water Act (CWA). The purpose of the CWA is to “...restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The CWA uses the NPDES permit as the primary instrument to control urban stormwater.

The state of Washington was delegated authority by the U.S. Environmental Protection Agency (EPA) to implement the NPDES permit program. The state Department of Ecology combined CWA federal requirements with the requirements of the Washington State Waste Discharge Act and initiated the first stormwater NPDES permit program in 1995 for jurisdictions having populations greater than 100,000 and the Washington State Department of Transportation. In 2007, Ecology issued the Phase II permits to jurisdictions that owned or operated municipal separated storm sewer systems (MS4s). Today there are more than one hundred MS4 permits issued statewide on a five year renewal cycle. The next issuance date of MS4s is in 2013.

The permits include requirements for inventorying stormwater facilities; inspecting and maintaining facilities; reducing pollutants at their sources; public education; reporting NPDES permit compliance, and applying protective design standards (development regulations) to the addition of new impervious surfaces.

B.3 Stormwater Funding

A need for funding has accompanied the need for stormwater management. Stormwater utilities, supported by ongoing rates, are the largest local funding source for stormwater control in Washington State. Other, secondary, funding sources include:

- ◆ Street / Road Fund
- ◆ General Fund
- ◆ Special Assessments / Local Improvement Districts
- ◆ Special Fees
- ◆ Capital Facilities Charges
- ◆ Conventional Debt Instruments
- ◆ Special Grants and Loans

Most stormwater utility rates are based on impervious surface area. Impervious surface area is widely accepted as an appropriate measure of a property's contribution of runoff, providing a clear relationship, or "rational nexus," to service received from a stormwater program. Some cities and counties in the state charge their own streets for stormwater service. The streets, while providing stormwater conveyance, are often large contributors of stormwater runoff that must be managed – requiring funding from the street / road fund or, in the absence of charges to that fund, other stormwater ratepayers. Statute (RCW 47.52.090) grants WSDOT the authority to "use all storm sewers that are adequate and available for the additional quantity of run-off" to be generated by limited access state highways.

C. INVENTORY OF STATE HIGHWAYS

The inventory of state highways provides a list of state highway segments that generate stormwater runoff that impacts local stormwater systems. A separate compilation that identifies the type of mitigation (best management practice) present by highway by jurisdiction was also developed.

Some of the information compiled is summarized below:

- ◆ Total state highways: 7,058 centerline miles;
- ◆ Limited access state highways: 2,220 centerline miles;
- ◆ Limited access state highways within cities: 440 centerline miles.

D. SURVEY OF JURISDICTIONS

The consultants conducted a survey of eligible jurisdictions to identify their successes and challenges in recovering the costs of stormwater runoff generated by state highways, and in coordination with WSDOT to manage that stormwater runoff. Eighty-one jurisdictions were eligible to be part of the survey, based on the following criteria:

- ◆ Jurisdiction must have a stormwater utility;

- ◆ Jurisdiction must be subject to National Pollutant Discharge Elimination System (NPDES) Phase 1 or Phase 2 municipal stormwater permitting requirements; and
- ◆ Jurisdictions must have one or more limited access state highways within their jurisdiction.

These criteria were used to identify jurisdictions that met the requirements of RCW 90.03.525, and as a result either did charge or could charge WSDOT for the impacts of state highways in their respective jurisdictions.

D.1 Survey Results

A total of forty-five jurisdictions chose to participate in the survey, whose results are summarized below:

- ◆ Major challenges to managing stormwater from limited access highways: Stormwater system capacity, costs, water quality, and staff resources
- ◆ Major challenges to complying with RCW 90.03.525: Factors upon which the fee is based, definition of what is eligible for reimbursement, and limited staff resources
- ◆ Major reasons for not charging WSDOT: Not charging for city streets, burdensome work plan and reporting requirements, and not tracking costs of runoff from state highways
- ◆ Working with WSDOT: Could be improved especially in regard to communication (most of which referred to the issues above)

E. CASE STUDIES

The consultants also conducted in-depth case studies of eight survey respondents, in order to accomplish the following:

- ◆ To assess costs that jurisdictions incur to manage stormwater from state highways;
- ◆ To assess costs and challenges that jurisdictions experience to charge WSDOT for cost recovery;
- ◆ To assess barriers to jurisdictions charging WSDOT for cost recovery;
- ◆ To assess jurisdictions' satisfaction with current stormwater state framework; and
- ◆ To collect jurisdictions' ideas to improve the process.

Background on the case study participants is provided in **Table ES.1** following.

Table ES.1 – Case Study Background

Jurisdiction	Population	Rate Approach	Monthly Rate	Eligible Highway Area	Annual WSDOT Payment	Notes
City of Issaquah	30,434	ESU ²	\$14.08	50 acres	\$0	Actual costs unknown
City of Puyallup	37,022	ESU ²	\$10.75	20 acres	\$0	Actual costs unknown
City of Bellingham	80,885	Impervious Square Feet	\$7.00	48 acres	\$44,500	Costs estimated at \$75,000/yr
Clark County	425,363	Impervious Square Feet	\$2.75	Unknown	\$81,489	Costs estimated at \$125,000/yr
City of Tukwila	19,107	Development Density	\$7.75	92 acres	\$62,897	Costs estimated at \$134,000/yr
City of Olympia	46,478	Impervious Square Feet	\$10.58	49 acres	\$33,554	Costs typically exceed charges
City of Richland	48,058	ERU ²	\$3.85	113 acres	\$0	City reports no WSDOT impact
City of Spokane Valley	89,765	ERU ²	\$1.75	82 acres	\$0	City reports no WSDOT impact

Each of the case study participants was asked about suggested improvements to cost recovery under RCW 90.03.525. These results, a key outcome of the case studies, are summarized in **Table ES.2** following.

² The equivalent service unit (ESU) and equivalent residential unit (ERU) rate approaches are identical. They each charge impervious surface based on the average amount of impervious surface area on single family residences in the service area, defined to be one ESU or one ERU.

Table ES.2 – Case Study Results Regarding Cost Recovery under RCW 90.03.525

Suggested Improvements	City of Issaquah	City of Puyallup	City of Bellingham	Clark County	City of Tukwila	City of Olympia	City of Richland	City of Spokane Valley
Eliminate required link between WSDOT payments & spending	●	●	●	●	●	●		
Allow jurisdictions to charge non-limited access highways	●	●	●		●	●		●
Develop standard rate methodology for charging WSDOT	●	●	●	●	●	●		
Eliminate requirement that cities charge their own streets	●	●			●	●		
Develop standard application approach for charging WSDOT	●	●		●				
Increase flexibility in determining project / activity eligibility			●	●		●		
Charge full cost (not 30% of rate) to state highways			●			●		
Increase outreach to those not recovering costs	●							

Each of the case study participants was also asked about ways to improve collaboration between WSDOT and the local jurisdiction with regard to the management of stormwater runoff generated by state highways. Case study participants made the following suggestions.

- ◆ Collaboration with WSDOT on projects should be faster and more straightforward;
- ◆ WSDOT responsiveness to local maintenance needs should be improved;
- ◆ Information such as system mapping should be better shared;
- ◆ WSDOT should participate in watershed planning; and
- ◆ Retrofitting of existing WSDOT facilities should remain a priority.

F. EFFICIENCY IMPROVEMENTS

This assessment of the RCW 90.03.525 cost recovery process was conducted to determine opportunities for increased efficiencies in the administration of this state law as well as in the overall stormwater management practices between WSDOT and local jurisdictions.

F.1 Current Potential Inefficiencies

Potential inefficiencies, including perceived and actual barriers and difficulties within the cost recovery process, were first identified and segregated into the following categories, which are further discussed below:

- ◆ RCW 90.03.525 requirements versus jurisdictional realities;
- ◆ Physical limitations on drainage systems;
- ◆ Differences in NPDES permits; and

◆ Funding limitations between WSDOT and local jurisdictions.

F.1.a RCW 90.03.525 Requirements vs. Jurisdictional Realities

Differences between statutory requirements and current local realities create inefficiencies within the cost recovery process. RCW 90.03.525 was created long before it was necessary to reflect NPDES Phase I or II permit requirements, or how stormwater has been managed over the past decade. This contrast has created some barriers, or at a minimum, difficulties in both cost recovery and collaborative stormwater management.

Table ES.3 – Statutory Requirements vs. Jurisdictional Perspectives

RCW Requirement	Jurisdictional Perspective
Must have storm water utility.	Non-limiting as most have a utility.
Only applies to limited access rights of way.	Feel this should be applicable to non-limited access rights of way.
Spending WSDOT payments limited to “storm water control facilities” and associated best management practices (BMPs). BMPs are undefined.	Definition limits cost recovery to physical structures. Allows for discretion on part of WSDOT in approval of annual reports and cost recovery.
Cities and counties must charge their own streets/roads if they seek to charge WSDOT.	Rationale is not understood. Local roadways are maintained, source of funding should not be limiting factor. Seventeen cities and counties currently charge themselves. Of eligible cities, remaining 51 do not.
Cost recovery limited by 70 percent credit.	No justification for this credit could be identified. Desire 100 percent recovery.
Charges paid by WSDOT are limited to being used “solely” mitigation for WSDOT runoff.	Difficult to identify project or management costs for “solely” managing impacts from WSDOT.
Must submit annual plan.	No value and is costly to develop and produce
Provides mechanism for greater cost recovery, up to 100 percent.	Process is uncertain and potentially costly. Limited application.
Provides for collaboration with local cities and counties.	Highway Runoff Manual directs designers to separate flows – no joint facilities.
RCW states that appropriations made by the legislature to WSDOT are to enable WSDOT to meet its NPDES obligations for all state owned rights of way.	Based on the limited definition of “state right of way” in RCW 90.03.520, this provision does not allow for full funding of all state rights of way (non-limited access) and therefore requires local cities and counties to bear the burden of stormwater management for WSDOT’s non-limited access highways as operators of the stormwater infrastructure.
RCW is not intended to limit collaboration between cities, counties, and the state.	Does not recognize the third party lawsuit provision of the Clean Water Act which is limiting collaboration on joint facilities.

F.1.b Physical Limitations on Drainage Systems

A number of factors associated with the physical characteristics of a possible site for cross collaboration can create inefficiencies. Opportunities for cross collaboration on design, construction, operation, and maintenance of stormwater control facilities exist throughout the state, both within and adjacent to limited access rights-of-way depending on individual site constraints. However, efforts for cross collaboration can be constrained by the physical settings of the state’s limited access rights-of-way within a drainage basin. Land availability, the cost of adjacent land, contributing

drainage basin sizes, and the physical size requirements of resulting treatment facilities can all impact the feasibility of cross collaboration.

F.1.c Differences in NPDES Permits

Sometimes seen as a potential inefficiency, differences between the WSDOT permit and the Phase I and II permits (both eastern and western Washington) will in fact have little impact on the design parameters of new facilities or on the operations and maintenance of such facilities since the state Stormwater Manual sets the baseline for all NPDES permits.

F.1.d Funding Limitations between WSDOT and Local Jurisdictions

The fact that local rate-setting and capital budgeting do not always coincide with the timing of WSDOT planning creates potential inefficiencies. Aligning WSDOT's stormwater retrofit facility needs with city and county capital facility planning and utility rate analysis processes would benefit both WSDOT and the local governments by identifying collaborative projects with mutual benefit and funding.

F.2 Recommendations for Consideration

Consultant recommendations are provided below for improving cost recovery and for improving collaboration between WSDOT and local jurisdictions on the management of stormwater runoff from state limited access highways.

F.2.a Cost Recovery Recommendations

Based in large part on the input of the surveys, the case studies, and the consultant team, the following cost recovery improvements are recommended.

1. Retain requirement that to charge WSDOT, a jurisdiction must have a stormwater utility;
2. Eliminate the requirement that jurisdictions must charge their own roads;
3. Streamline application and reporting processes;
4. Provide written guidance and training on what is eligible for cost recovery;
5. Calculate, justify and document an appropriate credit (or credits) for WSDOT; and
6. Create at least two uniform WSDOT stormwater utility rates, one for eastern Washington and one for western Washington.

There is a process underway to update the agreement interpreting RCW 47.24, in which cities accept certain highway responsibilities from the state. This process is expected to resolve concerns regarding stormwater responsibilities for non-limited access highways.

Upon careful consideration of the draft recommendations, two alternative courses of action emerged. The consultants propose two options for consideration, which are outlined below. Both options accomplish efficiencies and address many of the challenges identified by the local jurisdictions; Option A does so with modifications to the existing statutes, while Option B would require a new statutory framework. [🗑 = statutory changes required; 👍 = no changes necessary; 📖 = additional study required]

Cost Recovery Option A: Modify Existing Statutory Framework

- ◆ Retain requirement that to charge WSDOT a jurisdiction must have a stormwater utility. 👍
- ◆ Eliminate the requirement that jurisdictions must charge their own roads. 🗑

- ◆ Streamline application and reporting processes. ☺
- ◆ Provide written guidance on what is eligible for cost recovery. ☺
- ◆ Conduct a study to calculate, justify and document an appropriate credit(s) for WSDOT. ☰

Cost Recovery Option B: Create New Statutory Framework

- ◆ Retain requirement that to charge WSDOT a jurisdiction must have a stormwater utility. ☺
- ◆ Eliminate the requirement that jurisdictions must charge their own streets. ☹
- ◆ Conduct a study to establish a new, special uniform rate for limited access highways for inclusion in all stormwater utility rate structures statewide (minimum: one for eastern Washington and one for western Washington; more may be necessary to improve equity). ☰
- ◆ Eliminate application and reporting requirements. ☹

The table below includes a comparison of the two options, with an estimate of the relative cost impacts.

Table ES.4 – Cost Recovery Options Comparison

	One-Time Cost to Implement	Ongoing Savings	RCW Change	Ordinance Change	Time to Implement	Impact on WSDOT
Option A	\$\$	\$\$	Yes	Yes	≅ 1 yr	Depends on analysis
Option B	\$\$	\$\$\$	Yes	Yes	≅ 2 yrs	Depends on analysis

The “one-time cost to implement” column in the above table provides an estimate of the relative cost to WSDOT of implementing each option. The “ongoing savings” column provides an estimate of the relative savings to both WSDOT and local jurisdictions resulting from more streamlined or simplified administrative requirements. The “RCW change” and “ordinance change” columns indicate whether statute or local code modifications will be required to implement each option. The “time to implement” column provides an estimate of the time it will take to make necessary changes to authorizing statute, perform supporting analyses, etc., and implement either option. The “impact on WSDOT” column reports on the potential cost impact, on WSDOT, of cost recovery requests under each option – both depend on the results of the supporting analyses.

F.2.b Opportunities for Further Study

In the course of the study, the consultants have identified a number of issues that, if addressed, would likely lower overall costs for stormwater management. These include the following issues:

- ◆ Cost and liability concerns create barriers to cooperation on capital and M&O between WSDOT and jurisdictions.
- ◆ Uneven funding cycles between WSDOT and jurisdictions impede collaboration.
- ◆ Inconsistent relationships and implementation exists among WSDOT regions and jurisdictions.
- ◆ Inadequate joint planning between jurisdictions and WSDOT reduces collaboration and/or produces inefficiencies.
- ◆ Overlap in NPDES permits for non-limited access highways creates shared responsibilities; some highways are addressed in both WSDOT and jurisdiction permits.

G. IMPLEMENTATION

The consultants have provided a set of proposed changes to existing Washington State statute, as well as a model ordinance for jurisdictions to use in complying with proposed changes to statute.

SECTION I: STUDY OVERVIEW

In July 2011, the State of Washington Joint Transportation Committee contracted with FCS GROUP to perform a study that would “identify ways to improve the process by which cities are reimbursed by the Washington State Department of Transportation (WSDOT) for managing stormwater runoff from state highways within city boundaries, and to make stormwater management of these facilities more efficient.”³

A. BACKGROUND

Revised Code of Washington (RCW) 90.03.525, provided in its entirety as **Appendix A** to this report, authorizes local governments to charge WSDOT for the impacts of stormwater runoff from state highways on local stormwater systems. Rates charged are limited to “thirty percent of the (local) rate for comparable real property”, with some exceptions, to acknowledge “the traditional and continuing expenditures of the department of transportation for the construction, operation, and maintenance of storm water control facilities designed to control surface water or storm water runoff from state highway rights-of-way”. The calculation basis for the thirty percent limitation is unknown. There is no similar statutory provision for other developed property, including state property.

In fact, RCW 90.03.500 provides that local stormwater rates “may be imposed on any publicly-owned, including state-owned, real property that causes such damage” from runoff – except as provided in RCW 90.03.525. In contrast, we currently know of no other states in which local jurisdictions charge any stormwater rates to state highways. Department of transportation representatives in 21 states (out of 49 contacted) responded that they are not charged and/or do not pay for state highway stormwater impacts on local jurisdictions.

Payments from WSDOT for highway impacts “must be used solely for storm water control facilities that directly reduce state highway runoff impacts or implementation of best management practices that will reduce the need for such facilities.” Local jurisdictions must submit both a “plan for the expenditure of the charges for that calendar year” as well as a progress report “on the use of charges assessed for the prior year” in order for the state to pay the charges.

The most recent agreement between the Washington State Department of Transportation (WSDOT) and state municipalities clarified responsibility for state highways in local jurisdictions to those jurisdictions – retaining WSDOT responsibility only for limited access state highways. The effect of that agreement, currently being re-visited by WSDOT and the Association of Washington Cities, has

³ May 24, 2011 Request for Proposals to Identify an Effective Cost Recovery Structure for Cities, and Efficiencies in Stormwater Management.

further limited cost recovery by local jurisdictions to impacts from limited access state highways. Local jurisdictions and WSDOT share the responsibility of managing stormwater runoff from some state facilities.

Please note that this document includes references to “cost recovery” and “cost reimbursement” from WSDOT as the authorization provided in RCW 90.03.525. The primary purpose of a rate must be to recover costs, and not instead to generate revenue – generally held to be a tax purpose. Consistent with common ratemaking practice, the “costs” incurred by local jurisdictions to manage the impacts of state highway runoff and recovered from WSDOT under RCW 90.03.525 are prospective.

B. STUDY PURPOSE

The purposes of the study are to:

- ◆ Understand the stormwater relationship between WSDOT and local jurisdictions;
- ◆ Solicit feedback from jurisdictions on improvements in stormwater management and cost recovery;
- ◆ Develop options for efficiencies in cost recovery and stormwater management; and
- ◆ Understand the impacts of National Pollutant Discharge Elimination System (NPDES) permitting requirements on the stormwater relationship between WSDOT and local jurisdictions.

The consultant team, which included Parametrix, PRR, and Foster Pepper, worked closely with a staff workgroup made up of representatives of the Association of Washington Cities, WSDOT, the Departments of Ecology and Commerce, JTC staff, House and Senate Transportation Committee staff, and other state agencies and stakeholders.

C. STUDY DELIVERABLES

Deliverables of the study include the following products:

- ◆ A “Stormwater 101 Guide”. The “Stormwater 101” guide provides background information for legislators and others to better understand the current stormwater regulatory and fee environment.
- ◆ An inventory of state highways subject to the federal Clean Water Act. This inventory includes a list of state highways subject to compliance with the Clean Water Act National Pollutant Discharge Elimination System (NPDES) permits at the local agency and state level. (**Appendix B**)
- ◆ A survey of jurisdictions that impose stormwater fees to WSDOT, or otherwise manage stormwater from state highways. The survey will identify those jurisdictions that charge stormwater fees to WSDOT, the amounts charged, and the revenue received for the past five biennia (ten years). The survey will also identify those jurisdictions that manage stormwater from state highways and their associated costs. Key characteristics of jurisdictions surveyed will be provided. The surveys will also identify challenges faced by the jurisdictions regarding their relationships with WSDOT on the stormwater issue, and proposed improvements. (**Appendix C**)
- ◆ Case studies of jurisdictions (Appendix D). The case studies are to address at least the following issues, among eight survey respondents, in some depth:
 - The costs jurisdictions incur to manage stormwater runoff from state highways.
 - The costs that jurisdictions incur in order to impose stormwater fees upon WSDOT.
 - General challenges experienced by jurisdictions in imposing stormwater fees.

- Barriers and challenges to jurisdictions' imposing stormwater fees on WSDOT.
- The jurisdictions' level of satisfaction or dissatisfaction pertaining to existing state law and the WSDOT application process to recover stormwater costs.
- Specific examples of potential improvements where WSDOT and jurisdictions may find efficiencies in the cost and management of stormwater facilities.
- ◆ Recommendations for efficiency improvements. These recommendations are to address opportunities for increased efficiencies in both the cost recovery process under RCW 90.03.525 and the overall stormwater management practices between the Washington State Department of Transportation (WSDOT) and local jurisdictions. (**Appendix E**)
- ◆ Implementation recommendations. Implementation recommendations include proposed changes to RCW 90.03.525 and other sections of statute, as well as a model ordinance for jurisdictions to use in complying with the proposed changes to statute.

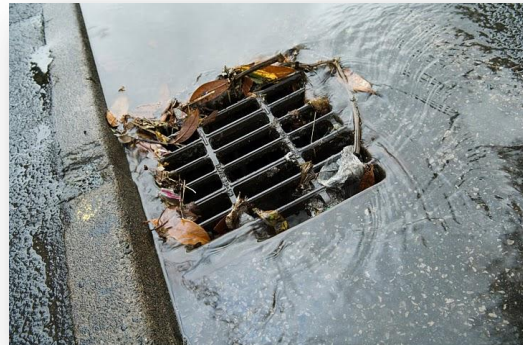
SECTION II: STORMWATER 101 GUIDE

The “Stormwater 101” guide is intended to provide (1) an overview of stormwater management, including a basic definition of stormwater and its components and a summary of the regulations impacting stormwater management, and (2) stormwater program funding options and common practices. The document is targeted for use as background for legislators, other public officials, and the general public.

A. STORMWATER OVERVIEW

A.1 Stormwater Background

Stormwater is now the primary cause of water pollution in the United States, resulting in numerous federal, state and local regulations. Stormwater is runoff from precipitation (rain, snow) across the land surface, generally exacerbated by development. That runoff contributes to flooding and erosion, picks up pollutants, and flows into pipes, ditches, streams, and other receiving water bodies. Conversion of natural areas to urbanized or developed areas increases flows and water pollution, and threatens properties with flooding. Impervious surfaces such as roofs, roads and highways, parking lots and sidewalks prevent water from potentially soaking into the ground or being utilized by vegetation.



Stormwater runoff poses a high risk to the health of receiving waters in the state, including Puget Sound, by causing two major problems.

- ◆ First, stormwater transports a mixture of pollutants such as petroleum products, heavy metals, animal waste and sediments from construction sites, roads, highways, parking lots, lawns and other developed lands, with the following results:
 - Stormwater pollution has harmed virtually all urban creeks, streams and rivers in Washington State.
 - Stormwater is the leading contributor to water quality pollution of urban waterways in the state.

- Two species of salmon and bull trout are threatened with extinction under the federal Endangered Species Act. Loss of habitat due to stormwater and development is one of the causes.
 - Shellfish harvest at many beaches is restricted or prohibited due to pollution. Stormwater runoff is often one of the causes.
 - Stormwater likely contributes to the killing of high percentages of healthy coho salmon in some urban creeks within hours of the fish entering the creeks, before they are able to spawn.
 - English sole in Puget Sound are more likely to develop cancerous lesions on their livers in more urban areas. Stormwater likely plays a role.
- ◆ Second, during the wet, winter months, high stormwater flows, especially long-lasting high flows, can:
- Cause flooding.
 - Damage property.
 - Harm and render unusable fish and wildlife habitat by eroding stream banks, widening stream channels, depositing excessive sediment and altering natural streams and wetlands.

In addition, more impervious surface area means less water soaks into the ground. As a result, drinking water supplies are not replenished and streams and wetlands are not recharged. This can lead to water shortages for people and inadequate stream flows and wetland water levels for fish and other wildlife.⁴

A.2. Stormwater Regulatory Environment

Although many regulations affect the practice of stormwater management, the primary driver is the federal Clean Water Act (CWA), first adopted in 1972, which sets the policy and regulatory framework for stormwater pollution control in the nation. The purpose of the CWA is to “...restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The CWA uses the National Pollutant Discharge Eliminate System (NPDES) permit as the primary instrument to control urban stormwater.

The state of Washington was delegated authority by the U.S. Environmental Protection Agency (EPA) to implement the NPDES permit program. The Washington State Waste Discharge Act contains state regulations regarding stormwater. The state Department of Ecology combined the federal requirements of the CWA with the state requirements of the state Waste Discharge Act and initiated the first stormwater NPDES permit program in 1995 for jurisdictions having population greater than 100,000. King, Pierce, Clark, and Snohomish Counties, as well as the Cities of Tacoma and Seattle, became the first Phase I permittees along with the Washington State Department of Transportation. In 2007, Ecology issued the Phase II permits to smaller jurisdictions that owned or operated municipal separate storm sewer systems (MS4s). Today there are more than one hundred MS4 permits issued statewide. These permits are on a five year renewal cycle. The state legislature acted in the 2011 session to set the next issuance date of MS4s in 2013. The WSDOT MS4 permit is scheduled to be re-issued in 2014.

The permits include requirements for inventorying stormwater facilities; inspecting and maintaining facilities; reducing pollutants at their sources; public education; reporting NPDES permit compliance, and applying protective design standards to new development of impervious surfaces.

⁴ Puget Sound Partnership Action Agenda, 2010

The protective design standards are found in the state Stormwater Manual, first adopted in 1992 and updated in 2005 for western and eastern Washington. Phase I permits contain additional requirements for water quality monitoring and retrofits.

The Stormwater NPDES permit (Sections S4 and S5) states:

- ◆ The NPDES permit "...does not authorize a violation of Washington State surface water quality standards...ground water quality standards...sediment management standards..."
- ◆ Requires that the permittee "...shall reduce the discharge of pollutants to the maximum extent practicable (MEP)."
- ◆ Requires "all known, available, and reasonable methods of prevention, control and treatment (AKART) to prevent and control pollution of waters of the State of Washington."
- ◆ Additional requirements may exist in areas that have an established Total maximum Daily Load (TMDL).

Best Management Practices (BMPs) are considered minimum requirements to meet MEP and AKART. Examples of BMPs include:

- ◆ Educating the public on the impacts of their individual behaviors on stormwater pollution;
- ◆ Preventing and eliminating illicit discharges through education, training and enforcement; and
- ◆ Implementing erosion and sediment control on construction sites.

The NPDES permits require adoption of the state Stormwater Manual, which is presumed to meet AKART. According to the Manual, these presumptive practices do not guarantee that stormwater discharges will meet receiving water quality standards. The combining of the CWA and state Waste Discharge Act requirements in a single permit provide the opportunity for third parties to sue dischargers if water quality standards are violated.

Other state laws affecting stormwater management include the Growth Management Act and its requirements for land management such as Shoreline (Shoreline Management Act) and Critical Areas requirements. At the federal level additional laws impacting stormwater management are the Comprehensive Environmental Recovery and Compliance Act (CERCLA) and the Endangered Species Act (ESA). Finally the federally recognized tribes are co-managers of the water resources in Washington State (Boldt decision, 1974).

B. STORMWATER FUNDING

A need for funding has accompanied the need for stormwater management. Stormwater utilities, supported by ongoing rates, are the largest local funding source for stormwater control in Washington State.

C.1 The Utility Concept

A stormwater utility is a stand-alone entity, usually set up as an enterprise fund, within the governmental structure. It is defined as being financially and organizationally self-sufficient, and can be designed to furnish a limited or comprehensive set of services related to stormwater quantity and quality management. A city utility operates under the purview of the city legislative authority. A county utility operates under the purview of the county legislative authority.

The following is a summary of the utility concept:

"A stormwater utility provides a reliable, dedicated source of revenue and an organizational structure that is dedicated to stormwater concerns. As a utility, a stormwater management

program can be carried out as a "stand alone" operation, with its own budget, implementation plan, and employees dedicated solely to stormwater system operation, maintenance, administration, and education. Also, creating a utility is often more acceptable politically, as many communities tend to resist the creation of new programs using special districts. Creating a utility has the added benefit of freeing up tax dollars from the local government's general fund that would normally be used for stormwater concerns, and this "extra" money can be applied toward other needs."⁵

C.1.a Legal Authorization

Revised Code of Washington (RCW) section 35.67.020 authorizes cities "to fix, alter, regulate, and control the rates and charges for their" systems of sewerage, defined in RCW 35.67.010 to include stormwater management. Similar authorization is provided for county programs in RCW Chapters 36.89, 36.94, and 86.15.

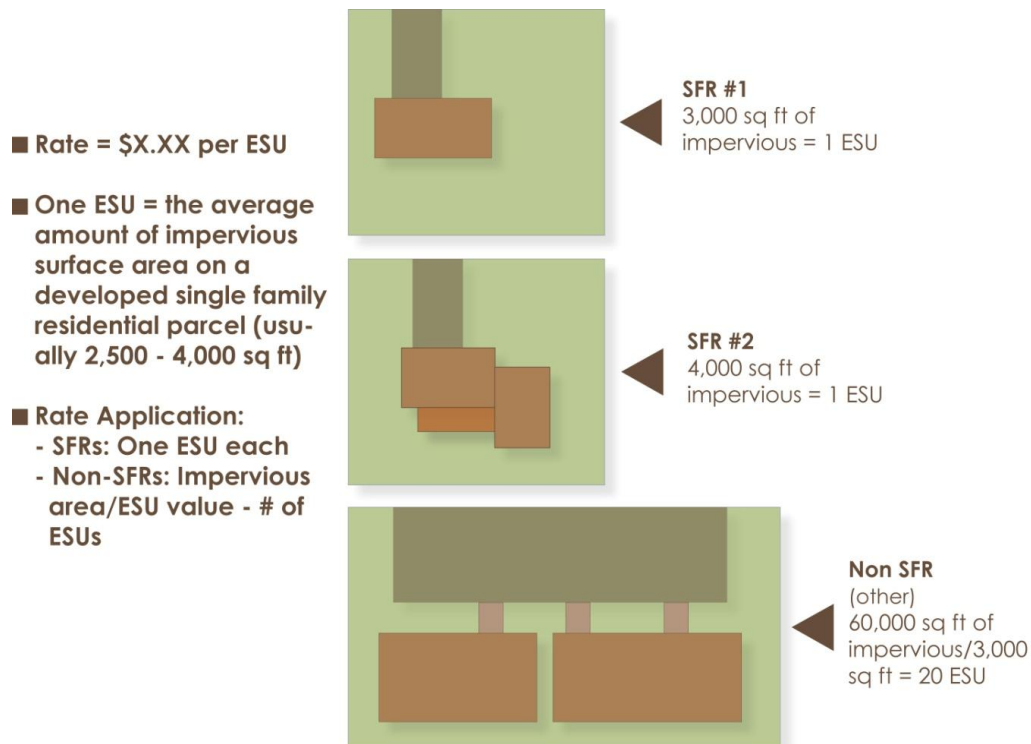
Other important RCW sections include 35.67.025, which specifies that all public property "shall be subject to rates and charges for storm water control facilities to the same extent private persons and private property are subject to such rates and charges," and 90.03.525, which limits the imposition of stormwater rates and charges on state highways.

C.1.b Stormwater Utility Rates

Most stormwater utility rates are based on impervious surface area. Impervious surface area is widely accepted as an appropriate measure of a property's contribution of runoff, providing a clear relationship, or "rational nexus," to service received from a stormwater program. As a method, it has also been tested in Washington State courts.

As illustrated below, under such a structure, single family residences are charged for one ESU, and other developed property is charged for its measured impervious surface area – expressed as the number of ESUs.

⁵ Stormwater Program Guidance Manual for the Puget Sound Basin.



Stormwater rates, in combination with other funding sources, pay for capital construction of stormwater systems and controls to prevent flooding and improve quality; maintenance and operations; and implementation of NPDES permit programs.

Alternative approaches to stormwater rates include density of development, usually distinguished by rates for different percentages of impervious coverage applied to the lot size. Both King County and the City of Bellevue utilize forms of the density of development approach.

C.1.c Charging for Streets

Some cities and counties in the state charge their own streets for stormwater service. The streets, while providing stormwater conveyance, are often large contributors of stormwater runoff. At the state level, the Washington State Department of Transportation seeks state appropriations to pay for the management of stormwater runoff generated by its 40,000 acres of paved surfaces. Statute (RCW 47.52.090) grants WSDOT the authority to “use all storm sewers that are adequate and available for the additional quantity of run-off” to be generated by limited access state highways.

The state of Washington authorizes (in RCW 90.03.525) the charging of state highways for their impacts on local systems. Rates charged are limited to “thirty percent of the rate for comparable real property”, with some exceptions. Revenues from the state for highway impacts “must be used solely for storm water control facilities that directly reduce state highway runoff impacts or implementation of best management practices that will reduce the need for such facilities.” Local jurisdictions must submit both a “plan for the expenditure of the charges for that calendar year” as well as a progress report “on the use of charges assessed for the prior year” in order for the state to pay the charges.

It is important to note that the most recent agreement between the Washington State Department of Transportation (WSDOT) and state municipalities clarified responsibility for state highways in local jurisdictions to those jurisdictions – retaining WSDOT responsibility only for limited access state highways. The effect of that agreement, currently being re-visited by WSDOT and the Association

of Washington Cities, has further limited cost recovery by local jurisdictions to the impact of limited access state highways. Local jurisdictions and WSDOT share the responsibility of managing stormwater runoff from some state facilities.

As part of WSDOT’s highway construction program during the 2009-11 biennium, it is estimated that at least \$86 million out of a \$3.43 billion 2009-11 capital program was spent on stormwater. An additional \$38.5 million will be spent statewide by WSDOT for stormwater-related maintenance activities in the 2011-13 biennium. WSDOT payments to local governments in stormwater assessments have steadily increased over time, going from \$1.2 million paid out in the 1995-97 biennium to \$3.8 million paid out in the 2009-11 biennium. Historical increases in WSDOT biennial payments to local governments, paid out of the maintenance budget, are shown below:

Table II.1 – WSDOT Payments to Cities and Counties under RCW 90.03.525

	1995-97	1997-99	1999-01	2001-03	2003-05	2005-07	2007-09	2009-11
\$ Total	\$1,232,098	\$1,192,246	\$2,891,317	\$2,856,583	\$2,779,862	\$3,173,498	\$3,458,733	\$3,812,911
# Jurisdictions	17	13	20	19	17	16	15	17

C.2 Other Funding Sources

The vast majority of stormwater programs subject to NPDES permitting requirements recover their costs through stormwater utility rates. There are other, secondary, funding sources available, with varying degrees of applicability, for stormwater management.

- ◆ **The street / road fund.** In the absence of stormwater utilities, city street funds and county road funds have historically provided sources of funding for stormwater management. The use of these funds for stormwater purposes has been justified on the basis that portions of many drainage systems have been built by street and road departments and maintenance in the right of way may be provided by the department, as well.
- ◆ **The general fund.** Property tax revenues have been the primary source of general fund resources in Washington cities and counties. Use of general fund money is usually unrestricted, and thus has been used historically to fund stormwater management, usually in the absence of a stormwater utility. General fund resources are subject to many competing demands, and cannot usually be considered a reliable source for ongoing funding.
- ◆ **Special assessments / local improvement districts.** Most commonly structured as local improvement districts (LIDs), these funding mechanisms assess individual properties benefited or served by a specific capital improvement for a share of the cost of that facility. Special benefit must be demonstrated by an increase in assessed valuation due to the improvement, often a difficult linkage to demonstrate for stormwater improvements.
- ◆ **Special fees.** Direct charges / fees may be used to recover the direct costs for services performed for a customer or class of customers not generally related to the overall service charge – such as development inspections.



- ◆ **Capital facilities charges.** Capital, or general, facilities charges are authorized for cities under RCW 35.92.025. Authorization is less straightforward for county stormwater utilities authorized under either RCW 36.89 or 36.94. Capital facilities charges are one-time charges imposed as a condition of development, and are designed to recover from growth an equitable share of the cost of capital investment incurred by the utility. Revenues from such charges are dependent on growth and are available for capital purposes only.
- ◆ **Conventional debt instruments.** The most commonly used long-term debt instruments are revenue and general obligation bonds. Bond anticipation notes are available for short-term "interim" capital financing. These sources are available for capital funding only, not operations.
 - Revenue bonds are the most common source of funds for construction of major utility improvements. There are no statutory limitations on the amount of revenue bonds a utility can issue; however, utilities are required to meet yearly net operating income coverage requirements, commonly 1.25 times the annual debt service. In fact, to issue new debt, it may be necessary to demonstrate coverage in excess of this level based on a market-driven target, possibly in the range of 1.5 to 2.0.

Revenue bond debt service is paid out of rate revenues. The terms on revenue bonds are not as favorable as general obligation bonds, but carry the advantage of leaving the jurisdiction's debt capacity undisturbed. Interest rates vary depending on market conditions.
 - General obligation bonds are secured by the taxing power of the jurisdiction, are typically paid through property tax revenues, and may be subject to a public vote. Cities and counties often choose to repay the debt from other (rate) revenues, and increase property taxes only if the rates fail to meet debt obligation.

The financing costs of general obligation bonds are lower than revenue bonds due to (1) lower interest rates available, (2) no coverage requirements, and (3) no reserve requirements.
 - Short-term "interim" financing mechanisms are also available for capital costs. Bond anticipation notes can provide interim financing during construction, while allowing flexibility in the choice of long-term financing instruments. Typically, bond anticipation notes have lower interest rates than bonds, but add to issuance costs.
- ◆ **Special grants and loans.** Some state and federally administered grant and loan opportunities are available for capital funding only.
 - Department of Ecology Grants and Loans - The Washington Department of Ecology (Ecology) administers an integrated funding program for three state and federal financial assistance programs to improve and protect water quality. Each funding cycle begins in the fall when Ecology accepts project applications. Ecology rates and ranks applications based on the highest-priority needs: Projects include stormwater control and treatment, nonpoint pollution abatement and stream restoration activities, and water quality education and outreach. The amount of available grant and loan funding varies from year to year based on the state's biennial budget appropriation process and the annual congressional federal budget. The three sources of funding for water quality projects are
 - Centennial Clean Water Fund Grant Program,
 - Federal Clean Water Act Section 319 Nonpoint-Source Grant Program, and
 - Washington State Water Pollution Control Revolving Fund Loan Program.
 - Public Works Trust Fund – Cities, towns, counties and special purpose districts are eligible to receive loans. Water, sewer, storm, roads, bridges and solid waste/recycling are eligible and funds may be used for repair, replacement, rehabilitation, reconstruction and improvements

including reasonable growth (generally the 20-year growth projection in the comprehensive plan).

PWTF loans are available at interest rates of 0.5%, 1% and 2% with the lower interest rates given to applicants who pay a larger share of the total project costs. The loan applicant must provide a minimum local match of funds of 5% towards the project cost to qualify for a 2% loan, 10% for a 1% loan, and 15% for a 0.5% loan. The useful life of the project determines the loan term up to a maximum of 20 years.

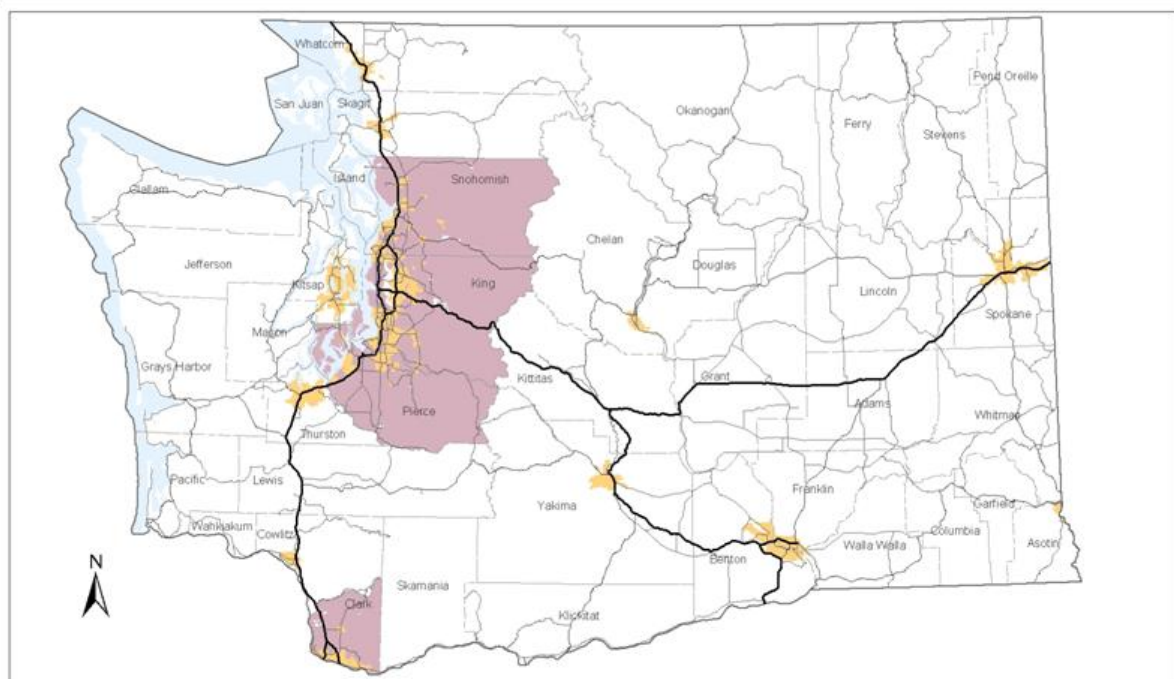
SECTION III: INVENTORY OF STATE HIGHWAYS

A comprehensive inventory of applicable state highways is provided as **Appendix B** to this document. The inventory is a list of state highway segments that generate stormwater runoff that impacts local stormwater systems. A separate compilation that identifies the type of mitigation (best management practice) present by highway by jurisdiction is also included. Finally, detailed maps are included, illustrating applicable highway segments by location.

Some of the information compiled is summarized below:

- ◆ Total state highways: 7,058 centerline miles; 20,587 lane miles;
- ◆ Limited access highways: 2,220 centerline miles; 9,576 lane miles;
- ◆ Limited access highways within Cities: 440 centerline miles.

NPDES permitting requirements apply to many jurisdictions in the state of Washington. In addition, WSDOT, which operates its transportation system across the state, is required to meet its permit requirements within specific geographic boundaries. The map below shows the geographic nature of the WSDOT NPDES permit.



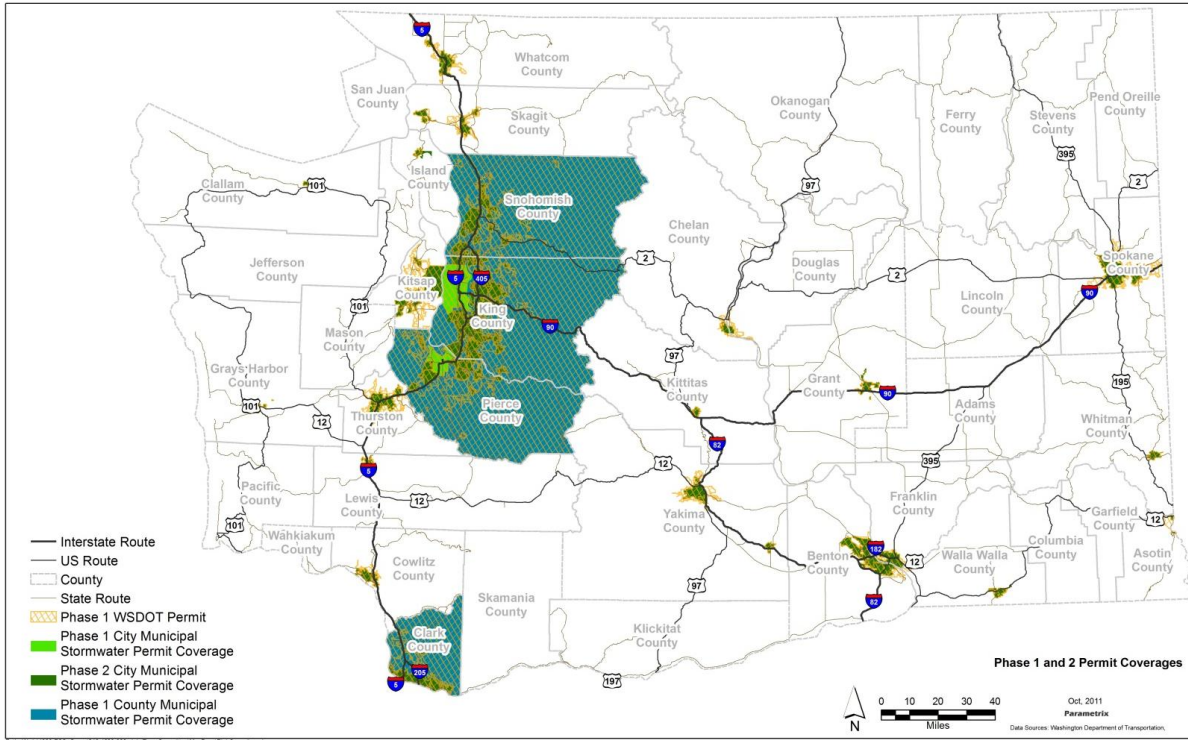
Data Source: Municipal Stormwater Permit Areas from WAECY (2010)
State Routes from WSDOT at scale of 1:500K
State and County Boundaries from WADNR
Cartography: WSDOT 4/29/2011

0 5 10 20 30 40 50
Miles

1995 Coverage
2009 Expanded Coverage

Washington State
Department of Transportation

Statewide permit coverage was established by Ecology based on concentrations of population centers in accordance with the CWA requirements. A map showing NPDES permit coverage for local jurisdictions is provided below.



SECTION IV: SURVEY OF JURISDICTIONS

The survey of jurisdictions is included in its entirety as **Appendix C** to this report. The consultants conducted a survey of eligible jurisdictions to identify their successes and challenges in recovering the costs of stormwater runoff generated by state highways, and in coordinating with WSDOT to manage that stormwater runoff. The survey purpose is further described below, followed by summaries of the survey methodology and survey results.

A. SURVEY PURPOSE

The survey was designed to gather information from jurisdictions that:

- ◆ Have a stormwater utility,
- ◆ Are subject to National Pollutant Discharge Elimination System (NPDES) Phase 1 or Phase 2 municipal stormwater permitting requirements, and
- ◆ Have one or more limited access state highways within their jurisdiction.

Furthermore, the survey was intended for those jurisdictions that impose stormwater fees to the Washington State Department of Transportation (WSDOT), or otherwise manage stormwater from limited access state highways. It also surveyed jurisdictions that currently do not manage stormwater from limited access highways, but which plan to do so in the future.

In particular, the survey questions were designed to identify successes experienced and challenges faced by the jurisdictions in:

- ◆ Working with WSDOT to manage stormwater,
- ◆ Complying with RCW 90.03.525, and
- ◆ Preparing documentation for recovery of costs associated with managing stormwater from limited access highways.

Results of the survey were used to help identify ways to improve the process by which jurisdictions charge the Washington State Department of Transportation for managing stormwater runoff from state limited access highways within jurisdiction boundaries, and to make stormwater management of these facilities more efficient.

B. SURVEY METHODOLOGY

The survey questions were administered through an online survey process. A total of eighty-one qualified jurisdictions were invited to participate. Forty-five completed the survey, for a response rate of 56%. (**Appendix C** includes a detailed discussion of the survey methodology.)

C. SUMMARY OF KEY FINDINGS

Based on the responses received, it is reasonable to conclude the following.

Stormwater system capacity, costs, water quality, and staff resources are the major challenges to managing stormwater from limited access highways.

Three-fourths of those jurisdictions that manage stormwater from limited access highways indicated challenges in doing so. The challenges included stormwater system capacity, costs, water quality, and staff resources. It was also found that those in the Puget Sound region were more likely to report challenges in managing stormwater than those in the western Washington or eastern Washington regions. Those with conveyance facilities were somewhat less likely to report challenges in stormwater management than those with other stormwater management systems.

Factors upon which the fee is based, definition of what is eligible for reimbursement, and limited staff resources are the major challenges to complying with RCW 90.03.525.

More than half of those that manage stormwater reported facing challenges complying with RCW 90.03.525. The challenges included factors upon which the fee is based, definition of what is eligible for reimbursement, limited staff resources, and working with WSDOT. Facing challenges complying with the RCW did not differ significantly between those that charge WSDOT and those that don't. Those with retention facilities were somewhat less likely to report problems in complying with RCW 90.03.525 than those with other stormwater management systems.

Not charging for city streets, burdensome work plan and reporting requirements, and not tracking costs of runoff from state highways are the major reasons for not charging WSDOT.

When those who did not charge WSDOT were asked why not, their reasons included not charging for city streets, burdensome work plan and reporting requirements, not tracking costs of runoff from state highways, and having not charged WSDOT in the past. Of those that did charge WSDOT, most reported spending \$500 to \$1,000 annually to gather the necessary reporting data and file a request. When it came to how long it takes to gather the necessary reporting documentation, many reported spending either 1-2 days or more than 4 days. The length of time it takes to gather the reporting documentation did not differ significantly by the number of lane miles of limited access highway in the jurisdiction.

These jurisdictions reported that the following would motivate them to start charging WSDOT: if the amount of reimbursement was increased, if the city street charge requirement was eliminated, if the planning and reporting was less burdensome, if the options and process were better understood, and if the limited access highway(s) in their jurisdiction had additional negative impact.

Working with WSDOT is OK, but could be improved.

Most reported the process of working with WSDOT on stormwater management to be either somewhat efficient or neutral. The level of efficiency of working with WSDOT to manage stormwater did not differ significantly between those that charged and those that did not charge WSDOT. Those with retention facilities were more likely to report that the process between them and WSDOT for managing stormwater runoff was inefficient than those with other types of stormwater management systems. Among the jurisdictions who reported inefficiencies, the inefficiencies tended to focus on communication challenges, the regulatory process itself, documentation, and insufficient monetary incentives. In regard to the charging process specifically, the difficulties included the method used to determine charges, justifying how the reimbursed fee is used, and documentation issues.

SECTION V: CASE STUDIES

Case studies are included in their entirety as **Appendix D** to this report. As part of the study, the project team conducted eight in-depth case studies from a representative cross-section of survey respondents. The case studies were intended to flesh out the views expressed by survey respondents and elicit recommended improvements to both stormwater cost recovery and coordination with WSDOT. The purpose of the case studies is further described below, followed by a description of the subject selection and a summary of the results.

A. CASE STUDY PURPOSE

The case studies were designed to address the following issues:

- ◆ The costs jurisdictions incur to manage stormwater runoff from state highways
- ◆ The costs that jurisdictions incur in order to impose stormwater fees upon WSDOT
- ◆ General challenges experienced by jurisdictions in imposing stormwater fees
- ◆ Barriers and challenges to jurisdictions' imposing stormwater fees on WSDOT
- ◆ The jurisdictions' level of satisfaction or dissatisfaction pertaining to existing state law and the WSDOT application process to recover stormwater costs
- ◆ Specific examples of potential improvements where WSDOT and jurisdictions may find efficiencies in the cost and management of stormwater facilities

B. CASE STUDY SELECTION

The following criteria were used to select case study participants:

- ◆ Is the selection eligible to charge WSDOT stormwater rates under RCW 90.03.525?
- ◆ Does the selection create / improve appropriate representation among subjects that (1) now charge WSDOT, (2) did charge WSDOT but no longer do, (3) never have charged WSDOT, and (4) have not but are now considering charging WSDOT?
- ◆ Does the selection create / improve appropriate representation between NPDES Phase I and Phase II communities?
- ◆ Does the selection create / improve appropriate representation between eastern and western Washington subjects?
- ◆ At least two respondents should be from eastern Washington.
- ◆ At least one respondent should be a county.

- ◆ At least one respondent should be an NPDES Phase I permittee.

There were 45 survey respondents. Of these respondents,

- ◆ Twelve (Bellevue, Bellingham, Clark County, Douglas County, King County, Kitsap County, Olympia, Pierce County, Renton, Skagit County, Tukwila, and Vancouver) currently charge the state of Washington under RCW 90.03.525.
- ◆ Two (Issaquah and Puyallup) appear to have charged the state in the past but no longer do.
- ◆ The remaining thirty-three respondents have never charged the state under RCW 90.03.525.
- ◆ Of the 45 respondents, three (King County, Pierce County, and Clark County) are NPDES Phase I permittees.
- ◆ Seven (Chelan County, Douglas County, Kennewick, Richland, Spokane County, Spokane Valley, and Walla Walla County) are located in eastern Washington.

Applying the above criteria to the survey respondents, the following eight jurisdictions were selected for case studies:

Table V.1 – Case Study Selection

Jurisdiction	Reasons Selected
City of Issaquah	Used to charge state, no longer does; NPDES Phase II
City of Puyallup	Used to charge state, no longer does; NPDES Phase II
City of Bellingham	Currently charges state; NPDES Phase II; geographic balance
Clark County	Currently charges state; NPDES Phase I; geographic balance
City of Tukwila	Currently charges state; NPDES Phase II
City of Olympia	Currently charges state; NPDES Phase II
City of Richland	Has never charged state; NPDES Phase II; eastern Washington
City of Spokane Valley	Has never charged state; NPDES Phase II; eastern Washington

C. CASE STUDY RESULTS

Selected background information on each of the case study selections is provided in **Table V.2** following.

Table V.2 – Case Study Background

Jurisdiction	Population	Rate Approach	Monthly Rate	Eligible Highway Area	Annual WSDOT Payment	Notes
City of Issaquah	30,434	ESU ⁶	\$14.08	50 acres	\$0	Actual costs unknown
City of Puyallup	37,022	ESU ⁴	\$10.75	20 acres	\$0	Actual costs unknown
City of Bellingham	80,885	Impervious Square Feet	\$7.00	48 acres	\$44,500	Costs estimated at \$75,000/yr
Clark County	425,363	Impervious Square Feet	\$2.75	Unknown	\$81,489	Costs estimated at \$125,000/yr
City of Tukwila	19,107	Development Density	\$7.75	92 acres	\$62,897	Costs estimated at \$134,000/yr
City of Olympia	46,478	Impervious Square Feet	\$10.58	49 acres	\$33,554	Costs typically exceed charges
City of Richland	48,058	ERU ⁴	\$3.85	113 acres	\$0	City reports no WSDOT impact
City of Spokane Valley	89,765	ERU ⁴	\$1.75	82 acres	\$0	City reports no WSDOT impact

Improvements to cost recovery system. Each of the case study participants was asked about suggested improvements to cost recovery under RCW 90.03.525. A number of consistent themes emerged from those responses. Six of the eight case study participants agreed with the following three suggested improvements:

- ◆ Eliminate required link between WSDOT payments and spending. Case study participants who made this suggestion indicated that the requirement that WSDOT payments be spent “solely” on the mitigation of WSDOT runoff is burdensome and unnecessarily restrictive. Required reporting is seen as imprecise and unnecessary.
- ◆ Allow jurisdictions to charge non-limited access highways. Case study participants who made this suggestion noted that the cost of managing runoff from non-limited access state highways is significant and unrecoverable except from their own local stormwater utility customers.
- ◆ Develop standard rate methodology for charging WSDOT. Case study participants who made this suggestion indicated that a separately calculated rate for eligible WSDOT facilities is preferable to the current system in which charges to WSDOT are linked to each local rate.

These and other case study results, a key outcome of the case studies, are summarized in **Table V.3** following.

⁶ The equivalent service unit (ESU) and equivalent residential unit (ERU) rate approaches are identical. They each charge impervious surface based on the average amount of impervious surface area on single family residences in the service area, defined to be one ESU or one ERU.

Table V.3 – Case Study Results Regarding Cost Recovery under RCW 90.03.525

Suggested Improvements	City of Issaquah	City of Puyallup	City of Bellingham	Clark County	City of Tukwila	City of Olympia	City of Richland	City of Spokane Valley
Eliminate required link between WSDOT payments & spending	●	●	●	●	●	●		
Allow jurisdictions to charge non-limited access highways	●	●	●		●	●		●
Develop standard rate methodology for charging WSDOT	●	●	●	●	●	●		
Eliminate requirement that cities charge their own streets	●	●			●	●		
Develop standard application approach for charging WSDOT	●	●		●				
Increase flexibility in determining project / activity eligibility			●	●		●		
Charge full cost (not 30% of rate) to state highways			●			●		
Increase outreach to those not recovering costs	●							

Opportunities for collaboration. Each of the case study participants was also asked about ways to improve collaboration between WSDOT and the local jurisdiction with regard to the management of stormwater runoff generated by state highways. Case study participants made the following suggestions:

- ◆ Collaboration with WSDOT on projects should be faster and more straightforward;
- ◆ Improve WSDOT responsiveness to local maintenance needs;
- ◆ Information such as system mapping should be better shared;
- ◆ WSDOT should participate in watershed planning; and
- ◆ Retrofitting of existing WSDOT facilities should remain a priority.

SECTION VI: EFFICIENCY IMPROVEMENTS

A technical memorandum addressing recommendations for efficiency improvements is included in its entirety as **Appendix E** to this report. The recommendations generally address efficiencies in both the cost and management of state limited access highway runoff within jurisdictional boundaries. The purpose of the effort is summarized below, followed by a summary of inefficiencies identified and recommended efficiency improvements.

A. PURPOSE

RCW 90.03.525 governs how cities and counties can recover stormwater costs on state highways that are within their respective jurisdictions. This assessment of the RCW 90.03.525 cost recovery process is conducted to determine opportunities for increased efficiencies in the administration of this state law as well as in the overall stormwater management practices between WSDOT and local jurisdictions. The analysis includes specific areas for consideration for improvements to the state law, as well as the management practices for implementation of its requirements. Changes are suggested for increasing efficiencies for stormwater management activities between WSDOT and local stormwater utilities.

B. CURRENT POTENTIAL INEFFICIENCIES

With a basic understanding of the regulatory drivers and limitations on both WSDOT and jurisdictions, the consultants identified potential inefficiencies in managing stormwater between local jurisdictions and WSDOT. These potential inefficiencies, including perceived and actual barriers and difficulties within the cost recovery process, are segregated into the following categories:

- ◆ RCW 90.03.525 requirements versus jurisdictional realities.
- ◆ Physical limitations on drainage systems.
- ◆ Differences in NPDES permits.
- ◆ Funding limitations between WSDOT and local jurisdictions.

B.1 RCW 90.03.525 Requirements vs. Jurisdictional Realities

Differences between statutory requirements and current local realities create inefficiencies within the cost recovery process. RCW 90.03.525 was created in response to actions taken by western Washington drainage utilities in the 1970s and 1980s to charge WSDOT for its stormwater runoff. It has not been modified or updated to reflect NPDES Phase I or II permit requirements, nor how stormwater has been managed over the past decade. This contrast has created some barriers, or at a minimum, difficulties in both cost recovery and collaborative stormwater management.

Table VI.1 – Statutory Requirements vs. Jurisdictional Perspectives

RCW Requirement	Jurisdictional Perspective
Must have storm water utility	Non-limiting as most have a utility
Only applies to limited access rights of way	Feel this should be applicable to non-limited access rights of way.
Spending WSDOT payments limited to “storm water control facilities” and associated best management practices (BMPs). BMPs are undefined.	Definition limits cost recovery to physical structures. Allows for discretion on part of WSDOT in approval of annual reports and cost recovery
Must charge own streets/roads	Rationale is not understood. Local roadways are maintained, source of funding should not be limiting factor. Seventeen cities and counties currently charge themselves. Of eligible cities, remaining 51 do not.
Cost recovery limited by 70 percent credit	No justification. Desire 100 percent recovery.
Recovery limited to “solely” mitigation for WSDOT runoff	Difficult to identify project or management costs for “solely” managing impacts from WSDOT
Must submit annual plan	No value and is costly to develop and produce
Provides mechanism for greater cost recovery, up to 100 percent.	Process is uncertain and potentially costly. Limited application.
Provides for collaboration with local cities and counties	Highway Runoff Manual directs designers to separate flows – no joint facilities
RCW states that appropriations made by the legislature to WSDOT are to enable WSDOT to meet its NPDES obligations for all state owned rights of way.	Based on the limited definition of “state right of way” in RCW 90.03.520, this provision does not allow for full funding of all state rights of way (non-limited access) and therefore requires local cities and counties to bear the burden of stormwater management for WSDOT’s non-limited access highways as operators of the stormwater infrastructure.
RCW is not intended to limit collaboration between cities, counties, and the state.	Does not recognize the third party lawsuit provision of the Clean Water Act which is limiting collaboration on joint facilities.

B.2 Physical Limitations on Drainage Systems

A number of factors associated with the physical characteristics of a possible site for cross collaboration can create inefficiencies. Opportunities for cross collaboration on design, construction, operation, and maintenance of stormwater control facilities exist throughout the state, both within and adjacent to limited access rights-of-way depending on individual site constraints. RCW 90.03.540 directs WSDOT to coordinate with adjacent local governments, ports, and other public and private organizations to determine opportunities for cost-effective joint stormwater treatment facilities for both new and existing impervious surfaces.

Efforts for cross collaboration can be constrained by the physical settings of the state’s limited access rights-of-way within a drainage basin. Land availability both within and outside of the right-of-way can limit the size of facilities either by limited acreage or by extensive adjacent improvements that would cost too much to remove (i.e., downtown Seattle). Further physical constraints to WSDOT participation may well lie in the contributing drainage basin sizes and physical size of the resulting treatment facility. With limited land available, WSDOT may be constrained on the size of the facility that can be constructed. Further, long-term maintenance and operation of the facility may be significant with insufficient assurances from the jurisdiction on cost sharing.

B.3 Differences in NPDES Permits

Sometimes seen as a potential inefficiency, differences between the WSDOT permit and the Phase I and II permits (both eastern and western Washington) will have little impact on the design parameters of new facilities or on the operations and maintenance of such facilities. Both Phase I and Phase II permittees are required to adopt either the 2005 *Ecology Stormwater Design Manual* or an equivalent Ecology-approved manual. The design requirements for both water quality treatment facilities, as well as flow attenuation (detention and retention) facilities, are equivalent across all design manuals. Maintenance and operations requirements are also similar and do not differ based on facility ownership. The NPDES permits will not be an impediment to co-development or co-location of facilities excluding the issue of third-party liability. The WSDOT Highway Runoff Manual (HRM) is somewhat different than the 2005 Ecology manual because the HRM is tailored to highways and other transportation facilities and contains a slightly different set of BMPs than the Ecology manuals, due to the nature of the linear transportation system.

B.4 Funding Limitations between WSDOT and Local Jurisdictions

The fact that local rate-setting and capital budgeting do not always coincide with the timing of WSDOT planning creates potential inefficiencies. Aligning WSDOT's stormwater retrofit facility needs with city and county capital facility planning and utility rate analysis processes would benefit both WSDOT and the local governments by identifying collaborative projects with mutual benefit and funding. WSDOT has a funding category which in part funds stormwater retrofits called the I4 subprogram. A concerted effort to coordinate the WSDOT I4 retrofit subprogram needs with jurisdictions would further enhance the ability of WSDOT to address stormwater problems in areas with the greatest environmental benefits.

C. RECOMMENDATIONS FOR CONSIDERATION

Consultant recommendations are provided below for improving cost recovery and for improving collaboration between WSDOT and local jurisdictions on the management of stormwater runoff from state limited access highways.

C.1 Cost Recovery Recommendations

In addition to the observations reported in the surveys and the case studies, the consultant team offers the following observations:

- ◆ Most jurisdictions exempt their own roads from stormwater rates.
- ◆ Many jurisdictions don't provide stormwater rate credits.
- ◆ Among those who do, credits of as much as 70% are unusual.
- ◆ RCW 90.03.525 may not be compatible with the methods that jurisdictions use to calculate and bill stormwater utility rates.
- ◆ RCW 90.03.500 provides that local stormwater rates "may be imposed on any publicly-owned, including state-owned, real property that causes such damage" from runoff – except as provided in RCW 90.03.525.
- ◆ We currently know of no other states in which local jurisdictions charge stormwater rates to state highways. Department of transportation representatives in 21 states (out of 49 contacted) responded that they are not charged and/or do not pay for state highway stormwater impacts.

Based in large part on the input of the surveys, the case studies, and the consultant team, the following cost recovery improvements are recommended. Each recommendation is followed by an analysis of the rationale and implications for local jurisdictions and for WSDOT.

1. Retain requirement that to charge WSDOT a jurisdiction must have a Stormwater Utility

Rationale and Implications for Jurisdictions:

- ◆ The legal requirements for fund accounting on utilities provide accountability for use of funds.
- ◆ Requirement for a stormwater utility not a burden; most stormwater programs, including those with NPDES permits, already have stormwater utilities or will in future.

Rationale and Implications for WSDOT:

- ◆ Provides accountability for expenditure of payments from WSDOT without additional process.

2. Eliminate the requirement that jurisdictions must charge their own roads

Rationale and Implications for Jurisdictions:

- ◆ Jurisdictions manage stormwater from their own roads using a mix of funds [e.g., road funds, general funds, stormwater fees]; source of funds should be irrelevant for WSDOT cost recovery.
- ◆ Treats charging for local and non-limited access roads the same. Neither must be charged to charge limited access highways.
- ◆ Removal of this barrier may allow up to 50 jurisdictions to seek cost recovery.

Rationale and Implications for WSDOT:

- ◆ Removal of barrier likely to increase costs to WSDOT (up to \$2 million annual increase, or up to twice their current cost).⁷

3. Streamline application and reporting processes

Rationale and Implications for Jurisdictions:

- ◆ Will reduce processing costs for each jurisdiction (estimated annual savings \$1,500 / jurisdiction that currently charges WSDOT).
- ◆ Will remove a barrier to cost recovery.

Rationale and Implications for WSDOT:

- ◆ Will reduce time for preparation and review (estimated annual savings ~\$5,000).
- ◆ Negligible upfront cost to develop templates for applications and reporting.

4. Provide written guidance and training on what is eligible for cost recovery

Rationale and Implications for Jurisdictions:

- ◆ Will reduce application and reporting costs (included in savings for issue 3).

Rationale and Implications for WSDOT:

⁷ Analysis used to support the estimate of \$2 million provided as **Appendix F** to this report.

- ◆ Cost for WSDOT to develop outreach training and update each NPDES permit cycle if necessary (Estimate \$2,500 initially, minor costs every 5 years for update).
- ◆ Will subsequently save processing costs (included in savings for issue 3).

5. Calculate, justify and document an updated credit (or credits) for WSDOT

Rationale and Implications for Jurisdictions:

- ◆ Resolution of a long standing jurisdictional concern about equity.
- ◆ Potential increase or decrease in cost recovery for jurisdictions based on technical rationale.

Rationale and Implications for WSDOT:

- ◆ Cost associated with determining an updated credit.
- ◆ If the technical rationale results in a credit less than or greater than 70%, WSDOT costs would need to adjust accordingly. [For example, if the credit were reduced to 50%, WSDOT costs would increase by \$1.267 million over current costs of approximately \$1.9 million (annual).]

6. Create at least two uniform WSDOT stormwater utility rates, one for eastern and one for western Washington

Rationale and Implications for Jurisdictions:

- ◆ Would resolve issue of lack of documentation of current credit by generating new average uniform rates [issue 5];
- ◆ Removes process barriers (issues 3 and 4);
- ◆ Recognizes geographic differences;
- ◆ Cost recovery might increase/decrease for some jurisdictions that currently charge WSDOT;
- ◆ Supported by most case studied jurisdictions;
- ◆ Potential incompatibility with local rate methodologies; requires ordinance amendment.

Rationale and Implications for WSDOT:

- ◆ Cost to develop new rates;
- ◆ Risk of increased WSDOT costs if new rates higher than current;
- ◆ More jurisdictions may apply for cost recovery;
- ◆ Rate updates may be needed periodically to account for new costs;
- ◆ Provides documentation of new rates;
- ◆ Eliminates need for application and reporting processes for WSDOT to manage.

C.2 Optional Courses of Action

Upon careful consideration of the draft recommendations, two alternative courses of action emerged. The consultants propose two options for consideration, which are outlined below. Both options accomplish efficiencies and address many of the challenges identified by the local jurisdictions; Option A does so with modifications to the existing statutes, while Option B would require a new

statutory framework. [✂ = statutory changes required; 👍 = no changes necessary; 📄 = additional study required]

Cost Recovery Option A: Modify Existing Statutory Framework

1. Retain requirement that to charge WSDOT a jurisdiction must have a stormwater utility. 👍
2. Eliminate the requirement that jurisdictions must charge their own roads. ✂
3. Streamline application and reporting processes. 👍
4. Provide written guidance on what is eligible for cost recovery. 👍
5. Conduct a study to calculate, justify and document an appropriate credit(s) for WSDOT. 📄

Cost Recovery Option B: Create New Statutory Framework

1. Retain requirement that to charge WSDOT a jurisdiction must have a stormwater utility. 👍
2. Eliminate the requirement that jurisdictions must charge their own streets. ✂
3. Conduct a study to establish a new, special uniform rate for limited access highways for inclusion in all stormwater utility rate structures statewide (minimum: one for eastern Washington and one for western Washington; more may be necessary to improve equity). 📄
4. Eliminate application and reporting requirements. ✂

The table below includes a comparison of the two options, with an estimate of the relative cost impacts.

Table VI.2 – Cost Recovery Options Comparison

	One-Time Cost to Implement	Ongoing Savings	RCW Change	Ordinance Change	Time to Implement	Impact on WSDOT
Option A	\$\$	\$\$	Yes	Yes	≅ 1 yr	Depends on analysis
Option B	\$\$	\$\$\$	Yes	Yes	≅ 2 yrs	Depends on analysis

The “one-time cost to implement” column in the above table provides an estimate of the relative cost to WSDOT of implementing each option. The “ongoing savings” column provides an estimate of the relative savings to both WSDOT and local jurisdictions resulting from more streamlined or simplified administrative requirements. The “RCW change” and “ordinance change” columns indicate whether statute or local code modifications will be required to implement each option. The “time to implement” column provides an estimate of the time it will take to make necessary changes to authorizing statute, perform supporting analyses, etc., and implement either option. The “impact on WSDOT” column reports on the potential cost impact, on WSDOT, of cost recovery requests under each option – both depend on the results of the supporting analyses.

C.3 Opportunities for Further Study

In addition to the observations reported in the surveys and the case studies, addressing the following issues would likely result in lowering overall public costs:

- ◆ Cost and liability concerns create barriers to cooperation on capital and M&O between WSDOT and jurisdictions.
- ◆ Uneven funding cycles between WSDOT and jurisdictions impede collaboration.
- ◆ Inconsistent relationships and implementation exists among WSDOT regions and jurisdictions.

- ◆ Inadequate joint planning between jurisdictions and WSDOT reduces collaboration/produces inefficiencies.
- ◆ Overlap in NPDES permits for non-limited access highways creates shared responsibilities; covered in both WSDOT and jurisdiction permits.

SECTION VII: IMPLEMENTATION

In order to implement either of the optional courses of action described in Section VI, it will be necessary to modify RCW 90.03.525 and related RCW chapters. Subsequently, many local governments will require code changes to remain consistent with the RCW. The consultants have provided the following proposed changes to existing Washington State statute and model ordinances for jurisdictions to use in complying with proposed changes to statute.

Proposed RCW Amendments:

- ◆ Cost Recovery Option A: Modify Existing Statutory Framework; and
- ◆ Cost Recovery Option B: Create New Statutory Framework.

Model (Local) Ordinances:

- ◆ Cost Recovery Option A: Existing Utility; Modified Existing RCW Framework;
- ◆ Cost Recovery Option B: Existing Utility; New RCW Framework;
- ◆ Cost Recovery Option A: New Utility; Modified Existing RCW Framework; and
- ◆ Cost Recovery Option B: New Utility; New RCW Framework.

A. PROPOSED RCW AMENDMENTS

Proposed RCW amendments for both cost recovery options are provided below. Numerical notes in the right column indicate which numbered feature of the cost recovery option (from report section VI) is being addressed by the proposed change.

A.1. Cost Recovery Option A: Modify Existing Statutory Framework

Sec. ____ RCW 47.52.090, and laws of 1984, ch. 7, §241, are each amended to read as follows:

Cooperative agreements — Urban public transportation systems — Title to highway — Traffic regulations — Underground utilities and overcrossings — Passenger transportation — Storm sewers — City street crossings.

The highway authorities of the state, counties, incorporated cities and towns, and municipal corporations owning or operating an urban public transportation system are authorized to enter into agreements with each other, or with the federal government, respecting the financing, planning, establishment, improvement, construction, maintenance, use, regulation, or vacation of limited access facilities in their respective jurisdictions to

facilitate the purposes of this chapter. Any such agreement may provide for the exclusive or nonexclusive use of a portion of the facility by streetcars, trains, or other vehicles forming a part of an urban public transportation system and for the erection, construction, and maintenance of structures and facilities of such a system including facilities for the receipt and discharge of passengers. Within incorporated cities and towns the title to every state limited access highway vests in the state, and, notwithstanding any other provision of this section, the department shall exercise full jurisdiction, responsibility, and control to and over the highway from the time it is declared to be operational as a limited access facility by the department, subject to the following provisions:

(1) Cities and towns shall regulate all traffic restrictions on such facilities except as provided in RCW 46.61.430, and all regulations adopted are subject to approval of the department before becoming effective. Nothing herein precludes the state patrol or any county, city, or town from enforcing any traffic regulations and restrictions prescribed by state law, county resolution, or municipal ordinance.

(2) The city, town, or franchise holder shall at its own expense maintain its underground facilities beneath the surface across the highway and has the right to construct additional facilities underground or beneath the surface of the facility or necessary overcrossings of power lines and other utilities as may be necessary insofar as the facilities do not interfere with the use of the right-of-way for limited access highway purposes. The city or town has the right to maintain any municipal utility and the right to open the surface of the highway. The construction, maintenance until permanent repair is made, and permanent repair of these facilities shall be done in a time and manner authorized by permit to be issued by the department or its authorized representative, except to meet emergency conditions for which no permit will be required, but any damage occasioned thereby shall promptly be repaired by the city or town itself, or at its direction. Where a city or town is required to relocate overhead facilities within the corporate limits of a city or town as a result of the construction of a limited access facility, the cost of the relocation shall be paid by the state.

(3) Cities and towns have the right to grant utility franchises crossing the facility underground and beneath its surface insofar as the franchises are not inconsistent with the use of the right-of-way for limited access facility purposes and the franchises are not in conflict with state laws. The department is authorized to enforce, in an action brought in the name of the state, any condition of any franchise that a city or town has granted. No franchise for transportation of passengers in motor vehicles may be granted on such highways without the approval of the department, except cities and towns are not required to obtain a franchise for the operation of municipal vehicles or vehicles operating under franchises from the city or town operating within the corporate limits of a city or town and within a radius not exceeding eight miles outside the corporate limits for public transportation on such facilities, but these vehicles may not stop on the limited access portion of the facility to receive or to discharge passengers unless appropriate special lanes or deceleration, stopping, and acceleration space is provided for the vehicles.

Every franchise or permit granted any person by a city or town for use of any portion of a limited access facility shall require the grantee or permittee to restore, permanently repair, and replace to its original condition any portion of the highway damaged or injured by it. Except to meet emergency conditions, the construction and permanent repair of any limited access facility by the grantee of a franchise shall be in a time and manner authorized by a permit to be issued by the department or its authorized representative.

(4) The department has the right to use all storm sewers that are adequate and available for the additional quantity of run-off proposed to be passed through such storm sewers consistent with RCW 90.03.525, as applicable.

(5) The construction and maintenance of city streets over and under crossings and surface intersections of the limited access facility shall be in accordance with the governing policy entered into between the department and the association of Washington cities on June 21, 1956, or as such policy may be amended by agreement between the department and the association of Washington cities.

Sec. ____ RCW 90.03.525 and laws of 2005, ch. 319, §140, are each amended to read as follows:

Storm water control facilities -- Imposition of rates and charges with respect to state and local highway rights-of-way -- Annual plan for expenditure of charges.

(1)

(a) The rate charged by a local government utility to the department of transportation with respect to state highway right-of-way or any section of state highway right-of-way for the construction, operation, and maintenance of storm water control facilities under chapters 35.67, 35.92, 36.89, 36.94, 57.08, and 86.15 RCW, shall be _____ ~~thirty~~ percent of the rate for comparable real property, except as otherwise provided in this section. ~~The rate charged to the department with respect to state highway right-of-way or any section of state highway right-of-way within a local government utility's jurisdiction shall not, however, exceed the rate charged for comparable city street or county road right-of-way within the same jurisdiction.~~

[A-5]

[A-2]

(b) The rate charged by a local government utility to its own or to another local government's highway right-of-way or any section of local highway right-of-way for the construction, operation, and maintenance of storm water control facilities may be the same maximum rate as may be charged by the local government to the state department of transportation under RCW 90.03.525(1)(a); or such other rate, or no rate, as may be determined by the legislative authority of that local government utility in consideration of the continuing expenditures of the local government for the construction, operation, and maintenance of storm water control facilities designed to control surface water or storm water runoff from local highway rights-of-way.

[A-2]

(c) The legislature finds that the aforesaid rates applicable to the state, and rate determinations by the legislative authority of a local government utility for local highway rights-of-way are presumptively fair and equitable because of the traditional and continuing expenditures of the department of transportation, cities and counties for the construction, operation, and maintenance of storm water control facilities designed to control surface water or storm water runoff from state and local highway rights-of-way.

(2) Charges paid under subsection (1)(a) of this section by the department of transportation must be used solely for storm water control facilities that directly reduce state highway runoff impacts or implementation of best management practices that will reduce the need for such facilities. By January 1st of each year, beginning with calendar year 1997, the local government utility, in coordination with the department, shall develop a plan for the expenditure of the charges for that calendar year. ~~The plan must be consistent with the objectives identified in RCW 90.78.010.~~ In addition, beginning with the submittal for 1998, the utility shall provide a progress report on the use of charges assessed for the prior year. No charges may be paid until the plan and report have been submitted to the department.

(3) The utility imposing the charge and the department of transportation may, however, agree to either higher or lower rates with respect to the construction, operation, or maintenance of any specific storm water control facilities based upon the annual plan prescribed in subsection (2) of this section. If, after mediation, the local government utility and the department of transportation cannot agree upon the proper rate, either may commence an action in the superior court for the county in which the state highway right-of-way is located to establish the proper rate. The court in establishing the proper rate shall take into account the extent and adequacy of storm water control facilities constructed by the department and the actual benefits to the sections of state highway rights-of-way from storm water control facilities constructed, operated, and maintained by the local government

utility. Control of surface water runoff and storm water runoff from state highway rights-of-way shall be deemed an actual benefit to the state highway rights-of-way. The rate for sections of state highway right-of-way as determined by the court shall be set forth in terms of the percentage of the rate for comparable real property, ~~but shall in no event exceed the rate charged for comparable city street or county road right-of-way within the same jurisdiction.~~

[A-2]

(4) The legislature finds that the federal clean water act (national pollutant discharge elimination system, 40 C.F.R. parts 122-124), the state water pollution control act, chapter 90.48 RCW, and the highway runoff program under chapter 90.71 RCW, mandate the treatment and control of storm water runoff from state highway rights-of-way owned by the department of transportation. Appropriations made by the legislature to the department of transportation for the construction, operation, and maintenance of storm water control facilities are intended to address applicable federal and state mandates related to storm water control and treatment. This section is not intended to limit opportunities for sharing the costs of storm water improvements between cities, counties, and the state.

Sec. ____ [To add retroactivity clause]

A.2. Cost Recovery Option B: Create New Statutory Framework

Sec. ____ RCW 47.52.090, and laws of 1984, ch. 7, §241, are each amended to read as follows:

Cooperative agreements — Urban public transportation systems — Title to highway — Traffic regulations — Underground utilities and overcrossings — Passenger transportation — Storm sewers — City street crossings.

The highway authorities of the state, counties, incorporated cities and towns, and municipal corporations owning or operating an urban public transportation system are authorized to enter into agreements with each other, or with the federal government, respecting the financing, planning, establishment, improvement, construction, maintenance, use, regulation, or vacation of limited access facilities in their respective jurisdictions to facilitate the purposes of this chapter. Any such agreement may provide for the exclusive or nonexclusive use of a portion of the facility by streetcars, trains, or other vehicles forming a part of an urban public transportation system and for the erection, construction, and maintenance of structures and facilities of such a system including facilities for the receipt and discharge of passengers. Within incorporated cities and towns the title to every state limited access highway vests in the state, and, notwithstanding any other provision of this section, the department shall exercise full jurisdiction, responsibility, and control to and over the highway from the time it is declared to be operational as a limited access facility by the department, subject to the following provisions:

(1) Cities and towns shall regulate all traffic restrictions on such facilities except as provided in RCW 46.61.430, and all regulations adopted are subject to approval of the department before becoming effective. Nothing herein precludes the state patrol or any county, city, or town from enforcing any traffic regulations and restrictions prescribed by state law, county resolution, or municipal ordinance.

(2) The city, town, or franchise holder shall at its own expense maintain its underground facilities beneath the surface across the highway and has the right to construct additional facilities underground or beneath the surface of the facility or necessary overcrossings of power lines and other utilities as may be necessary insofar as the facilities do not interfere with the use of the right-of-way for limited access highway purposes. The city or town has the right to maintain any municipal utility and the right to open the surface of the highway. The construction, maintenance until permanent repair is made, and permanent repair of these facilities shall be done in a time and manner authorized by permit to be issued by the department or its authorized representative, except to meet emergency conditions for which no permit will be required, but any damage occasioned thereby shall promptly be repaired by the city or town itself, or at its direction. Where a city or town is required to relocate overhead facilities within the corporate limits of a city or town as a result of the construction of a limited access facility, the cost of the relocation shall be paid by the state.

(3) Cities and towns have the right to grant utility franchises crossing the facility underground and beneath its surface insofar as the franchises are not inconsistent with the use of the right-of-way for limited access facility purposes and the franchises are not in conflict with state laws. The department is authorized to enforce, in an action brought in the name of the state, any condition of any franchise that a city or town has granted. No franchise for transportation of passengers in motor vehicles may be granted on such highways without the approval of the department, except cities and towns are not required to obtain a franchise for the operation of municipal vehicles or vehicles operating under franchises from the city or town operating within the corporate limits of a city or town and

within a radius not exceeding eight miles outside the corporate limits for public transportation on such facilities, but these vehicles may not stop on the limited access portion of the facility to receive or to discharge passengers unless appropriate special lanes or deceleration, stopping, and acceleration space is provided for the vehicles.

Every franchise or permit granted any person by a city or town for use of any portion of a limited access facility shall require the grantee or permittee to restore, permanently repair, and replace to its original condition any portion of the highway damaged or injured by it. Except to meet emergency conditions, the construction and permanent repair of any limited access facility by the grantee of a franchise shall be in a time and manner authorized by a permit to be issued by the department or its authorized representative.

(4) The department has the right to use all storm sewers that are adequate and available for the additional quantity of run-off proposed to be passed through such storm sewers consistent with RCW 90.03.525, as applicable.

(5) The construction and maintenance of city streets over and under crossings and surface intersections of the limited access facility shall be in accordance with the governing policy entered into between the department and the association of Washington cities on June 21, 1956, or as such policy may be amended by agreement between the department and the association of Washington cities.

Sec. ____ RCW 90.03.525 and laws of 2005, ch. 319, §140, are each amended to read as follows:

Storm water control facilities -- Imposition of rates and charges with respect to state and local highway rights-of-way -- Annual plan for expenditure of charges.

(1) The rates charged by a local government utility to the department of transportation with respect to state highway right-of-way or any section of state highway right-of-way for ~~the construction, operation, and maintenance of storm water control facilities~~ managing runoff under chapters 35.67, 35.92, 36.89, 36.94, 57.08, and 86.15 RCW, shall be applied initially to state highway right-of-way as follows:

<u>Description of state highway right-of-way</u>	<u>Monthly rate per impervious acre</u>
<u>Fully mitigating flows to predeveloped conditions– no impact on local government utility</u>	<u>\$0.00</u>
<u>Fully treating all runoff in accordance with WSDOT NPDES Permit requirements</u>	<u>\$0.00</u>
<u>Not mitigating flows to predeveloped conditions</u>	<u>\$X.XX</u>
<u>Not treating runoff in accordance with WSDOT NPDES Permit requirements</u>	<u>\$Y.YY</u>
<u>Base charge for conveyance</u>	<u>\$Z.ZZ</u>

[B-4]

Rates shall be adjusted annually by applying one or more specific cost indexes or other periodic data sources. A specific cost index or periodic data source must be:

(A) A relevant measurement of the average change in prices or costs over an identified time period for materials, labor, real property or a combination of the three; and

(B) Published by a recognized organization or agency that produces the index or data source for reasons that are independent of the rate methodology.

~~thirty percent of the rate for comparable real property, except as otherwise provided in this section. The rate charged to the department with respect to state highway right of way or any section of state highway right of way within a local government utility's jurisdiction shall not, however, exceed the rate charged for comparable city street or county road right of way within the same jurisdiction.~~

[B-2]

(2) The rate charged by a local government utility to its own or to another local government's highway right-of-way or any section of local highway right-of-way for the construction, operation, and maintenance of storm water control facilities may be the same maximum rate as may be charged by the local government to the state department of transportation under RCW 90.03.525(1); or such other rate, or no rate, as may be determined by the legislative authority of that local government utility in consideration of the continuing expenditures of the local government for the construction, operation, and maintenance of storm water control facilities designed to control surface water or storm water runoff from local highway rights-of-way.

[B-2]

(3) The legislature finds that the aforesaid rates applicable to the state, and rate determinations by the legislative authority of a local government utility for local highway rights-of-way are presumptively fair and equitable because of the traditional and continuing expenditures of the department of transportation, cities and counties for the construction, operation, and maintenance of storm water control facilities designed to control surface water or storm water runoff from state and local highway rights-of-way.

~~(2) Charges paid under subsection (1)(a) of this section by the department of~~

~~transportation must be used solely for storm water control facilities that directly reduce state highway runoff impacts or implementation of best management practices that will reduce the need for such facilities. By January 1st of each year, beginning with calendar year 1997, the local government utility, in coordination with the department, shall develop a plan for the expenditure of the charges for that calendar year. The plan must be consistent with the objectives identified in RCW 90.78.010. In addition, beginning with the submittal for 1998, the utility shall provide a progress report on the use of charges assessed for the prior year. No charges may be paid until the plan and report have been submitted to the department.~~

[B-3]

(43) The utility imposing the charge and the department of transportation may, however, agree to either higher or lower rates with respect to the construction, operation, or maintenance of any specific storm water control facilities based upon the annual plan prescribed in subsection (2) of this section. If, after mediation, the local government utility and the department of transportation cannot agree upon the proper rate, either may commence an action in the superior court for the county in which the state highway right-of-way is located to establish the proper rate. The court in establishing the proper rate shall take into account the extent and adequacy of storm water control facilities constructed by the department and the actual benefits to the sections of state highway rights-of-way from storm water control facilities constructed, operated, and maintained by the local government utility. Control of surface water runoff and storm water runoff from state highway rights-of-way shall be deemed an actual benefit to the state highway rights-of-way. The rate for sections of state highway right-of-way as determined by the court shall be set forth in terms of the percentage of the rate for comparable real property, ~~but shall in no event exceed the rate charged for comparable city street or county road right of way within the same jurisdiction.~~

[B-2]

(54) The legislature finds that the federal clean water act (national pollutant discharge elimination system, 40 C.F.R. parts 122-124), the state water pollution control act, chapter 90.48 RCW, and the highway runoff program under chapter 90.71 RCW, mandate the treatment and control of storm water runoff from state highway rights-of-way owned by the department of transportation. Appropriations made by the legislature to the department of transportation for the construction, operation, and maintenance of storm water control facilities are intended to address applicable federal and state mandates related to storm water control and treatment. This section is not intended to limit opportunities for sharing the costs of storm water improvements between cities, counties, and the state.

Sec.____. [To add retroactivity clause]

B. MODEL (LOCAL) ORDINANCES

Model ordinances for both cost recovery options, with and without existing utilities, are provided below.

B.1. Cost Recovery Option A: Existing Utility; Modify Existing RCW Framework

[AN ORDINANCE of the City of _____, Washington, relating to the City's Storm and Surface Water Utility, and amending Section _____ of the _____ Municipal Code.

WHEREAS, The legislature provided at RCW 90.03.525 that the rate charged by a local government utility, such as the City Storm and Surface Water Utility, to the state department of transportation with respect to state highway right-of-way for storm water control facilities under chapters 35.67, 35.92, 36.89, 36.94, 57.08, and 86.15 RCW, shall be _____ percent of the City rate for comparable real property; and, that the _____ percent rate is presumptively fair and equitable because of the traditional and continuing expenditures of the department of transportation for the construction, operation, and maintenance of storm water control facilities designed to control surface water or storm water runoff from state highway rights-of-way; and

WHEREAS, the City has established and maintained the Storm and Surface Water Utility rate; and

WHEREAS, [add additional references and recitals]

THE CITY COUNCIL OF THE CITY OF _____, WASHINGTON, DOES HEREBY ORDAIN AS FOLLOWS:

Section 1. Chapter _____ of the _____ Municipal Code, is amended to read as follows:

_____._____._____ **Streets and roads charge.**

The monthly fee for city-owned right-of-way shall be [__] percent of the fee provided in _____

_____._____._____ **State highway charge.**

The monthly fee for state highway right-of-way shall be established pursuant to RCW 90.03.525, unless the city and state agree to a different rate.

_____._____._____ **Private streets and roads charge.**

The monthly fee for and for privately-owned roads constructed and maintained in accordance with City road standards, including required drainage infrastructure, shall be [__] percent of the fee provided in _____.

Section 2. This ordinance shall take effect and be in force five (5) days from its passage, approval, and publication as required by law.

PASSED by the City Council this _____ day of _____, 2012.

APPROVED by the Mayor this _____ day of _____, 2012.

B.2. Cost Recovery Option A: New Utility; Modify Existing RCW Framework

ORDINANCE NO. _____

An Ordinance Establishing a Stormwater Utility Fee

THE PEOPLE OF THE CITY OF _____, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. A new Chapter, XX.YY, is hereby added to Title XX of the _____ Municipal Code, to read as follows:

Chapter XX.YY

STORMWATER UTILITY FEES

Sections:

- XX.YY.010 Purpose
- XX.YY.020 Applicability
- XX.YY.030 Definitions
- XX.YY.040 Rate Structure
- XX.YY.050 Equivalent Service Unit
- XX.YY.060 Unit Rate Established
- XX.YY.070 Service Charge Adjustment and Appeals
- XX.YY.080 Use of Funds
- XX.YY.090 Commencement of Charges
- XX.YY.100 Delinquent Charges

XX.YY.010 Purpose. It is the purpose of this Chapter to provide revenue for a Stormwater Program to plan, manage, construct, maintain, use, and carry out activities related thereto, and to provide revenues by fixing rates and charges. There is hereby created an enterprise fund known as the "City of _____ Stormwater Fund". All fees and charges imposed herein shall be placed in said fund for the purpose of paying any and all expenses related to the acquisition, installation, addition, improvement, replacement, repair, maintenance, operation, or administration of Stormwater Program facilities and activities.

XX.YY.020 Applicability. The requirements of this Chapter shall apply to all parcels of real property in the City of _____, including publicly and privately owned property.

XX.YY.030 Definitions. Biofiltration means the use of vegetation, including grasses and wetland plants, to filter and treat stormwater runoff as it is conveyed through an open channel or swale.

City means the City of _____, Washington, or as indicated by the context, may mean any official, officer, employee or agency representing the City in the discharge of his or her duties.

City Roads means all roads, public and private, excluding State and County roads, in the City of _____.

Developed Parcel means a parcel of real property which has been altered by development coverage.

Drainage Facilities means the drainage systems comprised of stormwater control facilities and any other natural features which store, control, treat and / or convey storm and surface water. Storm drainage facilities shall include all natural and man-made elements used to convey storm water from the first point of impact with the surface of the earth to a suitable receiving body of water or location internal or external to the boundaries of the City. They include all pipes, appurtenant features, culvers, streets, curbs, gutters, pumping stations, channels, streams, ditches, wetlands, detention / retention basins, ponds, and other stormwater conveyance and treatment facilities whether or not the City shall have recorded rights-of-way or easements; it is presumed that the City has a prescriptive right of access to all storm drainage facilities for operation, maintenance, rehabilitation, or replacement.

Equivalent Service Unit (ESU) means a configuration of impervious surface estimated to contribute an amount of runoff to the City's stormwater management system which is approximately equal to that created by the average single family residential developed parcel in _____.

Impervious Surfaces means hard surfaced areas that prevent or hinder the entry of water into the soil mantle and/or cause water to run off the surface in greater quantities or at an increased rate of flow than under natural conditions. Common impervious surfaces include, but are not limited to, rooftops, concrete or asphalt roads, sidewalks and paving, walkways, patio areas, driveways, parking lots or storage areas and gravel, hard-packed dirt, oiled or other surfaces which similarly impede the natural infiltration of stormwater, or runoff patterns existent prior to development.

Manager means the Director of Public Works or designee.

Parcel means the smallest separately segregated unit or plot of land having an identified owner, boundaries, and surface area which constitutes a separate lot or tract capable of being conveyed without further subdivision.

Service Charges means the stormwater utility fee in an amount to be determined by applying the appropriate rate to a particular parcel of real property based upon factors established by this Chapter.

Single Family Residence means a residential structure accommodating one dwelling unit, including duplex units and mobile homes, as defined by the City of _____ land use codes.

Stormwater Control Facilities means all man-made structures or natural water course facility improvements, developments, properties or interest therein, made, constructed or acquired for the conveyance of storm or surface water runoff for the purpose of improving the quality of, controlling, or protecting life or property from any storm, flood or surplus waters.

Stormwater Program means the _____ Stormwater Utility as defined in this chapter.

Undeveloped Land means unimproved land and open space as defined by the City of _____ land use codes.

Undeveloped Parcel means any parcel of real property which has not been altered by construction of any improvement or other impervious surface area which affects the hydraulic properties of the parcel.

Unit Rate means the dollar amount charged per ESU.

XX.YY.040 Rate Structure. A. Service charges for the Stormwater Utility Fee are hereby authorized and imposed, in amounts and on terms consistent with this Chapter.

B. The rates and service charges shall be based on the service provided and the relative contribution of stormwater runoff from a given parcel to the stormwater control facilities. The

estimated or measured impervious surface area will be used to determine the relative contribution of stormwater runoff from the parcel.

Service charges shall be determined as follows:

1. Undeveloped Parcels – Undeveloped parcels shall not be charged.
2. **City Streets – City streets shall be charged in the same manner as other developed parcels OR City streets shall not be charged.**
3. **State Highways – State highways shall be charged in the same manner as other developed parcels, but as provided in RCW 90.03.525 state highways shall be charged XX-percent of the unit rate.**
4. **Private Roads and Right of Way – [Private roads and right of way shall be charged in the same manner as City streets]**
5. Single Family Residences – The monthly service charge for each single family residence shall be the unit rate for one equivalent service unit.
6. Other Developed Parcels – The monthly service charge for all other developed parcels, including publicly-owned properties, shall be computed by multiplying the unit rate times the number of equivalent service units applicable to the parcel minus any approved rate adjustment for the parcel as determined under Section XX.YY.070.
7. Minimum Charge – There shall be a minimum monthly service charge for all developed properties equal to the unit rate.

XX.YY.050 Equivalent Service Unit. One equivalent service unit is established at X,XXX square feet of impervious surface area. For the purpose of computation of service charges, the number of equivalent service units shall be rounded to the nearest tenth (0.10).

XX.YY.060 Unit Rate Established. The unit rate per equivalent service unit shall be established by resolution of the City Council.

XX.YY.070 Service Charge Adjustments and Appeals. A. Any person billed for service charges may file a “Request for Service Charge Adjustment” with the Manager within thirty (30) days of the date of the bill. However, submittal of such a request does not extend the period of payment for the charge.

B. A request for service charge adjustment may be granted or approved by the Manager only when one or more of the following conditions exist:

1. The amount charged is in error; however, no adjustment will be made unless the parcel is non-residential and the City's calculation of the impervious surface area on the parcel is shown to be in error by at least ten percent (10%), as demonstrated by a licensed surveyor or engineer;
2. The parcel exists in its natural unimproved condition and will remain in its natural unimproved condition with no allowable human activities or manmade improvements that adversely affect water quantity or quality; or
3. The parcel includes a constructed or natural on-site stormwater mitigation facility that meets all of the following conditions:
 - a. the constructed or natural facility provides storm or stormwater detention, retention, water quality treatment, and/or conveyance, ; and,
 - b. the Manager has determined that the property owner is capable of maintaining and operating the facility; and,
 - c. the facility is maintained by the property owner to the City’s design specifications; and,

- d. the facility is available for inspection by the City; and,
- e. excess capacity, if not used by the property owner, is accessible and available for other related public purposes; and
- f. the credit is revocable under conditions where the facility no longer operates at the design level established during the drainage plan review / approval process.

C. Credit Calculation. The amount to be credited shall be a fixed percentage reduction, based on the percentage of program costs directly related to managing surface water volumes. For water quantity migration, the formula is expressed mathematically as follows:

$$A = F \times _ \%$$

Where

A= the credit amount to be subtracted from the monthly fee;

F= the total monthly charge without credit;

For qualifying biofiltration, the formula is expressed mathematically as follows:

$$A = F \times _ \%$$

Where

A= The credit amount to be subtracted from the monthly fee; and

F= The total monthly charge without credit.

D. The following information may be required by the Manager to determine eligibility for a service charge credit:

- 1. approved drainage plan certified by a licensed and qualified professional;
- 2. calculation of the credit amount;
- 3. signature of the person responsible for the accuracy of the credit application material; and
- 4. other information, as required by the Manager, to determine that the property owner is willing and has the capacity to maintain the facility.

E. Service charge adjustments will only apply to the bill then due and payable, and bills subsequently issued. The property owner shall have the burden of proving that the service charge adjustment should be granted.

F. Decisions on requests for service charge adjustment shall be made by the Manager based on information submitted by the applicant and by the City within thirty (30) days of the adjustment request, except when additional information is needed. The applicant shall be notified in writing of the Manager's decision.

G. Decisions of the Manager on requests for service charge adjustments shall be final unless appealed to City Council within thirty (30) days of the date the decision.

XX.YY.080 Use of Funds. Service charges collected under this Chapter shall be deposited into the City of _____ Stormwater Utility Fund or funds to be used only for the purpose of paying all or any part of the cost and expense of maintaining and operating stormwater control facilities, all or any part of the cost and expense of planning, designing, establishing, acquiring, developing, constructing, maintaining and improving the Stormwater Program and drainage facilities.

XX.YY.090 Commencement of Charges. For new construction, service charges will commence with the issuance of a building permit, creation of an impervious surface area, or installation of a water meter, whichever comes first. For existing structures, service charges will commence on the effective date of the ordinance establishing this Chapter.

XX.YY.100 Delinquent Charges. Delinquent accounts shall be treated in the same manner as delinquent water service accounts under City Code Section _____.

Section 2. Effective Date. This ordinance shall become effective immediately.

Section 3. Severability. If any provision of this ordinance, or its application to any person or circumstances is held to be unconstitutional or invalid for any reason, the remainder of this ordinance or the application of the provisions to other persons or circumstances shall not be affected.

Passed by the Council this ____ day of _____, 20XX.

City Official

ATTEST:

Recorder

APPROVED AS TO FORM:

Attorney

APPROVED AS TO CONTENT:

City Official

B.3. Cost Recovery Option B: Existing Utility; Create New Statutory Framework

[AN **ORDINANCE** of the City of _____, Washington, relating to the City's Storm and Surface Water Utility, and amending Section _____ of the _____ Municipal Code.

WHEREAS, The legislature provided at RCW 90.03.525 that the rate charged by a local government utility, such as the City Storm and Surface Water Utility, to the state department of transportation with respect to state highway right-of-way for storm water control facilities under chapters 35.67, 35.92, 36.89, 36.94, 57.08, and 86.15 RCW, and, **that the rate** is presumptively fair and equitable because of the traditional and continuing expenditures of the department of transportation for the construction, operation, and maintenance of storm water control facilities designed to control surface water or storm water runoff from state highway rights-of-way; and

WHEREAS, the City has established and maintained the Storm and Surface Water Utility rate; and

WHEREAS, [add additional references and recitals]

THE CITY COUNCIL OF THE CITY OF _____, WASHINGTON, DOES HEREBY ORDAIN AS FOLLOWS:

Section 1. Chapter _____ of the _____ Municipal Code, is amended to read as follows:

_____._____._____ **Streets and roads charge.**

The monthly fee for city-owned right-of-way shall be [__] percent of the fee provided in _____

_____._____._____ **State highway charge.**

The monthly fee for state highway right-of-way shall be established pursuant to RCW 90.03.525, unless the city and state agree to a different rate.

_____._____._____ **Private streets and roads charge.**

The monthly fee for and for privately-owned roads constructed and maintained in accordance with City road standards, including required drainage infrastructure, shall be [__] percent of the fee provided in _____.

Section 2. This ordinance shall take effect and be in force five (5) days from its passage, approval, and publication as required by law.

PASSED by the City Council this _____ day of _____, 2012.

APPROVED by the Mayor this _____ day of _____, 2012.

B.4. Cost Recovery Option B: New Utility; Create New Statutory Framework

ORDINANCE NO. _____

An Ordinance Establishing a Stormwater Utility Fee

THE PEOPLE OF THE CITY OF _____, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. A new Chapter, XX.YY, is hereby added to Title XX of the _____ Municipal Code, to read as follows:

Chapter XX.YY

STORMWATER UTILITY FEES

Sections:

- XX.YY.010 Purpose
- XX.YY.020 Applicability
- XX.YY.030 Definitions
- XX.YY.040 Rate Structure
- XX.YY.050 Equivalent Service Unit
- XX.YY.060 Unit Rate Established
- XX.YY.070 Service Charge Adjustment and Appeals
- XX.YY.080 Use of Funds
- XX.YY.090 Commencement of Charges
- XX.YY.100 Delinquent Charges

XX.YY.010 Purpose. It is the purpose of this Chapter to provide revenue for a Stormwater Program to plan, manage, construct, maintain, use, and carry out activities related thereto, and to provide revenues by fixing rates and charges. There is hereby created an enterprise fund known as the "City of _____ Stormwater Fund". All fees and charges imposed herein shall be placed in said fund for the purpose of paying any and all expenses related to the acquisition, installation, addition, improvement, replacement, repair, maintenance, operation, or administration of Stormwater Program facilities and activities.

XX.YY.020 Applicability. The requirements of this Chapter shall apply to all parcels of real property in the City of _____, including publicly and privately owned property.

XX.YY.030 Definitions. Biofiltration means the use of vegetation, including grasses and wetland plants, to filter and treat stormwater runoff as it is conveyed through an open channel or swale.

City means the City of _____, Washington, or as indicated by the context, may mean any official, officer, employee or agency representing the City in the discharge of his or her duties.

City Roads means all roads, public and private, excluding State and County roads, in the City of _____.

Developed Parcel means a parcel of real property which has been altered by development coverage.

Drainage Facilities means the drainage systems comprised of stormwater control facilities and any other natural features which store, control, treat and / or convey storm and surface water. Storm drainage facilities shall include all natural and man-made elements used to convey storm water from the first point of impact with the surface of the earth to a suitable receiving body of water or location internal or external to the boundaries of the City. They include all pipes, appurtenant features, culvers, streets, curbs, gutters, pumping stations, channels, streams, ditches, wetlands, detention / retention basins, ponds, and other stormwater conveyance and treatment facilities whether or not the City shall have recorded rights-of-way or easements; it is presumed that the City has a prescriptive right of access to all storm drainage facilities for operation, maintenance, rehabilitation, or replacement.

Equivalent Service Unit (ESU) means a configuration of impervious surface estimated to contribute an amount of runoff to the City's stormwater management system which is approximately equal to that created by the average single family residential developed parcel in _____.

Impervious Surfaces means hard surfaced areas that prevent or hinder the entry of water into the soil mantle and/or cause water to run off the surface in greater quantities or at an increased rate of flow than under natural conditions. Common impervious surfaces include, but are not limited to, rooftops, concrete or asphalt roads, sidewalks and paving, walkways, patio areas, driveways, parking lots or storage areas and gravel, hard-packed dirt, oiled or other surfaces which similarly impede the natural infiltration of stormwater, or runoff patterns existent prior to development.

Manager means the Director of Public Works or designee.

Parcel means the smallest separately segregated unit or plot of land having an identified owner, boundaries, and surface area which constitutes a separate lot or tract capable of being conveyed without further subdivision.

Service Charges means the stormwater utility fee in an amount to be determined by applying the appropriate rate to a particular parcel of real property based upon factors established by this Chapter.

Single Family Residence means a residential structure accommodating one dwelling unit, including duplex units and mobile homes, as defined by the City of _____ land use codes.

Stormwater Control Facilities means all man-made structures or natural water course facility improvements, developments, properties or interest therein, made, constructed or acquired for the conveyance of storm or surface water runoff for the purpose of improving the quality of, controlling, or protecting life or property from any storm, flood or surplus waters.

Stormwater Program means the _____ Stormwater Utility as defined in this chapter.

Undeveloped Land means unimproved land and open space as defined by the City of _____ land use codes.

Undeveloped Parcel means any parcel of real property which has not been altered by construction of any improvement or other impervious surface area which affects the hydraulic properties of the parcel.

Unit Rate means the dollar amount charged per ESU.

XX.YY.040 Rate Structure. A. Service charges for the Stormwater Utility Fee are hereby authorized and imposed, in amounts and on terms consistent with this Chapter.

B. The rates and service charges shall be based on the service provided and the relative contribution of stormwater runoff from a given parcel to the stormwater control facilities. The

estimated or measured impervious surface area will be used to determine the relative contribution of stormwater runoff from the parcel.

Service charges shall be determined as follows:

1. Undeveloped Parcels – Undeveloped parcels shall not be charged.
2. **City Streets – City streets shall be charged in the same manner as other developed parcels OR City streets shall not be charged.**
3. **State Highways – State highways shall be charged as provided in RCW 90.03.525.**
4. **Private Roads and Right of Way – [Private roads and right of way shall be charged in the same manner as City streets]**
5. Single Family Residences – The monthly service charge for each single family residence shall be the unit rate for one equivalent service unit.
6. Other Developed Parcels – The monthly service charge for all other developed parcels, including publicly-owned properties, shall be computed by multiplying the unit rate times the number of equivalent service units applicable to the parcel minus any approved rate adjustment for the parcel as determined under Section XX.YY.070.
7. Minimum Charge – There shall be a minimum monthly service charge for all developed properties equal to the unit rate.

XX.YY.050 Equivalent Service Unit. One equivalent service unit is established at X,XXX square feet of impervious surface area. For the purpose of computation of service charges, the number of equivalent service units shall be rounded to the nearest tenth (0.10).

XX.YY.060 Unit Rate Established. The unit rate per equivalent service unit shall be established by resolution of the City Council.

XX.YY.070 Service Charge Adjustments and Appeals. A. Any person billed for service charges may file a “Request for Service Charge Adjustment” with the Manager within thirty (30) days of the date of the bill. However, submittal of such a request does not extend the period of payment for the charge.

B. A request for service charge adjustment may be granted or approved by the Manager only when one or more of the following conditions exist:

1. The amount charged is in error; however, no adjustment will be made unless the parcel is non-residential and the City's calculation of the impervious surface area on the parcel is shown to be in error by at least ten percent (10%), as demonstrated by a licensed surveyor or engineer;
2. The parcel exists in its natural unimproved condition and will remain in its natural unimproved condition with no allowable human activities or manmade improvements that adversely affect water quantity or quality; or
3. The parcel includes a constructed or natural on-site stormwater mitigation facility that meets all of the following conditions:
 - a. the constructed or natural facility provides storm or stormwater detention, retention, water quality treatment, and/or conveyance, ; and,
 - b. the Manager has determined that the property owner is capable of maintaining and operating the facility; and,
 - c. the facility is maintained by the property owner to the City's design specifications; and,
 - d. the facility is available for inspection by the City; and,

- e. excess capacity, if not used by the property owner, is accessible and available for other related public purposes; and
- f. the credit is revocable under conditions where the facility no longer operates at the design level established during the drainage plan review / approval process.

C. Credit Calculation. The amount to be credited shall be a fixed percentage reduction, based on the percentage of program costs directly related to managing surface water volumes. For water quantity migration, the formula is expressed mathematically as follows:

$$A = F \times _ \%$$

Where

A= the credit amount to be subtracted from the monthly fee;

F= the total monthly charge without credit;

For qualifying biofiltration, the formula is expressed mathematically as follows:

$$A = F \times _ \%$$

Where

A= The credit amount to be subtracted from the monthly fee; and

F= The total monthly charge without credit.

D. The following information may be required by the Manager to determine eligibility for a service charge credit:

1. approved drainage plan certified by a licensed and qualified professional;
2. calculation of the credit amount;
3. signature of the person responsible for the accuracy of the credit application material; and
4. other information, as required by the Manager, to determine that the property owner is willing and has the capacity to maintain the facility.

E. Service charge adjustments will only apply to the bill then due and payable, and bills subsequently issued. The property owner shall have the burden of proving that the service charge adjustment should be granted.

F. Decisions on requests for service charge adjustment shall be made by the Manager based on information submitted by the applicant and by the City within thirty (30) days of the adjustment request, except when additional information is needed. The applicant shall be notified in writing of the Manager's decision.

G. Decisions of the Manager on requests for service charge adjustments shall be final unless appealed to City Council within thirty (30) days of the date the decision.

XX.YY.080 Use of Funds. Service charges collected under this Chapter shall be deposited into the City of _____ Stormwater Utility Fund or funds to be used only for the purpose of paying all or any part of the cost and expense of maintaining and operating stormwater control facilities, all or any part of the cost and expense of planning, designing, establishing, acquiring, developing, constructing, maintaining and improving the Stormwater Program and drainage facilities.

XX.YY.090 Commencement of Charges. For new construction, service charges will commence with the issuance of a building permit, creation of an impervious surface area, or

installation of a water meter, whichever comes first. For existing structures, service charges will commence on the effective date of the ordinance establishing this Chapter.

XX.YY.100 Delinquent Charges. Delinquent accounts shall be treated in the same manner as delinquent water service accounts under City Code Section _____.

Section 2. Effective Date. This ordinance shall become effective immediately.

Section 3. Severability. If any provision of this ordinance, or its application to any person or circumstances is held to be unconstitutional or invalid for any reason, the remainder of this ordinance or the application of the provisions to other persons or circumstances shall not be affected.

Passed by the Council this ____ day of _____, 20XX.

City Official

ATTEST:

Recorder

APPROVED AS TO FORM:

Attorney

APPROVED AS TO CONTENT:

City Official

APPENDIX A

FULL TEXT OF RCW 90.03.525

RCW 90.03.525

Storm water control facilities — Imposition of rates and charges with respect to state highway rights-of-way — Annual plan for expenditure of charges.

(1) The rate charged by a local government utility to the department of transportation with respect to state highway right-of-way or any section of state highway right-of-way for the construction, operation, and maintenance of storm water control facilities under chapters 35.67, 35.92, 36.89, 36.94, 57.08, and 86.15 RCW, shall be thirty percent of the rate for comparable real property, except as otherwise provided in this section. The rate charged to the department with respect to state highway right-of-way or any section of state highway right-of-way within a local government utility's jurisdiction shall not, however, exceed the rate charged for comparable city street or county road right-of-way within the same jurisdiction. The legislature finds that the aforesaid rates are presumptively fair and equitable because of the traditional and continuing expenditures of the department of transportation for the construction, operation, and maintenance of storm water control facilities designed to control surface water or storm water runoff from state highway rights-of-way.

(2) Charges paid under subsection (1) of this section by the department of transportation must be used solely for storm water control facilities that directly reduce state highway runoff impacts or implementation of best management practices that will reduce the need for such facilities. By January 1st of each year, beginning with calendar year 1997, the local government utility, in coordination with the department, shall develop a plan for the expenditure of the charges for that calendar year. The plan must be consistent with the objectives identified in *RCW 90.78.010. In addition, beginning with the submittal for 1998, the utility shall provide a progress report on the use of charges assessed for the prior year. No charges may be paid until the plan and report have been submitted to the department.

(3) The utility imposing the charge and the department of transportation may, however, agree to either higher or lower rates with respect to the construction, operation, or maintenance of any specific storm water control facilities based upon the annual plan prescribed in subsection (2) of this section. If, after mediation, the local government utility and the department of transportation cannot agree upon the proper rate, either may commence an action in the superior court for the county in which the state highway right-of-way is located to establish the proper rate. The court in establishing the proper rate shall take into account the extent and adequacy of storm water control facilities constructed by the department and the actual benefits to the sections of state highway rights-of-way from storm water control facilities constructed, operated, and maintained by the local government utility. Control of surface water runoff and storm water runoff from state highway rights-of-way shall be deemed an actual benefit to the state highway rights-of-way. The rate for sections of state highway right-of-way as determined by the court shall be set forth in terms of the percentage of the rate for comparable real property, but shall in no event exceed the rate charged for comparable city street or county road right-of-way within the same jurisdiction.

(4) The legislature finds that the federal clean water act (national pollutant discharge elimination system, 40 C.F.R. parts 122-124), the state water pollution control act, chapter 90.48 RCW, and the highway runoff program under chapter 90.71 RCW, mandate the treatment and control of storm water runoff from state highway rights-of-way owned by the department of transportation. Appropriations made by the legislature to the department of transportation for the construction, operation, and maintenance of storm water control facilities are intended to address applicable federal and state mandates related to storm water control and treatment. This section is not intended to limit opportunities for sharing the costs of storm water improvements between cities, counties, and the state.

APPENDIX B

INVENTORY OF STATE HIGHWAYS

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Aberdeen	X		105	1.93	X
Aberdeen	X		12	2.11	X
Aberdeen	X		101	6.57	X
Airway Heights			2	2	
Algona	X	X	167	1.34	X
Almira			2	0.6	
Anacortes	X		20	10.07	X
Arlington	X	X	5	1.53	X
Arlington	X		530	0.47	X
Arlington	X		9	2.68	X
Arlington	X		531	2.99	X
Asotin	X		129	1.52	X
Auburn	X	X	167	3.66	X
Auburn	X	X	18	4.31	X
Auburn	X		164	4.4	X
Bainbridge Island	X	X	305	6.8	X
Battle Ground	X		502	1.52	X
Battle Ground	X		503	3.65	X
Bellevue	X	X	520	3.58	X
Bellevue	X	X	90	5.81	X
Bellevue	X	X	405	7.8	X
Bellingham	X	X	5	8.32	X
Bellingham	X		542	1.75	X
Bellingham	X		539	2.4	X
Bellingham	X		11	3.29	X
Benton City			224	0.13	
Benton City			82	0.52	
Benton City			225	2.69	
Bingen			141	0.27	
Bingen			14	1.38	
Black Diamond	X		169	2.34	X
Blaine		X	543	1.03	
Blaine		X	5	2.37	
Blaine			548	2.27	
Bonney Lake	X		410	4.18	X
Bothell	X	X	522	3.03	X
Bothell	X	X	527	3.75	X
Bothell	X	X	405	5.16	X
Bothell	X		524	1.92	X
Bremerton	X		310	1.84	X
Bremerton	X		304	2.66	X
Bremerton	X		303	2.91	X
Bremerton	X		3	5.51	X
Brewster			173	1.19	

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Brewster			97	1.35	
Bridgeport			17	0.34	
Bridgeport			173	2.04	
Buckley	X		165	0.5	X
Buckley	X		410	2.4	X
Bucoda			507	0.79	
Burien	X	X	509	4.03	X
Burien	X		518	0.6	X
Burlington	X	X	5	2.08	X
Burlington	X		20	2.32	X
Camas	X	X	14	3.95	X
Camas	X		500	3.51	X
Carbonado			165	0.21	X
Carnation			203	1.02	X
Cashmere			2	0.57	
Castle Rock		X	5	1.18	
Castle Rock			504	0.51	
Castle Rock			411	0.9	
Cathlamet			409	0.77	
Cathlamet			4	1.03	
Centralia	X	X	5	1.84	
Centralia	X		507	5.48	
Chehalis		X	5	3.7	
Chehalis			6	0.37	
Chelan			97	4.31	
Chelan			150	4.46	
Cheney			904	3.41	
Chewelah			395	1.02	
Clarkston	X		12	1.57	X
Clarkston	X		129	1.73	X
Cle Elum		X	90	1.14	
Cle Elum			903	1.88	
Clyde Hill	X	X	520	0.43	X
Colfax		X	195	2.29	
Colfax			272	0.15	
Colfax			26	0.35	
College Place			125	0.92	
Colton			195	0.78	
Colville			20	1.2	
Colville			395	2.61	
Concrete			20	1.61	X
Connell			395	2.44	
Connell			260	5.49	
Cosmopolis			101	1.24	

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Coulee City			2	0.41	
Coulee Dam			155	1.53	
Coupeville			20	0.26	
Covington	X	X	18	1.95	X
Covington	X	X	516	3.29	X
Creston			2	0.55	
Cusick			20	0.04	
Darrington			530	1.79	X
Davenport			25	0.17	
Davenport			28	0.81	
Davenport			2	1.01	
Dayton			12	1.38	
Deer Park			395	0.07	
Des Moines	X		99	1.03	X
Des Moines	X		509	1.11	X
Des Moines	X		516	1.56	X
Dupont		X	5		X
Duvall	X		203	1.27	X
East Wenatchee	X		28	2.97	X
Eatonville			161	1.59	X
Edgewood	X		161	3.34	X
Edmonds	X		99	2.36	X
Edmonds	X		524	3.37	X
Edmonds	X		104	3.56	X
Electric City			155	2.83	
Ellensburg	X	X	90	0.15	
Ellensburg	X		97	0.64	
Elma		X	12	1.44	
Elma			8	0.48	
Elmer City			155	0.68	
Entiat			97	2.86	
Enumclaw	X		169	0.85	X
Enumclaw	X		164	1.56	X
Enumclaw	X		410	3.26	X
Ephrata			282	0.4	
Ephrata			28	4.57	
Everett	X	X	527	3.06	X
Everett	X	X	526	3.61	X
Everett	X	X	5	8.7	X
Everett	X		2	0.44	X
Everett	X		99	3.13	X
Everett	X		529	6.9	X
Everson			544	2.12	
Fairfield			27	0.76	

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Federal Way	X	X	18	1.94	X
Federal Way	X	X	5	6.71	X
Federal Way	X		161	0.8	X
Federal Way	X		509	6.41	X
Federal Way	X		99	6.77	X
Ferndale	X	X	5	4.71	
Fife	X	X	5	2.8	X
Fife	X		99	0.86	X
Forks			110	0.16	
Forks			101	3.62	
Garfield			27	1.04	
George		X	90	0.68	
George			281	0.62	
Gig Harbor	X	X	16	5.31	X
Gig Harbor	X		302	0.24	X
Gold Bar			2	2.08	
Goldendale			97	0.26	
Goldendale			142	1.51	
Grand Coulee			155	1.05	
Grand Coulee			174	2.3	
Grandview			82	1.38	
Granger		X	82	0.38	
Granger			223	0.96	
Granite Falls	X		92	0.79	X
Hamilton			20	0.54	
Harrington			28	0.66	
Harrington			23	0.7	
Hoquiam			109	5.31	
Hoquiam			101	5.48	
Hunts Point		X	520	0.5	X
Ilwaco			100	0.89	
Ilwaco			101	1.27	
Ione			31	0.72	
Issaquah	X	X	900	2	X
Issaquah	X	X	90	5.46	X
Kahlotus			21	0.25	
Kahlotus			263	0.41	
Kahlotus			260	0.74	
Kalama		X	5	1.04	X
Kelso	X	X	5	6.03	X
Kelso	X		411	0.54	X
Kelso	X		432	0.64	X
Kelso	X		4	1.69	X
Kenmore	X		522	2.02	X

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Kennewick	X	X	240	3.53	X
Kennewick	X	X	395	5.43	X
Kennewick	X		397	1.73	X
Kent	X	X	5	2.72	X
Kent	X	X	167	6.47	X
Kent	X	X	516	9.08	X
Kent	X		99	2.57	X
Kent	X		515	4.09	X
Kent	X		181	4.43	X
Kettle Falls			395	1.11	
Kirkland	X	X	405	5.07	X
Lacey	X	X	5	4.1	X
Lacey	X		510	0.7	X
Lake Forest Park	X		104	1.73	X
Lake Forest Park	X		522	1.98	X
Lake Stevens	X	X	9	3.97	X
Lake Stevens	X		204	1.84	X
Lake Stevens	X		92	2.37	X
Lakewood	X	X	5	6	X
Lakewood	X		512	0.61	X
Latah			27	0.8	
Leavenworth			2	1.24	
Liberty Lake		X	90	2.84	
Lind			21	1.37	
Long Beach			103	2.37	
Longview	X		433	0.07	X
Longview	X		411	1.97	X
Longview	X		432	2.96	X
Longview	X		4	4.43	X
Lyman			20	0.39	
Lynden			546	0.78	
Lynden			539	1.21	
Lynnwood	X	X	5	2.28	X
Lynnwood	X	X	524	3.98	X
Lynnwood	X		99	3.26	X
Mabton			241	0.51	
Mabton			22	0.75	
Mansfield			172	0.98	
Maple Valley	X		516	1.8	X
Maple Valley	X		169	3.93	X
Marcus			25	0.85	
Marysville	X	X	5	0.95	X
Marysville	X	X	531	1.12	X
Marysville	X	X	528	3.43	X

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Marysville	X		529	0.35	X
McCleary		X	8	1.51	
McCleary			108	2.21	
Medical Lake			902	3.36	
Medina	X	X	520	1.27	X
Mercer Island	X	X	90	7.32	X
Mesa		X	395	0.92	
Mesa			17	1.51	
Metaline			31	1.1	
Metaline Falls			31	0.31	
Mill Creek	X		96	2.55	X
Mill Creek	X		527	2.9	X
Milton	X	X	5	1.13	X
Milton	X		161	0.39	X
Milton	X		99	0.87	X
Monroe	X		203	0.91	X
Monroe	X		522	1.87	X
Monroe	X		2	2.32	X
Montesano			107	0.59	
Montesano			12	1.16	
Morton			12	0.14	
Morton			7	0.62	
Morton			508	1.05	
Moses Lake	X	X	90	6.07	
Moses Lake	X		171	3.79	
Moses Lake	X		17	6.18	
Mossyrock			122	0.09	
Mossyrock			12	1.09	
Mount Vernon	X	X	5	4.27	X
Mount Vernon	X		536	1.25	X
Mount Vernon	X		538	3.22	X
Mountlake Terrace	X	X	5	2.15	X
Mountlake Terrace		X	104		X
Moxee			24	0.54	X
Mukilteo	X		526	0.65	X
Mukilteo	X		525	5.22	X
Naches			12	1.8	
Napavine		X	5	1.75	
Napavine			508	0.41	
Nespelem			155	0.06	
Newport			41	0.41	
Newport			20	0.42	
Newport			2	2.24	
Nooksack			544	0.31	

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Nooksack			9	1.17	
Normandy Park	X		509	2.72	X
North Bend		X	90	0.92	X
North Bend			202	2.32	X
North Bonneville			14	3.78	
Northport			25	0.89	
Oak Harbor	X		20	4.03	X
Oakesdale			271	0.22	
Oakesdale			27	1.18	
Oakville			12	0.58	
Odessa			21	1.09	
Odessa			28	1.11	
Okanogan			20	0.28	
Okanogan			215	3.33	
Olympia	X	X	101	2.81	X
Olympia	X	X	5	3.57	X
Omak			97	0.67	
Omak			155	1.27	
Omak			215	2.41	
Oroville			97	1.52	
Orting	X		162	2.28	X
Othello			17	0.66	
Othello			24	0.94	
Othello			26	1.55	
Pacific	X	X	167	2.22	X
Palouse			272	1.09	
Palouse			27	1.18	
Pasco	X	X	395	4.47	X
Pasco	X	X	182	9.15	X
Pasco	X		12	1.54	X
Pasco	X		397	3.99	X
Pateros			97	0.92	
Pe Ell			6	0.88	
Pomeroy			12	2.89	
Port Angeles	X		117	1.4	X
Port Angeles	X		101	6.68	X
Port Orchard	X	X	16	2.11	X
Port Orchard	X		160	1.03	X
Port Orchard	X		166	4.58	X
Port Townsend			20	2.78	
Poulsbo	X	X	305	2.76	X
Poulsbo	X		307	0.09	X
Poulsbo	X		3	0.7	X
Prescott			124	0.75	

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Prosser			82	0.22	
Prosser			221	0.59	
Prosser			22	3.03	
Pullman	X		27	3.92	
Pullman	X		270	5.12	
Puyallup	X	X	167	2.01	X
Puyallup	X		161	1.62	X
Puyallup	X		512	3.51	X
Quincy			281	1.29	
Quincy			28	2.76	
Rainier			507	1.11	
Raymond			105	0.56	
Raymond			6	1.37	
Raymond			101	3.9	
Reardan			231	0.33	
Reardan			2	0.98	
Redmond	X	X	520	3.64	X
Redmond	X	X	202	4.86	X
Renton	X	X	167	2.85	X
Renton	X	X	405	6.77	X
Renton	X		515	3.77	X
Renton	X		169	3.98	X
Renton	X		900	6.84	X
Republic			21	0.21	
Republic			20	1.42	
Richland	X	X	182	5.04	X
Richland	X	X	240	14.3	X
Richland	X		224	1.53	X
Ridgefield		X	5	1.57	X
Ridgefield			501	2.97	X
Riverside			97	1.29	
Rock Island			28	1.25	X
Rockford			27	0.31	
Rockford			278	1.09	
Roslyn			903	1.57	
Roy			507	1.5	X
Ruston			163	0.23	X
Sammamish	X		202	0.14	X
Sea Tac	X	X	509	1.2	X
Sea Tac	X	X	518	1.52	X
Sea Tac	X	X	5	3.69	X
Sea Tac	X		99	3.91	X
Seattle	X	X	509	1.67	X
Seattle	X	X	520	3.07	X

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Seattle	X	X	90	6.23	X
Seattle	X	X	5	23.54	X
Seattle	X		900	0.15	X
Seattle	X		519	1.14	X
Seattle	X		523	2.45	X
Seattle	X		513	3.35	X
Seattle	X		522	4.23	X
Seattle	X		99	17.37	X
Sedro Woolley	X		9	1.64	
Sedro Woolley	X		20	2.56	
Selah	X	X	823	1.87	
Sequim		X	101	3.61	
Shelton		X	101	1.27	X
Shelton			3	2	X
Shoreline	X		104	0.71	X
Shoreline	X		99	3.01	X
Shoreline		X	5	3.18	X
Skykomish			2	0.51	X
Skykomish			9	2.14	X
Snoqualmie			202	2.72	X
Soap Lake			28	0.21	
Soap Lake			17	1.01	
South Bend			101	2.76	
South Prairie			162	0.53	X
Spokane	X	X	195	4.81	X
Spokane	X	X	90	6.45	X
Spokane	X		395	0.46	X
Spokane	X		290	4.24	X
Spokane	X		291	4.6	X
Spokane	X		2	9.13	X
Spokane Valley	X	X	27	4.56	X
Spokane Valley	X	X	90	10.11	X
Spokane Valley	X		290	8.53	X
Sprague		X	90	0.17	
Sprague			23	0.79	
Springdale			292	0.27	
Springdale			231	1.53	
St John			23	0.82	
Stanwood			532	2.4	
Starbuck			261	0.2	
Stevenson			14	0.75	
Sultan			2	3.02	X
Sumas			547	0.48	
Sumas			9	1.16	

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Sumner	X	X	410	2.25	X
Sumner	X	X	167	2.76	X
Sumner	X		162	0.53	X
Sunnyside	X	X	82	2.02	
Sunnyside	X		241	1.61	
Tacoma	X	X	16	5.21	X
Tacoma	X	X	5	6.27	X
Tacoma	X		167	0.76	X
Tacoma	X		705	1.5	X
Tacoma	X		163	3.14	X
Tacoma	X		7	5.09	X
Tacoma	X		509	9	X
Tekoa			274	0.45	
Tekoa			27	1.33	
Tenino			507	2.34	
Toledo			505	0.7	
Tonasket			20	0.45	
Tonasket			97	0.69	
Toppenish			22	2.24	
Tukwila	X	X	405	1.19	X
Tukwila	X	X	5	6.49	X
Tukwila	X		900	0.9	X
Tukwila	X		99	1.2	X
Tukwila	X		518	1.3	X
Tukwila	X		181	1.62	X
Tukwila	X		599	1.75	X
Tumwater	X	X	101	0.5	X
Tumwater	X	X	5	4.04	X
Tumwater	X		121	0.31	X
Twisp			20	2.12	
Union Gap	X	X	82	0.67	X
Uniontown			195	1.1	
Vader			506	0.74	
Vancouver	X	X	5	3.39	X
Vancouver	X	X	205	4.66	X
Vancouver	X	X	500	5.66	X
Vancouver	X	X	14	10.39	X
Vancouver	X		501	8.43	X
Waitsburg			124	0.48	
Waitsburg			12	1.3	
Walla Walla	X		12	3.13	X
Walla Walla	X		125	4.26	X
Wapato			97	0.64	
Warden			170	1.14	

City	NPDES Permittee Phase I or II	Limited Access Highway?	State Route Number	Highway miles	WSDOT Permit Coverage?
Washougal	X	X	14	3.33	
Washtucna			261	0.45	
Washtucna			26	0.77	
Washtucna			260	0.97	
Waterville			2	1.45	
Wenatchee	X		285	5.86	X
West Richland	X		224	3.66	X
Westport			105	2.94	
White Salmon			14	1.09	
White Salmon			141	1.43	
Wilbur			21	0.43	
Wilbur			2	1.02	
Wilkeson			165	0.69	X
Winlock			505	1.35	
Winthrop			20	1.76	
Woodinville	X		522	1.8	X
Woodinville	X		202	2.81	X
Woodland		X	5	1.94	X
Woodland			503	2.07	X
Woodway			104	0.14	X
Yakima	X	X	823	0.34	X
Yakima	X	X	12	3.27	X
Yakima	X	X	82	4.61	X
Yakima	X		24	0.63	X
Yarrow Point		X	520	0.33	X
Yelm			510	1.7	X
Yelm			507	1.91	X
Zillah			82	0.67	
				1107.84	

BMPType	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
BIOSWALE	Bio-Swales	520	Bellevue	King	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	520	Bellevue	King	X		X	
Pond	Stormwater Ponds	520	Bellevue	King	X		X	
Stormwater Pond	Stormwater Ponds	520	Bellevue	King	X		X	
Compost Amended Vegetated Filtration	Vegetated Roadside Filter Strips	5	Bellingham	Whatcom	X	X		
Compost Amended Vegetated Filtration	Vegetated Roadside Filter Strips	5	Bellingham	Whatcom	X	X		
Compost Amended Vegetated Filtration	Vegetated Roadside Filter Strips	5	Bellingham	Whatcom	X	X		
Compost Amended Vegetated Filtration	Vegetated Roadside Filter Strips	5	Bellingham	Whatcom	X	X		
Compost Amended Vegetated Filtration	Vegetated Roadside Filter Strips	5	Bellingham	Whatcom	X	X		
Stormwater Pond	Stormwater Ponds	5	Bellingham	Whatcom	X	X		
Stormwater Pond	Stormwater Ponds	5	Bellingham	Whatcom	X	X		
Stormwater Pond	Stormwater Ponds	5	Bellingham	Whatcom	X	X		
Swale	Bio-Swales	5	Bellingham	Whatcom	X	X		
Swale	Bio-Swales	5	Bellingham	Whatcom	X	X		
Stormwater Pond	Stormwater Ponds	5	Bellingham	Whatcom	X	X		
Biofiltration swale	Bio-Swales	5	Blaine	Whatcom		X		
Biofiltration swale	Bio-Swales	5	Blaine	Whatcom		X		
Stormwater Pond	Stormwater Ponds	5	Blaine	Whatcom		X		
Stormwater Pond	Stormwater Ponds	5	Blaine	Whatcom		X		
Stormwater Pond	Stormwater Ponds	543	Blaine	Whatcom		X		
Stormwater Pond	Stormwater Ponds	543	Blaine	Whatcom		X		
Detention Pond	Stormwater Ponds	543	Blaine	Whatcom		X		
Detention Pond	Stormwater Ponds	543	Blaine	Whatcom		X		
Filter Strip	Vegetated Roadside Filter Strips	543	Blaine	Whatcom		X		
Filter Strip	Vegetated Roadside Filter Strips	543	Blaine	Whatcom		X		
Detention Pond	Stormwater Ponds	543	Blaine	Whatcom		X		
Biofiltration Swale (RT.04)	Bio-Swales	543	Blaine	Whatcom		X		
Detention Pond	Stormwater Ponds	543	Blaine	Whatcom		X		
Biofiltration Swale (RT.04)	Bio-Swales	543	Blaine	Whatcom		X		
Retention/ Detention Pond	Stormwater Ponds	543	Blaine	Whatcom		X		
Retention/ Detention Pond	Stormwater Ponds	543	Blaine	Whatcom		X		
Media Filter Drain	Media Filter Drain	405	Bothell	King	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	King	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	King	X		X	
Detention Tank	Stormwater Vaults	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Detention Tank	Stormwater Vaults	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	405	Bothell	Snohomish	X		X	
Stormwater treatment wetland/ d	Stormwater Ponds	405	Bothell	Snohomish	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	405	Bothell	Snohomish	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	405	Bothell	Snohomish	X		X	
SWALE	Bio-Swales	405	Bothell	Snohomish	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	405	Bothell	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	405	Bothell	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Bothell	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Bothell	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	405	Bothell	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	405	Bothell	Snohomish	X		X	
POND	Stormwater Ponds	405	Bothell	Snohomish	X		X	
Stormwater Weland	Stormwater Ponds	522	Bothell	King	X		X	
Vault	Stormwater Vaults	522	Bothell	King	X		X	
Stormwater Pond	Stormwater Ponds	527	Bothell	Snohomish	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	527	Bothell	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	509	Burien	King	X		X	
Stormwater Pond	Stormwater Ponds	509	Burien	King	X		X	
Stormwater Pond	Stormwater Ponds	509	Burien	King	X		X	

BMPType	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
Stormwater Pond	Stormwater Ponds	509	Burien	King	X		X	
Stormwater Pond	Stormwater Ponds	509	Burien	King	X		X	
Stormwater Pond	Stormwater Ponds	509	Burien	King	X		X	
Stormwater Pond	Stormwater Ponds	509	Burien	King	X		X	
Stormwater Pond	Stormwater Ponds	509	Burien	King	X		X	
Stormwater Pond	Stormwater Ponds	509	Burien	King	X		X	
Filter Strip	Vegetated Roadside Filter Strips	5	Burlington	Skagit	X	X		
Filter Strip	Vegetated Roadside Filter Strips	5	Burlington	Skagit	X	X		
Unknown Possible Drywell	Drywells	195	Colfax	Whitman				
Unknown Possible Drywell	Drywells	195	Colfax	Whitman				
N/A	Flow Restrictor Oil/Water Sep	195	Colfax	Whitman				
N/A	Flow Restrictor Oil/Water Sep	195	Colfax	Whitman				
N/A	Flow Restrictor Oil/Water Sep	195	Colfax	Whitman				
SWALE	Bio-Swales	18	Covington	King	X		X	
Stormwater Pond	Stormwater Ponds	18	Covington	King	X		X	
Stormwater Pond	Stormwater Ponds	18	Covington	King	X		X	
Stormwater Pond	Stormwater Ponds	18	Covington	King	X		X	
Stormwater Pond	Stormwater Ponds	18	Covington	King	X		X	
Stormwater Pond	Stormwater Ponds	18	Covington	King	X		X	
Stormwater Pond	Stormwater Ponds	516	Covington	King	X		X	
Infiltration Pond	Stormwater Ponds	5	DuPont	Pierce	X		X	
POND	Stormwater Ponds	12	Elma	Grays Harbor				
POND	Stormwater Ponds	12	Elma	Grays Harbor				
POND	Stormwater Ponds	12	Elma	Grays Harbor				
POND	Stormwater Ponds	12	Elma	Grays Harbor				
Detention Pond	Stormwater Ponds	5	Everett	Snohomish	X		X	
Detention Pond	Stormwater Ponds	5	Everett	Snohomish	X		X	
Swale	Bio-Swales	5	Everett	Snohomish	X		X	
Swale	Bio-Swales	5	Everett	Snohomish	X		X	
Swale	Bio-Swales	5	Everett	Snohomish	X		X	
Swale	Bio-Swales	5	Everett	Snohomish	X		X	
Swale	Bio-Swales	5	Everett	Snohomish	X		X	
Vault	Stormwater Vaults	5	Everett	Snohomish	X		X	
Swale	Bio-Swales	5	Everett	Snohomish	X		X	
Ecology Ditch	Media Filter Drain	5	Everett	Snohomish	X		X	
Swale	Bio-Swales	5	Everett	Snohomish	X		X	
Detention Pond	Stormwater Ponds	5	Everett	Snohomish	X		X	
Wet Detention Pond	Stormwater Ponds	5	Everett	Snohomish	X		X	
Swale	Bio-Swales	5	Everett	Snohomish	X		X	
Detention Vualt	Stormwater Vaults	5	Everett	Snohomish	X		X	
Biofiltration Swale (RT.04)	Bio-Swales	5	Everett	Snohomish	X		X	
Wet Detention Pond	Stormwater Ponds	5	Everett	Snohomish	X		X	
Wet Detention Pond	Stormwater Ponds	5	Everett	Snohomish	X		X	
Wet Detention Pond	Stormwater Ponds	5	Everett	Snohomish	X		X	
POND	Stormwater Ponds	5	Everett	Snohomish	X		X	
Swale	Bio-Swales	526	Everett	Snohomish	X		X	
Pond	Stormwater Ponds	526	Everett	Snohomish	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	526	Everett	Snohomish	X		X	
Swale	Bio-Swales	526	Everett	Snohomish	X		X	
Swale	Bio-Swales	526	Everett	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	527	Everett	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	527	Everett	Snohomish	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	527	Everett	Snohomish	X		X	
Detention Pond	Stormwater Ponds	527	Everett	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	527	Everett	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	5	Federal Way	King	X		X	
Stormwater Pond	Stormwater Ponds	5	Federal Way	King	X		X	
Stormwater Pond	Stormwater Ponds	5	Federal Way	King	X		X	
Stormwater Pond	Stormwater Ponds	5	Federal Way	King	X		X	
Vault	Stormwater Vaults	5	Federal Way	King	X		X	
Detention/Water Quality Pond	Stormwater Ponds	5	Federal Way	King	X		X	
Detention/Water Quality Pond	Stormwater Ponds	5	Federal Way	King	X		X	
Bioswale	Bio-Swales	5	Federal Way	King	X		X	
Detention/Water Quality Pond	Stormwater Ponds	5	Federal Way	King	X		X	
Detention/Water Quality Pond	Stormwater Ponds	5	Federal Way	King	X		X	
Detention/Water Quality Pond	Stormwater Ponds	5	Federal Way	King	X		X	

BMPType	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
Swale	Bio-Swales	5	Federal Way	King	X		X	
Swale	Bio-Swales	5	Federal Way	King	X		X	
Swale	Bio-Swales	5	Federal Way	King	X		X	
Detention Pond	Stormwater Ponds	161	Federal Way	King	X			X
Swale	Bio-Swales	5	Ferndale	Whatcom	X	X		
Swale	Bio-Swales	5	Ferndale	Whatcom	X	X		
Swale	Bio-Swales	5	Ferndale	Whatcom	X	X		
Detention Pond	Stormwater Ponds	5	Ferndale	Whatcom	X	X		
PONDS	Stormwater Ponds	16	Gig Harbor	Pierce	X			X
PONDS	Stormwater Ponds	16	Gig Harbor	Pierce	X			X
2-cell pond	Stormwater Ponds	90	Issaquah	King	X			X
Stormwater Pond	Stormwater Ponds	90	Issaquah	King	X			X
Stormwater Pond	Stormwater Ponds	90	Issaquah	King	X			X
Stormwater Pond	Stormwater Ponds	90	Issaquah	King	X			X
N/A	Stormwater Ponds	90	Issaquah	King	X			X
Stormwater Pond	Stormwater Ponds	90	Issaquah	King	X			X
Stormwater Pond	Stormwater Ponds	900	Issaquah	King	X			X
Detention Pond	Stormwater Ponds	240	Kennewick	Benton	X			
Detention Pond	Stormwater Ponds	240	Kennewick	Benton	X			
Infiltration Basin	Stormwater Ponds	240	Kennewick	Benton	X			
Drywell	Drywells	395	Kennewick	Benton	X			
Stormwater Pond	Stormwater Ponds	5	Kent	King	X			X
Ecology Ditch	Media Filter Drain	167	Kent	King	X			X
Ecology Ditch	Media Filter Drain	167	Kent	King	X			X
POND	Stormwater Ponds	167	Kent	King	X			X
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	167	Kent	King	X			X
Detention Pond	Stormwater Ponds	167	Kent	King	X			X
Stormwater Pond	Stormwater Ponds	516	Kent	King	X			X
POND	Stormwater Ponds	516	Kent	King	X			X
Stormwater Pond	Stormwater Ponds	516	Kent	King	X			X
Ecology Embankment	Media Filter Drain	405	Kirkland	King	X			X
Ecology Embankment	Media Filter Drain	405	Kirkland	King	X			X
Ecology Embankment	Media Filter Drain	405	Kirkland	King	X			X
Ecology Embankment	Media Filter Drain	405	Kirkland	King	X			X
Ecology Embankment	Media Filter Drain	405	Kirkland	King	X			X
Detention Pond	Stormwater Ponds	405	Kirkland	King	X			X
Ecology Embankment	Media Filter Drain	405	Kirkland	King	X			X
Detention Tank (Detention Vault)	Stormwater Vaults	405	Kirkland	King	X			X
Ecology Embankment	Media Filter Drain	405	Kirkland	King	X			X
Ecology Embankment	Media Filter Drain	405	Kirkland	King	X			X
Ecology Embankment	Media Filter Drain	405	Kirkland	King	X			X
Detention Pond	Stormwater Ponds	405	Kirkland	King	X			X
POND	Stormwater Ponds	405	Kirkland	King	X			X
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	405	Kirkland	King	X			X
Swale	Bio-Swales	405	Kirkland	King	X			X
Detention Pond	Stormwater Ponds	405	Kirkland	King	X			X
Ecology Embankment	Media Filter Drain	405	Kirkland	King	X			X
Combined detention/Constructed	Stormwater Ponds	9	Lake Stevens	Snohomish	X			X
Drywell	Drywells	90	Liberty Lake	Spokane		X		
Drywell	Drywells	90	Liberty Lake	Spokane		X		
Drywell	Drywells	90	Liberty Lake	Spokane		X		
Swale	Bio-Swales	90	Liberty Lake	Spokane		X		
Swale	Bio-Swales	90	Liberty Lake	Spokane		X		
Infiltration Pond	Stormwater Ponds	90	Liberty Lake	Spokane		X		
Swale	Bio-Swales	90	Liberty Lake	Spokane		X		
Dry Well	Drywells	90	Liberty Lake	Spokane		X		
Infiltration Pond	Stormwater Ponds	90	Liberty Lake	Spokane		X		
BioSwale	Bio-Swales	90	Liberty Lake	Spokane		X		
Infiltration Pond IN.02	Stormwater Ponds	90	Liberty Lake	Spokane		X		
Infiltration Pond IN.02	Stormwater Ponds	90	Liberty Lake	Spokane		X		
Swale	Bio-Swales	90	Liberty Lake	Spokane		X		
Detention Pond	Stormwater Ponds	5	Lynnwood	Snohomish	X			X
Swale	Bio-Swales	5	Lynnwood	Snohomish	X			X
Detention Pond	Stormwater Ponds	5	Lynnwood	Snohomish	X			X
Ecology Ditch	Media Filter Drain	5	Lynnwood	Snohomish	X			X

BMPType	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
Detention Pond	Stormwater Ponds	5	Lynnwood	Snohomish	X		X	
Detention Pond	Stormwater Ponds	5	Lynnwood	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	5	Lynnwood	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	5	Lynnwood	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	5	Lynnwood	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	5	Lynnwood	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	5	Lynnwood	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	5	Lynnwood	Snohomish	X		X	
Swake	Bio-Swales	5	Lynnwood	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	524	Lynnwood	Snohomish	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	524	Lynnwood	Snohomish	X		X	
DETENTION VAULT	Stormwater Vaults	524	Lynnwood	Snohomish	X		X	
DETENTION VAULT	Stormwater Vaults	524	Lynnwood	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	5	Marysville	Snohomish	X		X	
Infiltration Trench	Infiltration Trenches	5	Marysville	Snohomish	X		X	
Infiltration Trench	Infiltration Trenches	5	Marysville	Snohomish	X		X	
Swale	Bio-Swales	5	Marysville	Snohomish	X		X	
Pond	Stormwater Ponds	5	Marysville	Snohomish	X		X	
Swale	Bio-Swales	528	Marysville	Snohomish	X		X	
Stormwater Pond	Stormwater Ponds	531	Marysville	Snohomish	X		X	
POND	Stormwater Ponds	8	McCleary	Grays Harbor				
POND	Stormwater Ponds	8	McCleary	Grays Harbor				
Pond	Stormwater Ponds	8	McCleary	Grays Harbor				
Biofiltration Swale (RT.04)	Bio-Swales	0	Mercer Island	King	X		X	
Biofiltration Swale (RT.04)	Bio-Swales	0	Mercer Island	King	X		X	
Biofiltration Swale (RT.04)	Bio-Swales	90	Mercer Island	King	X		X	
Biofiltration Swale (RT.04)	Bio-Swales	90	Mercer Island	King	X		X	
Biofiltration Swale (RT.04)	Bio-Swales	90	Mercer Island	King	X		X	
Biofiltration Swale (RT.04)	Bio-Swales	90	Mercer Island	King	X		X	
Biofiltration Swale (RT.04)	Bio-Swales	90	Mercer Island	King	X		X	
Stormwater Pond	Stormwater Ponds	90	Mercer Island	King	X		X	
POND	Stormwater Ponds	90	Mercer Island	King	X		X	
N/A	Stormwater Ponds	5	Milton	Pierce	X		X	
Detention Pond	Stormwater Ponds	161	Milton	King	X		X	
Detention Pond	Stormwater Ponds	5	Mountlake Terrace	Snohomish	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	5	Mountlake Terrace	Snohomish	X		X	
Pond	Stormwater Ponds	104	Mountlake Terrace	Snohomish	X		X	
Media Filter Drain	Media Filter Drain	5	Napavine	Lewis				
Detention Pond	Stormwater Ponds	90	North Bend	King			X	
Biofiltration Swale	Bio-Swales	90	North Bend	King			X	
N/A	Stormwater Ponds	5	Olympia	Thurston	X	X		
N/A	Stormwater Ponds	5	Olympia	Thurston	X	X		
N/A	Stormwater Ponds	5	Olympia	Thurston	X	X		
Pond	Stormwater Ponds	5	Olympia	Thurston	X	X		
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
FILTERSTRIP	Vegetated Roadside Filter Strips	101	Olympia	Thurston	X	X		
SWALE	Bio-Swales	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	101	Olympia	Thurston	X	X		
SWALE	Bio-Swales	101	Olympia	Thurston	X	X		
SWALE	Bio-Swales	101	Olympia	Thurston	X	X		
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		

BMPType	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
POND	Stormwater Ponds	101	Olympia	Thurston	X	X		
Vault	Stormwater Vaults	101	Olympia	Thurston	X	X		
SWALE	Bio-Swales	101	Olympia	Thurston	X	X		
Drywell	Drywells	182	Pasco	Franklin	X			
Drywell	Drywells	182	Pasco	Franklin	X			
Drywell	Drywells	182	Pasco	Franklin	X			
Infiltration Pond	Stormwater Ponds	182	Pasco	Franklin	X			
Infiltration Pond	Stormwater Ponds	182	Pasco	Franklin	X			
Infiltration Pond	Stormwater Ponds	182	Pasco	Franklin	X			
Infiltration Basin	Stormwater Ponds	182	Pasco	Franklin	X			
Dispersion	Dispersion Areas	182	Pasco	Franklin	X			
Dispersion	Dispersion Areas	182	Pasco	Franklin	X			
Dispersion	Dispersion Areas	182	Pasco	Franklin	X			
Dispersion	Dispersion Areas	182	Pasco	Franklin	X			
Dispersion	Dispersion Areas	182	Pasco	Franklin	X			
Dispersion	Dispersion Areas	182	Pasco	Franklin	X			
Dispersion	Dispersion Areas	182	Pasco	Franklin	X			
Dispersion	Dispersion Areas	182	Pasco	Franklin	X			
Engineered Dispersion	Dispersion Areas	182	Pasco	Franklin	X			
Engineered Dispersion	Dispersion Areas	182	Pasco	Franklin	X			
Retention Pond	Stormwater Ponds	305	Poulsbo	Kitsap	X	X		
DETENTION POND	Stormwater Ponds	101	Raymond	Pacific				
Bioswale	Bio-Swales	202	Redmond	King	X		X	
Biofiltration Swale (RT.04)	Bio-Swales	202	Redmond	King	X		X	
Swale	Bio-Swales	520	Redmond	King	X		X	
Swale	Bio-Swales	520	Redmond	King	X		X	
Swale	Bio-Swales	520	Redmond	King	X		X	
Swale	Bio-Swales	520	Redmond	King	X		X	
Stormwater Pond	Stormwater Ponds	520	Redmond	King	X		X	
Stormwater Pond	Stormwater Ponds	520	Redmond	King	X		X	
Stormwater Pond	Stormwater Ponds	520	Redmond	King	X		X	
Stormwater Pond	Stormwater Ponds	520	Redmond	King	X		X	
Infiltration Pond	Stormwater Ponds	520	Redmond	King	X		X	
Constructed Stormwater Treatment	Stormwater Ponds	520	Redmond	King	X		X	
Detention Pond	Stormwater Ponds	167	Renton	King	X		X	
Ecology Ditch	Media Filter Drain	167	Renton	King	X		X	
Ecology Ditch	Media Filter Drain	167	Renton	King	X		X	
Detention Vault	Stormwater Vaults	167	Renton	King	X		X	
Combination Detention/Stormwater	Stormwater Ponds	167	Renton	King	X		X	
Detention Pond	Stormwater Ponds	167	Renton	King	X		X	
CAVFS	Vegetated Roadside Filter Strips	167	Renton	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Renton	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Renton	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Renton	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Renton	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Renton	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Renton	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Renton	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Renton	King	X		X	
Detention Pond	Stormwater Ponds	405	Renton	King	X		X	
Infiltration Basin	Stormwater Ponds	182	Richland	Benton	X			
Wet Pond	Stormwater Ponds	182	Richland	Benton	X			
DETENTION SWALE	Bio-Swales	182	Richland	Benton	X			
DETENTION SWALE	Bio-Swales	182	Richland	Benton	X			
	Stormwater Ponds	182	Richland	Benton	X			
	Stormwater Ponds	182	Richland	Benton	X			
	Stormwater Ponds	182	Richland	Benton	X			
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	240	Richland	Benton	X			
Infiltration Pond	Stormwater Ponds	240	Richland	Benton	X			
Pond	Stormwater Ponds	240	Richland	Benton	X			
Infiltration Pond	Stormwater Ponds	240	Richland	Benton	X			
Infiltration Pond	Stormwater Ponds	240	Richland	Benton	X			
Infiltration Pond	Stormwater Ponds	240	Richland	Benton	X			
	Stormwater Ponds	240	Richland	Benton	X			
	Stormwater Ponds	240	Richland	Benton	X			

BMPTyep	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
Infiltration Pond	Stormwater Ponds	240	Richland	Benton	X			
Infiltration Pond	Stormwater Ponds	240	Richland	Benton	X			
Infiltration Pond	Stormwater Ponds	240	Richland	Benton	X			
Stormwater Pond	Stormwater Ponds	5	SeaTac	King	X		X	
Siltation Basin	Stormwater Ponds	5	SeaTac	King	X		X	
Siltation Basin	Stormwater Ponds	5	SeaTac	King	X		X	
Swale	Bio-Swales	5	SeaTac	King	X		X	
Swale	Bio-Swales	5	SeaTac	King	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	5	SeaTac	King	X		X	
Vault	Stormwater Vaults	5	SeaTac	King	X		X	
Swale	Bio-Swales	5	SeaTac	King	X		X	
Swale	Bio-Swales	5	SeaTac	King	X		X	
Swale	Bio-Swales	5	SeaTac	King	X		X	
Stormwater Pond	Stormwater Ponds	509	SeaTac	King	X		X	
Stormwater Pond	Stormwater Ponds	518	SeaTac	King	X		X	
Bioswale	Bio-Swales	0	Seattle	King			X	X
Biofiltration Swale (RT.04)	Bio-Swales	0	Seattle	King			X	X
POND	Stormwater Ponds	0	Seattle	King			X	X
POND	Stormwater Ponds	0	Seattle	King			X	X
Stormwater Pond	Stormwater Ponds	5	Seattle	King			X	X
Swale	Bio-Swales	5	Seattle	King			X	X
Stormwater Pond	Stormwater Ponds	5	Seattle	King			X	X
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	90	Seattle	King			X	X
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	90	Seattle	King			X	X
Stormwater Pond	Stormwater Ponds	509	Seattle	King			X	X
Wet/Infiltration Pond	Stormwater Ponds	823	Selah	Yakima	X	X		
Stormwater Pond	Stormwater Ponds	101	Sequim	Clallam				
POND	Stormwater Ponds	101	Sequim	Clallam				
POND	Stormwater Ponds	101	Sequim	Clallam				
POND	Stormwater Ponds	101	Sequim	Clallam				
POND	Stormwater Ponds	101	Sequim	Clallam				
POND	Stormwater Ponds	101	Sequim	Clallam				
POND	Stormwater Ponds	101	Sequim	Clallam				
POND	Stormwater Ponds	0	Shoreline	King	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	5	Shoreline	King	X		X	
Stormwater Pond	Stormwater Ponds	5	Shoreline	King	X		X	
Stormwater Pond	Stormwater Ponds	5	Shoreline	King	X		X	
Swale	Bio-Swales	5	Shoreline	King	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	5	Shoreline	King	X		X	
Swale	Bio-Swales	5	Shoreline	King	X		X	
Pond	Stormwater Ponds	5	Shoreline	King	X		X	
SWALE	Bio-Swales	5	Shoreline	King	X		X	
Natural Dispersion	Dispersion Areas	195	Spokane	Spokane	X	X		
Natural Dispersion	Dispersion Areas	195	Spokane	Spokane	X	X		
Bioinfiltration Pond	Stormwater Ponds	290	Spokane	Spokane	X	X		
Bioinfiltration Pond	Stormwater Ponds	290	Spokane	Spokane	X	X		
Drywell	Drywells	27	Spokane Valley	Spokane	X	X		
Drywell	Drywells	27	Spokane Valley	Spokane	X	X		
Drywell	Drywells	27	Spokane Valley	Spokane	X	X		
Drywell	Drywells	27	Spokane Valley	Spokane	X	X		
Drywell	Drywells	27	Spokane Valley	Spokane	X	X		
Drywell	Drywells	27	Spokane Valley	Spokane	X	X		
Swale	Bio-Swales	27	Spokane Valley	Spokane	X	X		
Swale	Bio-Swales	27	Spokane Valley	Spokane	X	X		
Swale	Bio-Swales	27	Spokane Valley	Spokane	X	X		
Swale	Bio-Swales	27	Spokane Valley	Spokane	X	X		
Drywell	Drywells	27	Spokane Valley	Spokane	X	X		
Swale	Bio-Swales	90	Spokane Valley	Spokane	X	X		
Swale	Bio-Swales	90	Spokane Valley	Spokane	X	X		
Swale	Bio-Swales	90	Spokane Valley	Spokane	X	X		
Settling Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Swale	Bio-Swales	90	Spokane Valley	Spokane	X	X		
Swale	Bio-Swales	90	Spokane Valley	Spokane	X	X		

BMPType	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
	Drywells	90	Spokane Valley	Spokane	X	X		
Bioinfiltration Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drywells	Drywells	90	Spokane Valley	Spokane	X	X		
Bioinfiltration Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Bioinfiltration Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Bioinfiltration Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Bioinfiltration Pond	Drywells	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Dry Well	Drywells	90	Spokane Valley	Spokane	X	X		
Dry Well	Drywells	90	Spokane Valley	Spokane	X	X		
Bioinfiltration Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Infiltration Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drainage Swale	Bio-Swales	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Infiltration Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Infiltration Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Drainage Swale	Bio-Swales	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Bioinfiltration Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Drywell	Drywells	90	Spokane Valley	Spokane	X	X		
Bioinfiltration Pond	Stormwater Ponds	90	Spokane Valley	Spokane	X	X		
Detention Pond	Stormwater Ponds	5	Tacoma	Pierce			X	X
Pond	Stormwater Ponds	5	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	5	Tacoma	Pierce			X	X
Pond	Stormwater Ponds	5	Tacoma	Pierce			X	X
Biofiltration Swale (RT.04)	Bio-Swales	5	Tacoma	Pierce			X	X
Detention Tank	Stormwater Vaults	5	Tacoma	Pierce			X	X
M St Pond Cell 1 (detention pond)	Stormwater Ponds	5	Tacoma	Pierce			X	X
M St Pond Cell 2 (detention pond)	Stormwater Ponds	5	Tacoma	Pierce			X	X
Yakima Pond Cell 2 (detention pond)	Stormwater Ponds	5	Tacoma	Pierce			X	X
Yakima Pond Cell 1 (detention pond)	Stormwater Ponds	5	Tacoma	Pierce			X	X
Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Swale	Bio-Swales	16	Tacoma	Pierce			X	X
Swale	Bio-Swales	16	Tacoma	Pierce			X	X
Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X

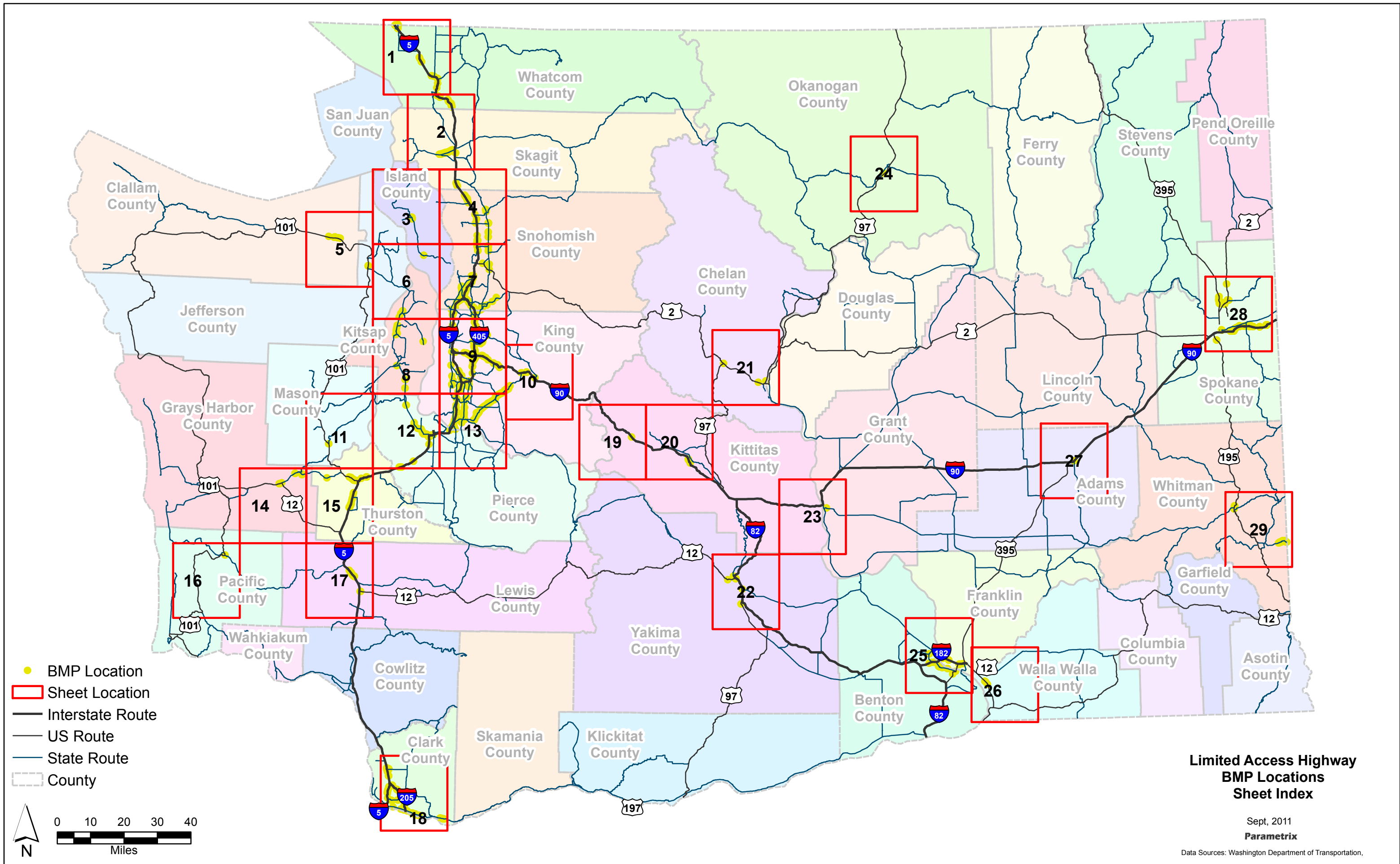
BMPType	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Detention Pond	Stormwater Ponds	16	Tacoma	Pierce			X	X
Swale	Bio-Swales	5	Tukwila	King	X		X	
Potential Infiltration Trench	Infiltration Trenches	5	Tukwila	King	X		X	
Stormwater Pond	Stormwater Ponds	5	Tukwila	King	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	5	Tukwila	King	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	5	Tukwila	King	X		X	
Swale	Bio-Swales	5	Tukwila	King	X		X	
Swale	Bio-Swales	5	Tukwila	King	X		X	
Swale	Bio-Swales	5	Tukwila	King	X		X	
Swale	Bio-Swales	5	Tukwila	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Tukwila	King	X		X	
Stormwater Pond	Stormwater Ponds	405	Tukwila	King	X		X	
Ecology Embankment	Media Filter Drain	405	Tukwila	King	X		X	
Detention Pond	Stormwater Ponds	405	Tukwila	King	X		X	
Detention Pond	Stormwater Ponds	405	Tukwila	King	X		X	
Media Filter Drain	Media Filter Drain	405	Tukwila	King	X		X	
Media Filter Drain	Media Filter Drain	405	Tukwila	King	X		X	
Detention Basin	Stormwater Ponds	5	Tumwater	Thurston	X	X		
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	101	Tumwater	Thurston	X	X		
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	101	Tumwater	Thurston	X	X		
POND	Stormwater Ponds	101	Tumwater	Thurston	X	X		
POND	Stormwater Ponds	101	Tumwater	Thurston	X	X		
POND	Stormwater Ponds	101	Tumwater	Thurston	X	X		
2-Cell Pond	Stormwater Ponds	5	Vancouver	Clark	X		X	
FLOW RESTRICTOR/OIL	Flow Restrictor Oil/Water Sep	14	Vancouver	Clark	X		X	
DETENTION POND	Stormwater Ponds	14	Vancouver	Clark	X		X	
SWALE	Bio-Swales	14	Vancouver	Clark	X		X	
N/A	Flow Restrictor Oil/Water Sep	14	Vancouver	Clark	X		X	
WET POND	Stormwater Ponds	14	Vancouver	Clark	X		X	
SWALE	Bio-Swales	14	Vancouver	Clark	X		X	
DETENTION POND	Stormwater Ponds	14	Vancouver	Clark	X		X	
N/A	Flow Restrictor Oil/Water Sep	14	Vancouver	Clark	X		X	
SWALE	Bio-Swales	14	Vancouver	Clark	X		X	
DETETNION POND	Stormwater Ponds	14	Vancouver	Clark	X		X	
DETENTION POND	Stormwater Ponds	14	Vancouver	Clark	X		X	
SWALE	Bio-Swales	14	Vancouver	Clark	X		X	
DETENTION POND	Stormwater Ponds	14	Vancouver	Clark	X		X	
SWALE	Bio-Swales	14	Vancouver	Clark	X		X	
SWALE	Bio-Swales	14	Vancouver	Clark	X		X	
SWALE	Bio-Swales	14	Vancouver	Clark	X		X	
SWALE	Bio-Swales	14	Vancouver	Clark	X		X	
Swale	Bio-Swales	14	Vancouver	Clark	X		X	
Swale	Bio-Swales	14	Vancouver	Clark	X		X	
SWALE	Bio-Swales	205	Vancouver	Clark	X		X	
SWALE	Bio-Swales	205	Vancouver	Clark	X		X	
Detention Pond	Stormwater Ponds	205	Vancouver	Clark	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	205	Vancouver	Clark	X		X	
WET POND	Stormwater Ponds	205	Vancouver	Clark	X		X	
Detention Pond	Stormwater Ponds	205	Vancouver	Clark	X		X	
Vortechs System	Stormwater Vaults	205	Vancouver	Clark	X		X	
BIOFILTRATION POND	Stormwater Ponds	500	Vancouver	Clark	X		X	
N/A	Flow Restrictor Oil/Water Sep	500	Vancouver	Clark	X		X	
POND	Stormwater Ponds	500	Vancouver	Clark	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	500	Vancouver	Clark	X		X	
WET POND	Stormwater Ponds	500	Vancouver	Clark	X		X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	500	Vancouver	Clark	X		X	
WET POND	Stormwater Ponds	500	Vancouver	Clark	X		X	
INFILTRATION TRENCH	Infiltration Trenches	500	Vancouver	Clark	X		X	
POND	Stormwater Ponds	500	Vancouver	Clark	X		X	

BMPType	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
WET POND	Stormwater Ponds	500	Vancouver	Clark	X		X	
POND	Stormwater Ponds	500	Vancouver	Clark	X		X	
POND	Stormwater Ponds	500	Vancouver	Clark	X		X	
SWALE	Bio-Swales	500	Vancouver	Clark	X		X	
SWALE	Bio-Swales	14	Washougal	Clark	X		X	
SWALE	Bio-Swales	14	Washougal	Clark	X		X	
DETENTION POND	Stormwater Ponds	14	Washougal	Clark	X		X	
INFILTRATION BASIN	Stormwater Ponds	14	Washougal	Clark	X		X	
INFILTRATION BASIN	Stormwater Ponds	14	Washougal	Clark	X		X	
ECOLOGY BANK	Media Filter Drain	14	Washougal	Clark	X		X	
SWALE	Bio-Swales	14	Washougal	Clark	X		X	
POND	Stormwater Ponds	12	Yakima	Yakima	X	X		
Natural Dispersion Area	Dispersion Areas	12	Yakima	Yakima	X	X		
Natural Dispersion Area	Dispersion Areas	82	Yakima	Yakima	X	X		
Detention Pond	Stormwater Ponds	823	Yakima	Yakima	X	X		
Pond	Stormwater Ponds	0		Spokane		X		
INFILTRATION POND	Stormwater Ponds	0		Chelan		X		
Bioinfiltration Pond (IN.01)	Stormwater Ponds	0		Spokane		X		
Drywell	Drywells	0		Spokane		X		
Infiltration Pond (IN.02)	Stormwater Ponds	0		Spokane		X		
Drywell	Drywells	0		Spokane		X		
Infiltration Pond	Stormwater Ponds	2		Chelan		X		
Drywell	Drywells	2		Spokane		X		
Drywell	Drywells	2		Spokane		X		
Swale	Bio-Swales	2		Spokane		X		
Infiltration Pond	Stormwater Ponds	2		Spokane		X		
Drywell	Drywells	2		Spokane		X		
Drywell	Drywells	2		Spokane		X		
Infiltration Pond	Stormwater Ponds	2		Spokane		X		
Drywell	Drywells	2		Spokane		X		
Wet Pond	Stormwater Ponds	2		Snohomish			X	
Infiltration Pond (IN.02)	Stormwater Ponds	2		Chelan		X		
Pond	Stormwater Ponds	2		Spokane		X		
Bioinfiltration Pond (IN.01)	Stormwater Ponds	2		Spokane		X		
SWALE	Bio-Swales	2		Spokane		X		
Biofiltration Swale (RT.04)	Stormwater Ponds	2		Spokane		X		
Retention Pond	Stormwater Ponds	3		Kitsap		X		
Retention Pond	Stormwater Ponds	3		Kitsap		X		
Retention Pond	Stormwater Ponds	3		Kitsap		X		
SW Treatment	Miscellaneous Facilities	3		Kitsap		X		
Poss pond	Stormwater Ponds	3		Kitsap		X		
Poss pond	Stormwater Ponds	3		Kitsap		X		
Bioinfiltration Swale	Bio-Swales	3		Kitsap		X		
POND	Stormwater Ponds	3		Kitsap		X		
POND	Stormwater Ponds	3		Kitsap		X		
POND	Stormwater Ponds	3		Kitsap		X		
Detention Pond w/ Flow Restrictor	Stormwater Ponds	3		Mason		X		
Infiltration Ditch	Infiltration Trenches	3		Mason		X		
Infiltration Pond	Stormwater Ponds	5		Pierce			X	
POND	Stormwater Ponds	5		Pierce			X	
POND	Stormwater Ponds	5		Pierce			X	
POND	Stormwater Ponds	5		Pierce			X	
Infiltration Trench	Infiltration Trenches	5		Thurston		X		
Detention Pond	Stormwater Ponds	5		Pierce			X	
Detention Pond	Stormwater Ponds	5		Pierce			X	
Infiltration Trench	Infiltration Trenches	5		Thurston		X		
Infiltration Trench	Infiltration Trenches	5		Thurston		X		
Infiltration Trench	Infiltration Trenches	5		Thurston		X		
Infiltration Trench	Infiltration Trenches	5		Thurston		X		
Infiltration Trench	Infiltration Trenches	5		Thurston		X		
Detention Pond	Stormwater Ponds	5		Thurston		X		
Infiltration Trench	Infiltration Trenches	5		Thurston		X		
Infiltration Trench	Infiltration Trenches	5		Thurston		X		
Swale	Bio-Swales	5		Thurston		X		
Infiltration Trench	Infiltration Trenches	5		Thurston		X		

BMPType	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
Stormwater Pond	Stormwater Ponds	5		Snohomish			X	
Stormwater Pond	Stormwater Ponds	5		Snohomish			X	
Stormwater Pond	Stormwater Ponds	5		Snohomish			X	
Stormwater Pond	Stormwater Ponds	5		Snohomish			X	
Stormwater Pond	Stormwater Ponds	5		Snohomish			X	
Stormwater Pond	Stormwater Ponds	5		Snohomish			X	
Stormwater Pond	Stormwater Ponds	5		Snohomish			X	
Stormwater Pond	Stormwater Ponds	5		Snohomish			X	
Stormwater Pond	Stormwater Ponds	5		Snohomish			X	
Pond	Stormwater Ponds	5		Snohomish			X	
Pond	Stormwater Ponds	5		King			X	
Vault	Stormwater Vaults	5		King			X	
Bioswale	Bio-Swales	5		King			X	
POND	Stormwater Ponds	5		Snohomish			X	
SWALE	Bio-Swales	5		Snohomish			X	
SWALE	Bio-Swales	5		Snohomish			X	
Swale	Bio-Swales	5		Snohomish			X	
Wet Detention Pond	Stormwater Ponds	5		Snohomish			X	
Pond	Stormwater Ponds	5		Snohomish			X	
Filter Strip	Vegetated Roadside Filter Strips	5		Snohomish			X	
Filter Strip	Vegetated Roadside Filter Strips	5		Snohomish			X	
Filter Strip	Vegetated Roadside Filter Strips	5		Snohomish			X	
Pond	Stormwater Ponds	5		Snohomish			X	
Pond	Stormwater Ponds	5		Snohomish			X	
Filter Strip	Vegetated Roadside Filter Strips	5		Snohomish			X	
Vault	Stormwater Vaults	5		King			X	
POND	Stormwater Ponds	5		Snohomish			X	
Swale	Bio-Swales	5		Snohomish			X	
Swale	Bio-Swales	5		Snohomish			X	
Compost Amended Vegetated Filt	Vegetated Roadside Filter Strips	5		Skagit		X		
Compost Amended Vegetated Filt	Vegetated Roadside Filter Strips	5		Skagit		X		
Compost Amended Vegetated Filt	Vegetated Roadside Filter Strips	5		Skagit		X		
Compost Amended Vegetated Filt	Vegetated Roadside Filter Strips	5		Skagit		X		
Compost Amended Vegetated Filt	Vegetated Roadside Filter Strips	5		Whatcom		X		
Compost Amended Vegetated Filt	Vegetated Roadside Filter Strips	5		Whatcom		X		
Compost Amended Vegetated Filt	Vegetated Roadside Filter Strips	5		Whatcom		X		
Swale	Bio-Swales	5		Whatcom		X		
Flow Rest	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
Flow Rest	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
Flow Rest	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
Flow Res	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
Flow Rest	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
Flow Rest	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
Swale	Bio-Swales	5		Whatcom		X		
Swale	Bio-Swales	5		Whatcom		X		
Swale	Bio-Swales	5		Whatcom		X		
Swale	Bio-Swales	5		Whatcom		X		
Flow Rest	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
Flow Rest	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
Flow Res	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
Flow Res	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
NA	Stormwater Vaults	5		Whatcom		X		
Flow Restrictor Oil/Water	Flow Restrictor Oil/Water Sep	5		Whatcom		X		
Swale	Bio-Swales	5		Snohomish			X	
Combined Wet / Detention Pond	Stormwater Ponds	5		Clark			X	
Combined Wet / Detention Pond	Stormwater Ponds	5		Clark			X	
Media Filter Drain	Media Filter Drain	5		Clark			X	
Detention Pond	Stormwater Ponds	5		Clark			X	
Media Filter Drain	Media Filter Drain	5		Clark			X	
Media Filter Drain	Media Filter Drain	5		Clark			X	
Combined Wet / Detention Pond	Stormwater Ponds	5		Clark			X	
Detention Pond	Stormwater Ponds	5		Lewis		X		
Combined Wet / Detention Pond	Stormwater Ponds	5		Lewis		X		
Media Filter Drain	Media Filter Drain	5		Lewis		X		
Media Filter Drain	Media Filter Drain	5		Lewis		X		

BMPTYPE	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
Drywell	Drywells	395		Spokane		X		
Drywell	Drywells	395		Spokane		X		
Drywell	Drywells	395		Spokane		X		
Pond	Stormwater Ponds	395		Spokane		X		
Pond	Stormwater Ponds	395		Spokane		X		
Drywell	Drywells	395		Spokane		X		
Drywell	Drywells	395		Spokane		X		
Drywell	Drywells	395		Spokane		X		
Drywell	Drywells	395		Spokane		X		
Drywell	Drywells	395		Spokane		X		
Drywell	Drywells	395		Spokane		X		
Drywell	Drywells	395		Spokane		X		
Stormwater Pond	Stormwater Ponds	405		Snohomish				
FlowRest	Flow Restrictor Oil/Water Sep	405		Snohomish		X		
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	405		King			X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	405		King			X	
POND	Stormwater Ponds	405		King			X	
POND	Stormwater Ponds	405		Snohomish			X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	405		Snohomish			X	
Stormwater Pond	Stormwater Ponds	405		King			X	
Stormwater Pond	Stormwater Ponds	405		Snohomish			X	
Stormwater Pond	Stormwater Ponds	405		Snohomish			X	
POND	Stormwater Ponds	405		King			X	
POND	Stormwater Ponds	405		King			X	
Combined Stormwater Treatment	Stormwater Ponds	502		Clark			X	
Detention Pond	Stormwater Ponds	502		Clark			X	
Media Filter Drain	Media Filter Drain	502		Clark			X	
Combined Wet / Detention Pond	Stormwater Ponds	502		Clark			X	
Media Filter Drain	Media Filter Drain	502		Clark			X	
Detention Pond	Stormwater Ponds	502		Clark			X	
Combined Wet / Detention Pond	Stormwater Ponds	502		Clark			X	
Media Filter Drain	Media Filter Drain	502		Clark			X	
Detention Pond	Stormwater Ponds	522		Snohomish			X	
Stormwater Pond	Stormwater Ponds	522		Snohomish			X	
Stormwater Pond	Stormwater Ponds	522		Snohomish			X	
Biofiltration Swale	Bio-Swales	522		Snohomish			X	
Pre-Settling Basin and Sand Filter	Stormwater Ponds	522		Snohomish			X	
POND	Stormwater Ponds	522		Snohomish			X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	522		Snohomish			X	
POND	Stormwater Ponds	522		Snohomish			X	
POND	Stormwater Ponds	522		Snohomish			X	
POND	Stormwater Ponds	522		Snohomish			X	
Swale	Bio-Swales	522		Snohomish			X	
Vault	Stormwater Vaults	524		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	525		Snohomish			X	
POND	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Pond	Stormwater Ponds	525		Snohomish			X	
SWALE	Bio-Swales	525		Snohomish			X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	525		Snohomish			X	
Pond	Stormwater Ponds	525		Snohomish			X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	525		Snohomish			X	
Pond	Stormwater Ponds	525		Snohomish			X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	525		Snohomish			X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	525		Snohomish			X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	525		Snohomish			X	
Flow Restrictor Oil/Water Sep	Flow Restrictor Oil/Water Sep	525		Snohomish			X	
Swale	Bio-Swales	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	

BMPTYPE	BMPCat	StateRoute	City	County	PH2city	PH2county	PH1County	PH1City
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Stormwater Pond	Stormwater Ponds	525		Snohomish			X	
Pond	Stormwater Ponds	530		Snohomish			X	
Detention Pond	Stormwater Ponds	532		Snohomish			X	
Filter Strip	Vegetated Roadside Filter Strips	536		Skagit		X		

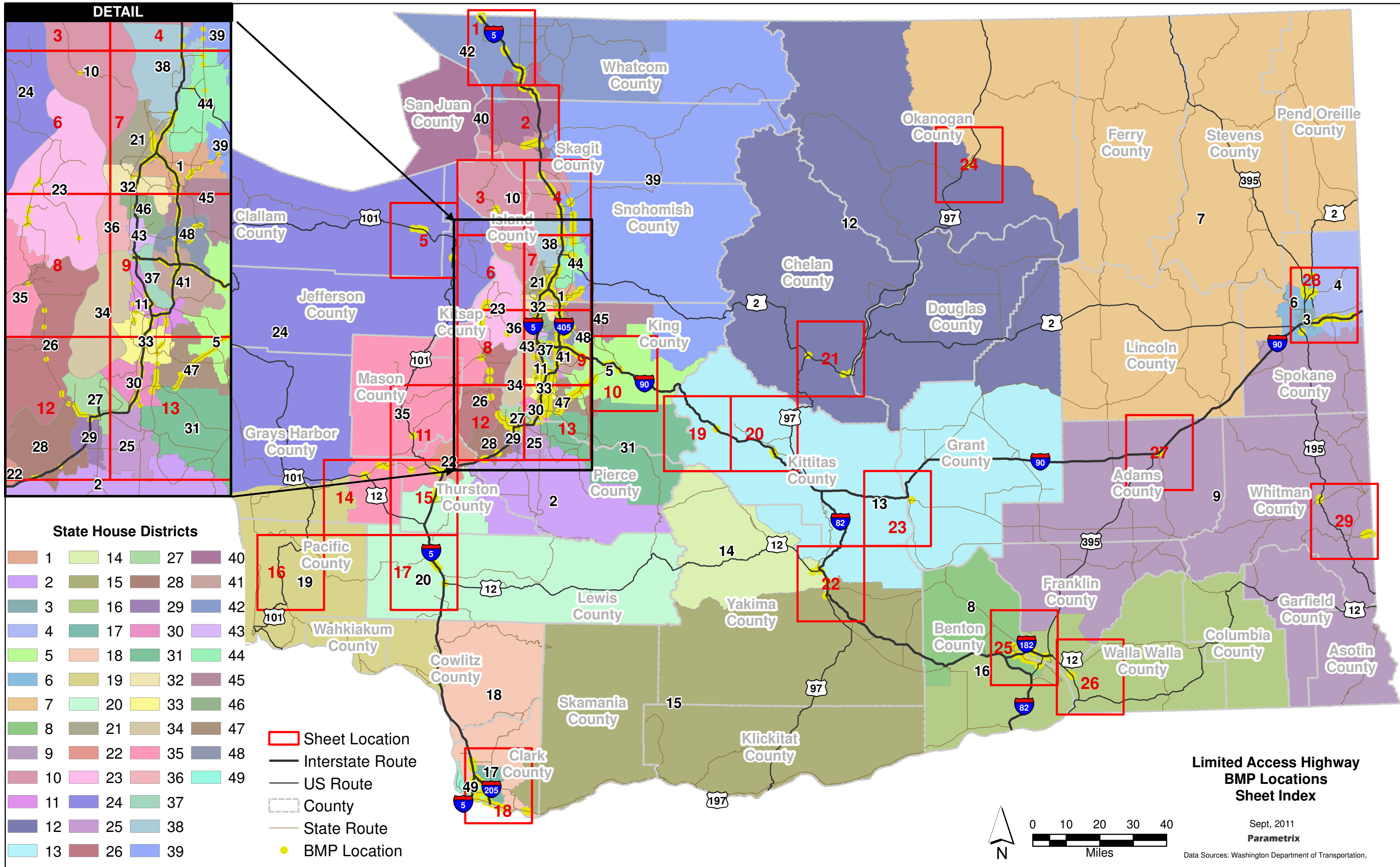


**Limited Access Highway
BMP Locations
Sheet Index**

Sept, 2011

Parametrix

Data Sources: Washington Department of Transportation,



APPENDIX C

SURVEY OF JURISDICTIONS

Joint Transportation Committee Stormwater Management Survey

Summary Report

10/13/11

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INTRODUCTION

What was the purpose of the survey?

The survey was designed to gather information from jurisdictions that:

- Have a stormwater utility,
- Are subject to National Pollutant Discharge Elimination System (NPDES) Phase 1 or Phase 2 municipal stormwater permitting requirements, and
- Have one or more limited access state highways within their jurisdiction.

Furthermore, the survey was intended for those jurisdictions that impose stormwater fees to the Washington State Department of Transportation (WSDOT), or otherwise manage stormwater from limited access state highways. It also surveyed jurisdictions that currently do not manage stormwater from limited access highways, but which plan to do so in the future.

In particular, the survey questions were designed to identify successes experienced and challenges faced by the jurisdictions in:

- Working with WSDOT to manage stormwater
- Complying with RCW 90.03.525
- Preparing documentation for recovery of costs associated with managing stormwater from limited access highways

Results of the survey will be used, in conjunction with other project tasks to identify ways to improve the process by which jurisdictions charge the Washington State Department of Transportation for managing stormwater runoff from state limited access highways within jurisdiction boundaries, and to make stormwater management of these facilities more efficient.

How was the survey conducted?

The survey questions (see Appendix A) were administered through an online survey process. A total of eighty-one qualified jurisdictions were invited to participate. Forty-five completed the survey, for a response rate of 56%. (See Appendix B for a detailed discussion of the survey methodology.)

SUMMARY OF KEY FINDINGS

Stormwater system capacity, costs, water quality, and staff resources are the major challenges to managing stormwater from limited access highways

Three-fourths of those jurisdictions that manage stormwater from limited access highways indicated challenges in doing so. The challenges included stormwater system capacity, costs, water quality, and staff resources. It was also found that those in the Puget Sound region were more likely to report challenges in managing stormwater than those in the Western Washington or Eastern Washington regions. Those with conveyance facilities were somewhat less likely to report challenges in stormwater management than those with other stormwater management systems.

Factors upon which the fee is based, definition of what is eligible for reimbursement, and limited staff resources are the major challenges to complying with RCW 90.03.525

More than half of those that manage stormwater reported facing challenges complying with RCW 90.03.525. The challenges included factors upon which the fee is based, definition of what is eligible for reimbursement, limited staff resources, and working with WSDOT. Facing challenges complying with the RCW did not differ significantly between those that charge WSDOT and those that don't. Those with retention facilities were somewhat less likely to report problems in complying with RCW 90.03.525 than those with other stormwater management systems.

Not charging for city streets, burdensome work plan and reporting requirements, and not tracking costs of runoff from state highways are the major reasons for not charging WSDOT

When those who did not charge WSDOT were asked why not, their reasons included not charging for city streets, burdensome work plan and reporting requirements, not tracking costs of runoff from state highways, and having not charged WSDOT in the past. Most reported spending \$500 to \$1,000 annually to gather the necessary reporting data and file a request. When it came to how long it takes to gather the necessary reporting documentation, many reported spending either 1-2 days or more than 4 days. The length of time it takes to gather the reporting documentation did not differ significantly by the number of lane miles of limited access highway in the jurisdiction.

These same jurisdictions reported that the following would motivate them to start charging WSDOT: if the amount of reimbursement was increased, if the city street charge requirement was eliminated, if the planning and reporting was less burdensome, if the options and process were better understood, and if the limited access highway(s) in their jurisdiction had additional negative impact.

Working with WSDOT is OK, but could be improved

Most reported the process of working with WSDOT on stormwater management to be either somewhat efficient or neutral. The level of efficiency of working with WSDOT to manage stormwater did not differ significantly between those that charged and those that did not charge WSDOT. Those with retention facilities were more likely to report that the process between them and WSDOT for

managing stormwater runoff was inefficient than those with other types of stormwater management systems. Among the jurisdictions who reported inefficiencies, the inefficiencies tended to focus on communication challenges, the regulatory process itself, documentation, and insufficient monetary incentives. In regard to the charging process specifically, the difficulties included the method used to determine charges, justifying how the reimbursed fee is used, and documentation issues.

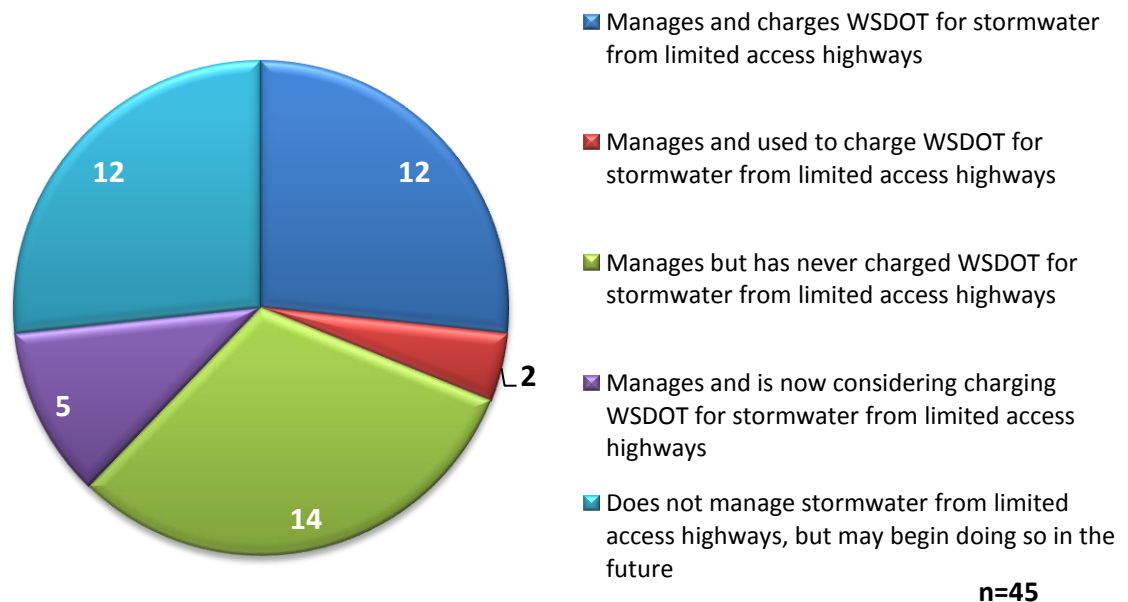
CHARACTERISTICS OF RESPONDING JURISDICTIONS

Participating jurisdictions were asked to choose one of five categories that reflected whether or not they managed stormwater from limited access highways and whether or not they charged WSDOT for doing so. The distribution of responding jurisdictions in regard to this can be seen in the chart below. A total of fourteen managed stormwater and did currently charge or had charged WSDOT in the past, another nineteen managed stormwater and had never charged WSDOT, and twelve did not manage stormwater from limited access highways, but were considering doing so in the future.

Certain survey questions were asked of respondents depending on their jurisdiction category. The first two categories were asked all of the questions; the next two categories were asked all questions up to question 27, and the last category was asked all questions up to question 16. Because the total number of respondents for some of the questions was relatively small we thought it best to present the results in regard to counts and not percents, since percents for small numbers of respondents can appear to artificially over-inflate the results.

Which of the following best describes how your municipality deals with stormwater from state limited access highways?

Base: All respondents who participated in the survey

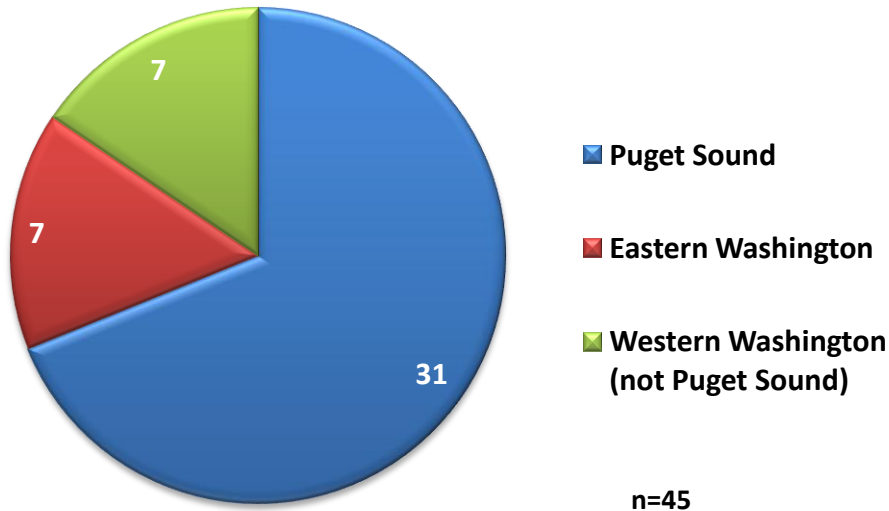


What parts of the state are the responding jurisdictions from?

As can be seen in the next chart, most (31 of 45) respondents are from the Puget Sound region. Appendix C presents a map of the responding jurisdictions. (For additional jurisdiction characteristics, see Appendix D.)

Municipality locations

Base: All respondents who participated in the survey



What methods are used to manage stormwater from limited access highways?

It was reported that WSDOT manages a portion of the stormwater for a third (15 of 45) of the responding jurisdictions. Of those, only one reimburses WSDOT for managing stormwater in their jurisdiction. Another 3 of 45 reported having an agreement with WSDOT for construction of future facilities to manage stormwater .

Most responding jurisdictions reported using conveyance facilities¹ (27 of 32), with detention² (19 of 32), and water quality treatment facilities³ (16 of 32), and retention⁴ (9 of 32) also being used.

¹ **Conveyance** - A mechanism for transporting water from one point to another, including pipes, ditches, and channels. The drainage facilities, both natural and man-made, which collect, contain, and provide for the flow of surface and stormwater from the highest points on the land down to a receiving water. The natural elements of the conveyance system include swales and small drainage courses, streams, rivers, lakes, and wetlands. The human-made elements of the conveyance system include gutters, ditches, pipes, channels, and most retention/detention facilities.

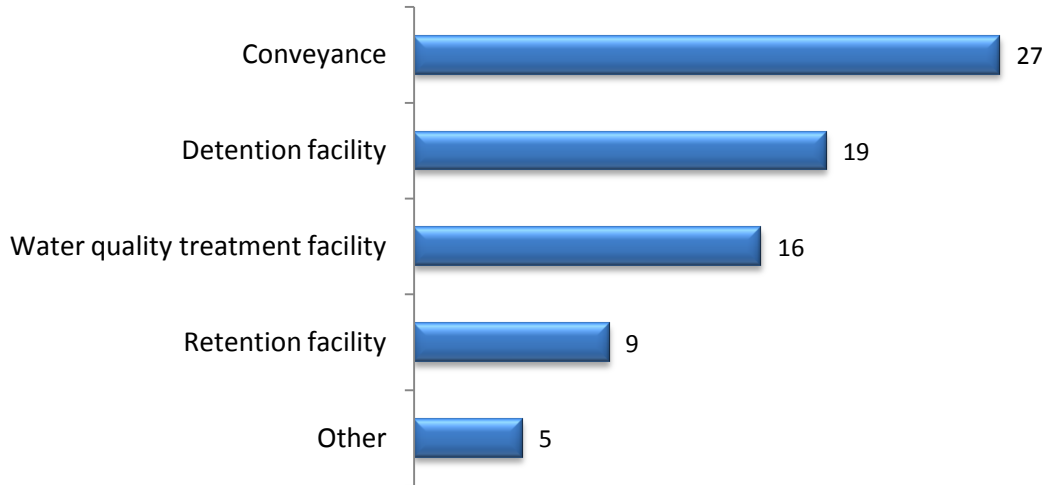
² **Detention** - The release of stormwater runoff from the site at a slower rate than it is collected by the stormwater facility system, the difference being held in temporary storage. An above or below ground facility, such as a pond or tank, that temporarily stores stormwater runoff and subsequently releases it at a slower rate than it is collected by the drainage facility system. There is little or no infiltration of stored stormwater.

³ **Water Quality Treatment Facility** - A man-made structure such as a grass lined swale, engineered soil, or structural mechanism designed to remove pollutants from stormwater runoff prior to discharge to waters of the State.

⁴ **Retention** - The process of collecting and holding surface and stormwater runoff with no surface outflow. A type of drainage facility designed either to hold water for a considerable length of time and then release it by

Type of stormwater management facilities used

Base: Respondents who reported that they managed stormwater



Note: More than one response allowed; numbers add up to more than n.

n=33

When asked if they had pursued any alternative stormwater management practices with WSDOT, a few (6 of 33) reported doing so.

Successful alternative methods reported by five jurisdictions included:

- Tree planting projects to shade highway road surface
- Open channels and adjacent streams
- Low impact development
- Retrofitting existing freeway for flow control and water quality
- Infiltration
- Porous concrete

The reasons for the success of these alternative stormwater management practices included:

- Tree planting recognized as acceptable best management practice
- Retrofitting requirements by WSDOT allowed this to happen
- Reduced maintenance costs
- Enhanced water quality

evaporation, plant transpiration, and/or infiltration into the ground; or to hold surface and stormwater runoff for a short period of time and then release it to the surface and stormwater management system.

Unsuccessful alternative stormwater management practices pursued with WSDOT were also reported by five jurisdictions and included:

- Biofiltration swales
- Contribution of fees toward property acquisitions for future water quality and detention ponds that would treat WSDOT stormwater runoff
- Off right of way solutions for flow control and treatment (mitigation) for highway expansion

The reasons for the lack of success of these alternatives included:

- Heavy sands and debris tracking in winter months clogs curb cuts and fills swales
- State doesn't/or can't support contribution of fees for property acquisitions
- Lack of time to develop solutions
- Too infrequent routine maintenance including sweeping and removal of debris
- Lack of available land to implement solutions

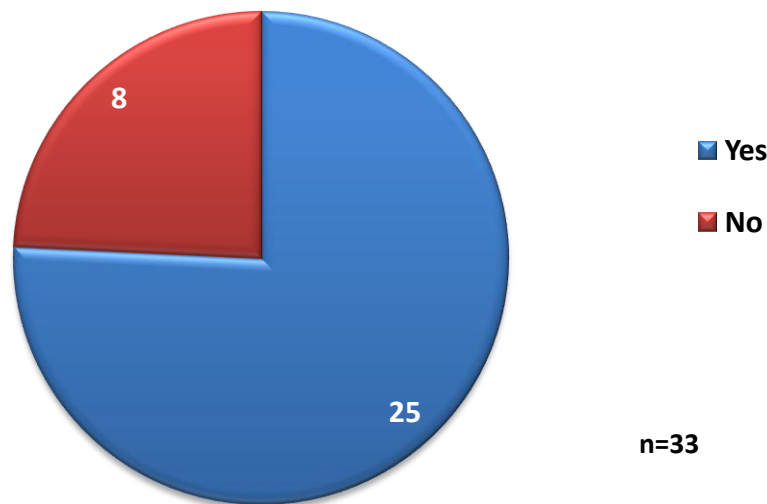
RESULTS

What are the challenges to managing stormwater from limited access highways?

Three-fourths (25 of 33) of those jurisdictions that manage stormwater from limited access highways indicated challenges in doing so.

Does your municipality face any challenges in managing stormwater from state limited access highways?

Base: All respondents who reported that they manage stormwater



The challenges reported by 29 respondents could be classified into the following four categories, presented in order of how frequently they were mentioned:

1. Stormwater system capacity, such as:
 - Sediment control
 - Flood control
 - Excessive runoff from older highways that lack flow control
 - Erosion downstream
2. Costs, such as:
 - Maintenance costs
 - Lack of adequate funding
 - Reimbursement challenges
 - Lack of compensation for other state highways (not limited access)
3. Water quality, such as:
 - Lack of water quality treatment
 - Non-point source water quality pollutants entering storm system

4. Staff resources, such as:
 - Getting maintenance completed
 - Identifying who is responsible for the maintenance

It was also found that:

- Those in the Puget Sound region were more likely (20 of 24) to report challenges in managing stormwater than those in the Western Washington (4 of 6) or Eastern Washington (1 of 3) regions.
- Those with conveyance facilities were somewhat less likely (21 of 27) to report challenges in stormwater management than those with detention (16 of 19), retention (8 of 9), or water quality treatment facilities (15 of 16).

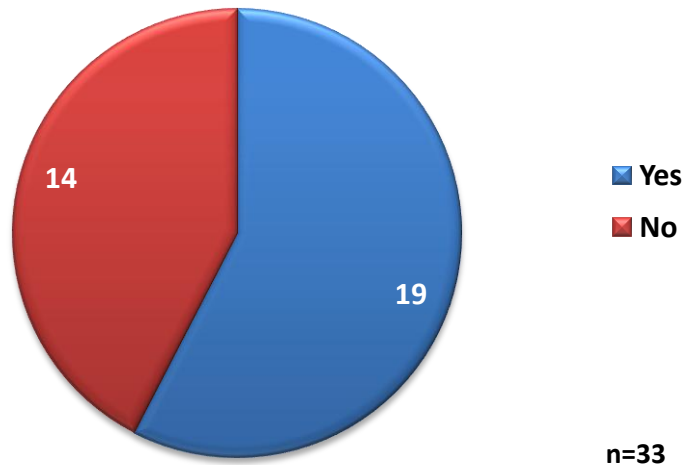
What are the challenges to complying with RCW 90.03.525?

More than half of those that manage stormwater (19 of 33) reported facing challenges complying with RCW 90.03.525.⁵

Facing challenges complying with the RCW did not differ significantly between those that charge WSDOT and those that don't. Of the 19 that indicated they faced challenges, half charged WSDOT (9) and half didn't (10). Of those who do not face challenges with the RCW, 5 charged and 9 did not charge WSDOT.

Does your municipality face any challenges specifically in complying with RCW 90.03.525?

Base: Respondents who reported that they manage stormwater



⁵ See page 23 for the RCW language.

Those with retention facilities (5 of 9) were somewhat less likely to report problems in complying with RCW 90.03.525 than those with detention (13 of 19), conveyance (17 of 27), or water quality treatment facilities (10 of 16).

The challenges reported by 21 respondents could be classified into the following four categories, presented in order of how frequently they were mentioned:

1. Factors upon which the fee is based, such as:
 - a. Funding only for maintenance
 - b. Unable to assess fee to WSDOT because do not assess their own streets
 - c. 30% fee seems arbitrary and unfair
2. Definition of what is eligible for reimbursement, such as:
 - a. Definition not inclusive of all state right-of-ways or other properties
 - b. Identifying projects that are “solely for stormwater control facility that directly reduce stormwater runoff impacts” is difficult since stormwater is typically intermingled
 - c. Projects that provide water quality mitigation and fish passage ineligible
 - d. Operational costs of stormwater facility not allowed even though those costs involve WSDOT highways
3. Limited staff resources, such as:
 - a. Limited staff resources to prepare plans and negotiate with WSDOT
 - b. Limited staff to maintain WSDOT facilities
 - c. Limited time to comply with requirements
4. Working with WSDOT, such as:
 - a. Coordination with WSDOT
 - b. Ability to collect reimbursement

With 15 of 34 of cities charging city streets for stormwater service in 2010, but with only 8 of the 15 charging WSDOT for managing stormwater from limited access highways, it seems that the city street charge requirement is a major impediment.

What does it cost to manage stormwater from limited access highways?

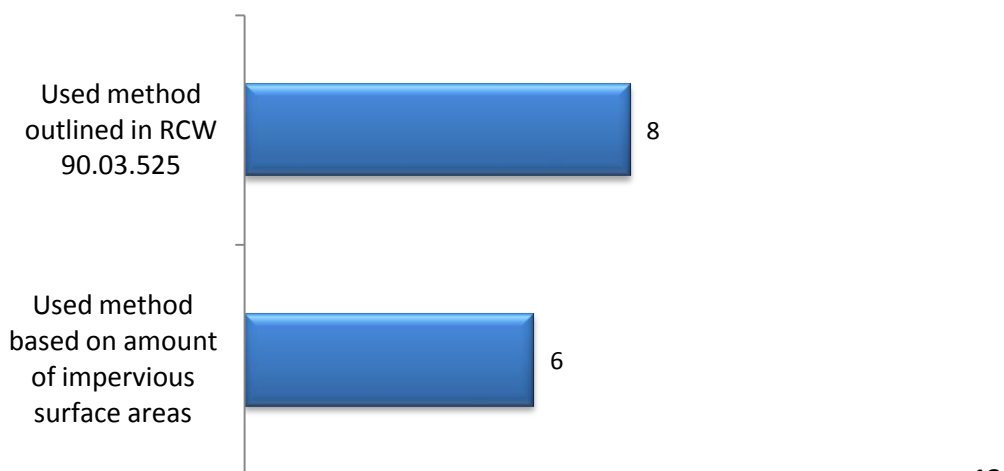
Almost a third (10 of 33) of those who manage stormwater from limited access highways account for those stormwater management costs. It was also found that:

- Those with more miles of limited access highway were more likely to account for stormwater management costs.
- Counties (6 of 10) were more likely than cities (4 of 19) to account for stormwater management costs.
- Those with retention facilities (5 of 7) were more likely to account for stormwater management from limited access highways than those with detention (8 of 17), conveyance (8 of 23), or water quality treatment facilities (5 of 13).

Among those that did charge WSDOT, most (8 of 13) used the method outlined in the RCW⁶ for calculating the charges.

Method for calculating charges to WSDOT in the 2009-2011 biennium

Base: Respondents who reported that they currently charge WSDOT



Based on the seven jurisdictions that reported their total costs to manage stormwater from limited access highways, the range, average, and median for the 2009-2011 biennium were:

- Range -- \$20,000 to \$1,800,000
- Average -- \$408,382
- Median -- \$237,671

Those costs can be compared to the range, average, and median stormwater revenue generated in the 2009-2011 biennium for those same seven jurisdictions:

- Range -- \$34,000 to \$31,000,000
- Average -- \$8,989,000
- Median -- \$4,750,000

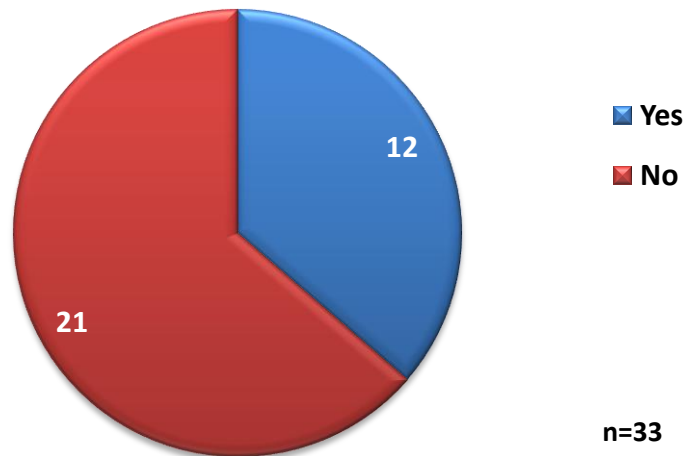
Why do some, but not all charge WSDOT?

More than a third (12 of 33) reported charging WSDOT for stormwater management in the 2009-2011 biennium .

⁶ See page 23 for the RCW method language.

Did your municipality charge the Washington State Department of Transportation for managing stormwater from state limited access highways in the 2009-2011 biennium as allowed by RCW 90.03.525?

Base: Respondents who reported that they manage stormwater



Among those that manage stormwater from limited access highways (n=33), the percent that charged WSDOT and the average amount charged in the last five biennium is shown in the table below.

Biennium	% that charged WSDOT	Average \$ charged
2009-2011	30%	\$197,275
2007-2009	30%	\$265,914
2005-2007	33%	\$226,945
2003-2005	27%	\$221,853
2001-2003	33%	\$190,388

It was also found that:

- The more miles of limited access highway, the more likely to charge WSDOT.
- The more revenue generated in 2009-2011 biennium by stormwater utility, the more likely to charge WSDOT.

When those who did not charge WSDOT (n=18) were asked why not, they reported the following reasons, presented in order of how frequently they were mentioned:

1. Don't charge for city streets
2. Burdensome work plan and reporting requirements
3. Don't track costs of runoff from state highways
4. Haven't charged WSDOT in the past

These same jurisdictions (n=17) reported that the following would motivate them to start charging WSDOT, presented in order of how frequently they were mentioned:

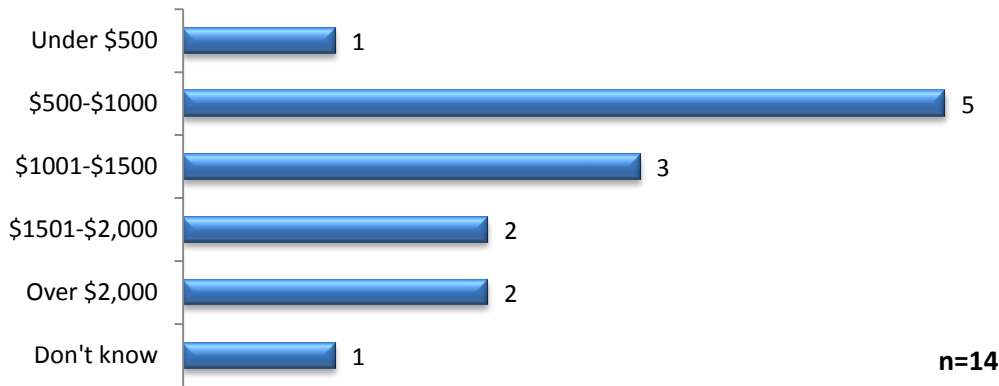
1. Amount of reimbursement
 - a. Change reimbursement to based on length of right of way and not on arbitrary 30%
 - b. If process generated enough revenue to make the process worth the bother
2. Eliminate the city street charge requirement
3. Less burdensome planning and reporting
4. Better understanding of options and process
5. If highway had additional negative impact

How expensive and how long is the charging process?

Many (6 of 14) reported spending \$1,000 or less annually to gather the necessary reporting data and file a request.

How much would you estimate it costs your jurisdiction to gather the necessary reporting data and file a request to the Washington State Department of Transportation for reimbursement?

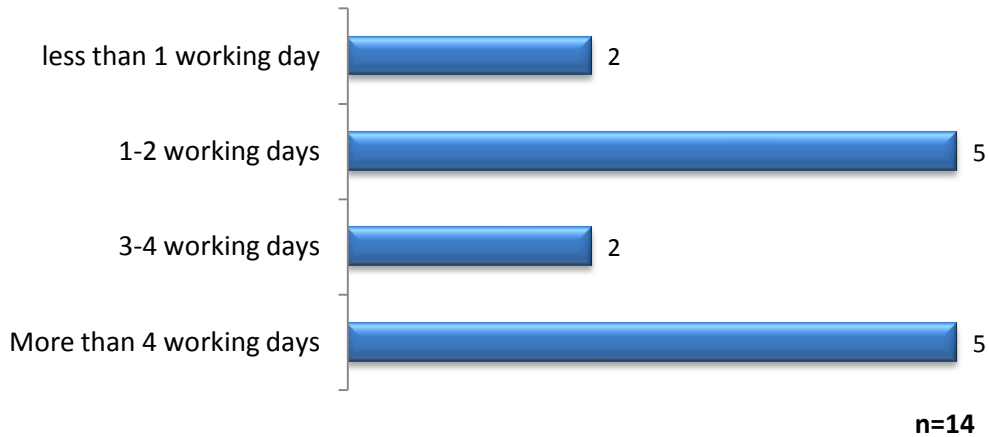
Base: Respondents who reported that they currently or used to charge WSDOT



When it came to how long it takes to gather the necessary reporting documentation, many reported spending either 1-2 days (5 of 14) or more than 4 days (5 of 14). The length of time it takes to gather the reporting documentation did not differ significantly by the number of lane miles of limited access highway in the jurisdiction.

How long would you estimate it takes your jurisdiction to gather the necessary reporting data and file a request to the Washington State Department of Transportation for reimbursement?

Base: Respondents who reported that they currently or used to charge WSDOT

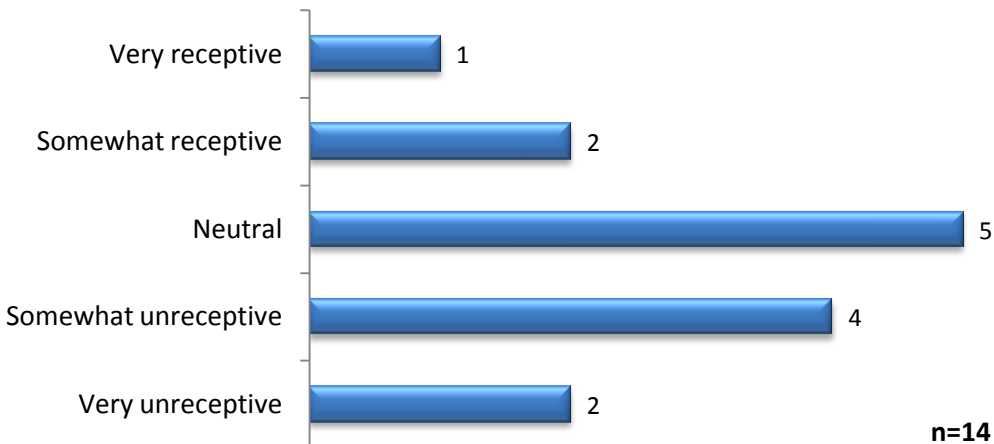


How receptive is WSDOT to charges and documentation?

Among those who have charged WSDOT for stormwater management, we asked how receptive WSDOT was to the charges submitted. We found 8 of the 14 reporting WSDOT being either receptive or at least neutral to the charges submitted.

How would you characterize the receptiveness of the Washington State Department of Transportation to charges for stormwater management?

Base: Respondents who reported that they currently or used to charge WSDOT



5 of 14 reported being denied reimbursement. The reasons for denial included:

1. Lack of adequate documentation
2. Perceived inability to demonstrate performance on projects
3. Project took too long and WSDOT thought they had paid their fair share
4. Progress report submitted too late
5. Didn't agree to percent of WSDOT responsibility
6. Ambiguity in code as to what is reimbursable

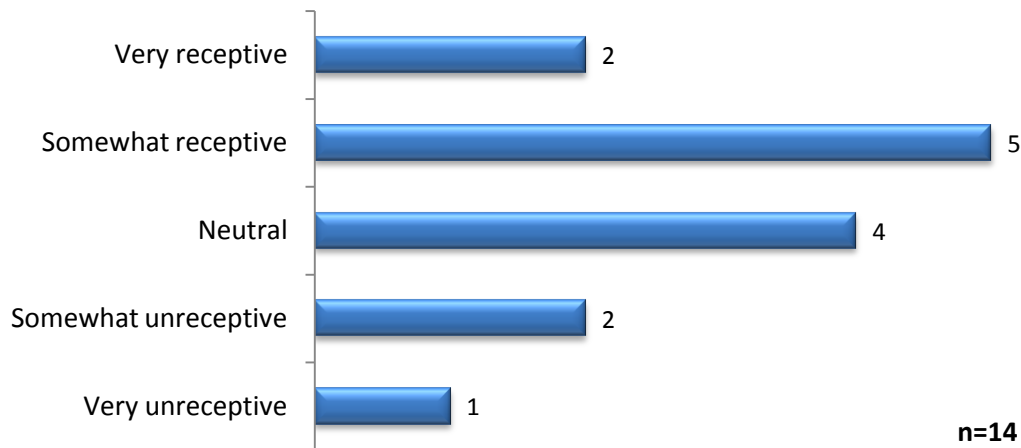
3 of 14 reported being reimbursed less than the charges submitted, with their reasons for less reimbursement including:

1. WSDOT refusal to pay penalty and interest on late payments
2. Didn't agree to percent of WSDOT responsibility
3. Denial of certain activities

When it came to WSDOT receptiveness to the documentation that jurisdictions submitted for reimbursement, 11 of 14 reported WSDOT being receptive or at least neutral.

How would you characterize the receptiveness of the Washington State Department of Transportation to supporting documentation that you submit for stormwater management?

Base: Respondents who reported that they currently or used to charge WSDOT



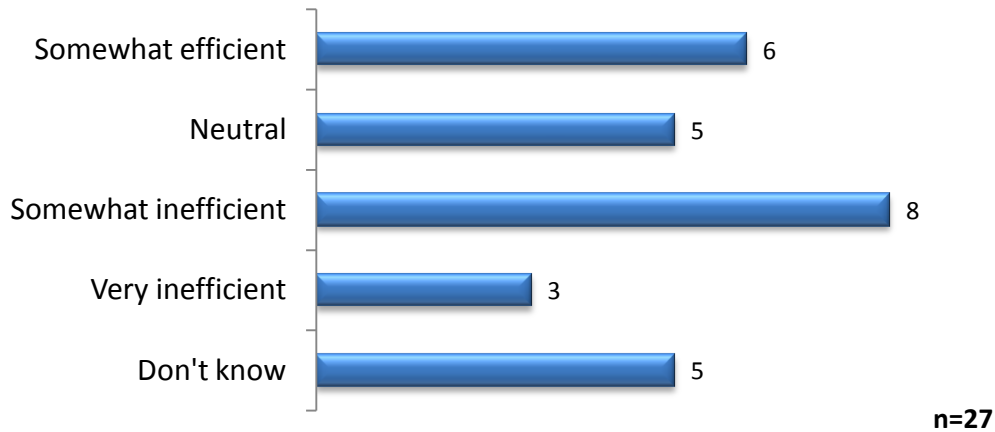
How efficient is the process of working with WSDOT?

We asked several questions in regard to the efficiency of working with WSDOT in managing stormwater from limited access highways and seeking reimbursement from WSDOT.

Most (19 of 27) reported the process of working with WSDOT on stormwater management to be either somewhat efficient or neutral. The level of efficiency of working with WSDOT to manage stormwater did not differ significantly between those that charged and those that did not charge WSDOT.

How would you characterize the efficiency of the process (between your jurisdiction and the Washington State Department of Transportation) of managing stormwater runoff from any state limited access highways in your jurisdiction?

Base: Respondents who reported that they manage stormwater



We found that those with retention facilities (4 of 6) were more likely to report that the process between them and WSDOT for managing stormwater runoff was inefficient than those with detention (8 of 13), conveyance (10 of 20), or water quality treatment facilities (7 of 13).

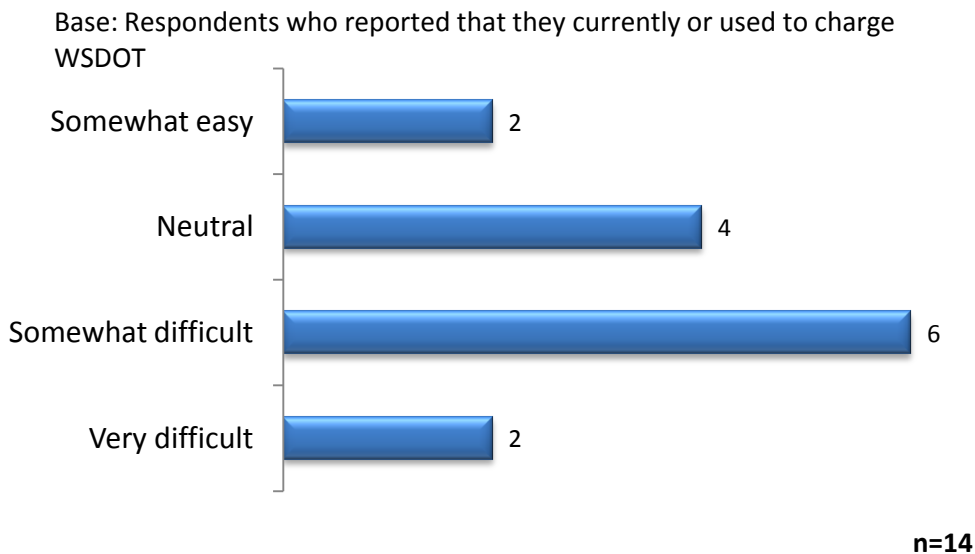
Among the 19 jurisdictions who reported inefficiencies, the inefficiencies tended to focus on the following four categories, presented in order of how frequently they were mentioned:

1. Communication challenges, such as:
 - a. Lack of communication with WSDOT
 - b. Multiple WSDOT contact people
2. The process itself, such as:
 - a. Slow process for formal notice of project approval/denial
 - b. Redtape
 - c. Lack of cooperation from WSDOT
 - d. Cumbersome and confusing process

3. Documentation, such as:
 - a. Annual report useless and time consuming
 - b. Financial process is overly cumbersome
 - c. Difficult to determine WSDOT percent of responsibility
 - d. WSDOT should inventory their stormwater infrastructure and provide GIS to jurisdictions
4. Not enough monetary incentive, such as:
 - a. Not enough incentive to compel local jurisdictions
 - b. Process isn't the problem. The program is the problem – not worthwhile for local jurisdictions

We also asked about the ease of the charging process and found that 6 of 13 reported the charging process to be somewhat easy or neutral.

How would you characterize the process of charging the Washington State Department of Transportation for stormwater management?



The difficulties with the charging process reported by 10 jurisdictions could be classified into the following three categories, presented in order of how frequently they were mentioned:

1. Method to determine charges, such as:
 - a. Limited to facility management
 - b. Knowing if projects approved so charges can be invoiced
 - c. Method to determine percent of impact from state highway
2. Justifying how the reimbursed fee is used, such as:
 - a. Justifying how fee is used to manage just WSDOT runoff

3. Documentation, such as:
 - a. Preparing annual report
 - b. Documentation of work completed

How can the process be improved?

When asked how the process of working with WSDOT to manage stormwater from limited access highways could be more efficient, the suggestions from 19 of the respondents could be classified into the following two categories, presented in order of how frequently they were mentioned:

1. Communication, such as:
 - a. Improve communication with WSDOT
 - b. Quicker notice of approval/denial of projects
 - c. Develop framework for identifying and planning construction projects
 - d. Better coordination to prioritize stormwater retrofit projects
 - e. Joint planning process to meet mutual water quality goals
2. Percent of reimbursement, such as:
 - a. Establish flat rate, eliminate 30% of what jurisdiction charges itself
 - b. WSDOT should pay the same as any other city utility customer

Finally, the ways to improve the charging process suggested by 10 respondents, and presented in order of how frequently they were mentioned were:

1. Percent of reimbursement, such as:
 - a. Base on percent of impervious surface
 - b. WSDOT pays the same as any other utility customer
 - c. If impervious surface figure didn't need to be recalculated each year
 - d. Consistent statewide method of determining percent of impact of state highway
2. Documentation, such as:
 - a. No annual report
 - b. Earlier notice of project approval/denial
 - c. Standardized reporting

Appendix A: Survey Questions

Thank you very much for agreeing to participate in our survey. As a participant in this survey, your agency should (1) have a stormwater utility, (2) be subject to National Pollutant Discharge Elimination System (NPDES) Phase 1 or Phase 2 municipal stormwater permitting requirements, and (3) have one or more limited access state highways within your jurisdiction.

The results of this survey will be used by the legislature as they review the existing regulatory codes regarding stormwater management from limited access highways. Stormwater management is defined as flow control, water quality control, conveyance, and related requirements. A limited access highway is a highway or arterial road for high-speed traffic which has limited or no access to adjacent property, some degree of separation of opposing traffic flow, use of grade separated interchanges to some extent, prohibition of some modes of transport such as bicycles or horses and very few or no intersecting cross-streets.

Limited Access Highway Example



The survey should take no more than 15-20 minutes of your time and your answers will be completely confidential. The bar at the bottom of each page tells you how much of the survey you have completed. The survey is programmed so that you can exit it at any time and you will be brought back to where you left off (if you use the same computer each time). The survey is best viewed by maximizing your computer screen. Please be sure to scroll down to the bottom of each page and click the "Next" button to proceed. Please click "Done" at the end of the survey so that your answers will be saved in our database. Once you have clicked "Done", you will not be able to make any changes.

PLEASE COMPLETE THE SURVEY BY SEPTEMBER 2, 2011.

Thank you for sharing your information and opinions!

***1. Which of the following Washington State cities or counties best describes the jurisdiction of your agency? (Please select one)**

Select City or County

City or County

2. Did your stormwater utility charge City streets for stormwater service in 2010?

- No
- Yes
- Don't know

***3. Does the Washington State Department of Transportation manage a portion of your jurisdiction's stormwater with their facilities?**

- No
- Yes

4. Do you reimburse the Washington State Department of Transportation for managing stormwater from your jurisdiction in their facilities?

- No
- Yes

5. Do you have an agreement with the Washington State Department of Transportation for construction of future facilities for managing stormwater?

- No
- Yes

***6. Does your municipality face any challenges in managing stormwater from state limited access highways?**

- No
- Yes

7. What are the most important challenges that your municipality faces in managing stormwater from state limited access highways? (only list three, 100 characters max for each)

1.
2.
3.

***8. Does your municipality face any challenges specifically in complying with RCW 90.03.525? YOU CAN READ THE FULL RCW BELOW.**

- No
- Yes

The legislation related to charging the Washington State Department of Transportation for managing stormwater from limited access highways is RCW 90.03.525, and reads as follows:

(1) The rate charged by a local government utility to the department of transportation with respect to state highway right-of-way or any section of state highway right-of-way for the construction, operation, and maintenance of storm water control facilities under chapters 35.67, 35.92, 36.89, 36.94, 57.08, and 86.15 RCW, shall be thirty percent of the rate for comparable real property, except as otherwise provided in this section. The rate charged to the department with respect to state highway right-of-way or any section of state highway right-of-way within a local government utility's jurisdiction shall not, however, exceed the rate charged for comparable city street or county road right-of-way within the same jurisdiction. The legislature finds that the aforesaid rates are presumptively fair and equitable because of the traditional and continuing expenditures of the department of transportation for the construction, operation, and maintenance of storm water control facilities designed to control surface water or storm water runoff from state highway rights-of-way.

(2) Charges paid under subsection (1) of this section by the department of transportation must be used solely for storm water control facilities that directly reduce state highway runoff impacts or implementation of best management practices that will reduce the need for such facilities. By January 1st of each year, beginning with calendar year 1997, the local government utility, in coordination with the department, shall develop a plan for the expenditure of the charges for that calendar year. The plan must be consistent with the objectives identified in *RCW 90.78.010. In addition, beginning with the submittal for 1998, the utility shall provide a progress report on the use of charges assessed for the prior year. No charges may be paid until the plan and report have been submitted to the department.

(3) The utility imposing the charge and the department of transportation may, however, agree to either higher or lower rates with respect to the construction, operation, or maintenance of any specific storm water control facilities based upon the annual plan prescribed in subsection (2) of this section. If, after mediation, the local government utility and the department of transportation cannot agree upon the proper rate, either may commence an action in the superior court for the county in which the state highway right-of-way is located to establish the proper rate. The court in establishing the proper rate shall take into account the extent and adequacy of storm water control facilities constructed by the department and the actual benefits to the sections of state highway rights-of-way from storm water control facilities constructed, operated, and maintained by the local government utility. Control of surface water runoff and storm water runoff from state highway rights-of-way shall be deemed an actual benefit to the state highway rights-of-way. The rate for sections of state highway right-of-way as determined by the court shall be set forth in terms of the percentage of the rate for comparable real property, but shall in no event exceed the rate charged for comparable city street or county road right-of-way within the same jurisdiction.

(4) The legislature finds that the federal clean water act (national pollutant discharge elimination system, 40 C.F.R. parts 122-124), the state water pollution control act, chapter 90.48 RCW, and the highway runoff program under chapter 90.71 RCW, mandate the treatment and control of storm water runoff from state highway rights-of-way owned by the department of transportation.

9. What are the most important challenges that your municipality faces in complying with RCW 90.03.525? (only list three, 100 characters max for each)

1. _____
2. _____
3. _____

***10. Has your agency pursued alternative stormwater management practices with the Washington State Department of Transportation?**

- No
- Yes

11. What are some stormwater management practices that your municipality pursued with the Washington State Department of Transportation, and which were successful? (only list three, 100 characters max for each)

1. _____
2. _____
3. _____

12. In your opinion, what are the most important reasons why these efforts have been successful? (only list three, 100 characters max for each)

1.
2.
3.

13. What are some stormwater management practices that your municipality pursued with the Washington State Department of Transportation, but which were unsuccessful? (only list three, 100 characters max for each)

1.
2.
3.

14. In your opinion, what are the most important reasons why these efforts have been unsuccessful? (only list three, 100 characters max for each)

1.
2.
3.

***15. Which of the following best describes how your municipality deals with stormwater from state limited access highways?**

- A. My municipality manages stormwater from state limited access highways and charges the Washington State Department of Transportation
- B. My municipality manages stormwater from state limited access highways and used to charge the Washington State Department of Transportation, but no longer does so
- C. My municipality manages stormwater from state limited access highways and has never charged the Washington State Department of Transportation
- D. My municipality manages stormwater from state limited access highways and has never, but is now considering charging the Washington State Department of Transportation
- E. My municipality does not manage stormwater from state limited access highways, but may begin doing so in the future

16. What type of facility do you use to manage stormwater from limited access highways? (check all that apply)

- Detention facility
- Retention facility
- Water quality treatment facility
- Conveyance
- Other (please specify)

***17. Do you account for stormwater management costs to handle runoff from Washington State Department of Transportation limited access highways?**

- No
- Yes
- Don't know

18. What was the total cost in the 2009-2011 biennium for your municipality to manage stormwater from state limited access highways? DO NOT USE THE DOLLAR SIGN, COMMAS. OR DECIMALS. FOR EXAMPLE, IF YOUR ANSWER WAS \$6,000,000 PLEASE ENTER IT AS 6000000. IF YOU DO NOT KNOW THE ANSWER TO THIS QUESTION, PLEASE LEAVE IT BLANK.

Total cost:

19. What was the total stormwater rate revenue generated by your stormwater utility in the 2009-2011 biennium? DO NOT USE THE DOLLAR SIGN, COMMAS. OR DECIMALS. FOR EXAMPLE, IF YOUR ANSWER WAS \$6,000,000 PLEASE ENTER IT AS 6000000. IF YOU DO NOT KNOW THE ANSWER TO THIS QUESTION, PLEASE LEAVE IT BLANK.

Total rate revenue:

***20. Did your municipality charge the Washington State Department of Transportation for managing stormwater from state limited access highways in the 2009-2011 biennium as allowed by RCW 90.03.525?**

- No
- Yes

21. Why did you not charge the Washington State Department of Transportation for stormwater management in the 2009-2011 biennium? (only list three reasons, 100 characters max for each)

- 1
- 2
- 3

22. What would motivate you to start charging the Washington State Department of Transportation for stormwater management? (only list three reasons, 100 characters max for each)

- 1
- 2
- 3

***23. How would you characterize the efficiency of the process (between your jurisdiction and the Washington State Department of Transportation) of managing stormwater runoff from any state limited access highways in your jurisdiction?**

- Very inefficient
- Somewhat inefficient
- Neutral
- Somewhat efficient
- Very efficient
- Don't know
- Not applicable

24. In your opinion, what are the most important inefficiencies in the process (between your jurisdiction and the Washington State Department of Transportation) of managing stormwater runoff from any state limited access highways in your jurisdiction? (only list three reasons, 100 characters max for each)

1.
2.
3.

25. In your opinion, what would be more efficient practices in the process (between your jurisdiction and the Washington State Department of Transportation) of managing stormwater runoff from any state limited access highways in your jurisdiction? (only list three reasons, 100 characters max for each)

1.
2.
3.

***26. Just to confirm, which of the following best describes how your municipality deals with stormwater from state limited access highways? The reason we are asking this question again is to make sure that, depending on your situation, you are asked the appropriate remaining questions.**

- A. My municipality manages stormwater from state limited access highways and charges the Washington State Department of Transportation
- B. My municipality manages stormwater from state limited access highways and used to charge the Washington State Department of Transportation, but no longer does so
- C. My municipality manages stormwater from state limited access highways and has never charged the Washington State Department of Transportation
- D. My municipality manages stormwater from state limited access highways and has never, but is now considering charging the Washington State Department of Transportation

27. What method did your municipality use in the 2009-2011 biennium to calculate its charges to the Washington State Department of Transportation for managing stormwater from state for limited access highways?

- Used method outlined in RCW 90.03.525
- Used method based on amount of impervious surface areas
- Don't know
- Other (please specify)

***28. How would you characterize the process of charging the Washington State Department of Transportation for stormwater management? Would you say it is:**

- Very difficult
- Somewhat difficult
- Neutral
- Somewhat easy
- Very easy
- Don't know

29. What about the charging process was difficult? (only list three)

1. _____
2. _____
3. _____

30. In your opinion, what are the most important ways the charging process could be improved?

1. _____
2. _____
3. _____

31. How much would you estimate it costs your jurisdiction to gather the necessary reporting data and file a request to the Washington State Department of Transportation for reimbursement?

- under \$500
- \$500-\$1000
- \$1001-\$1500
- \$1501-\$2,000
- Over \$2,000
- Don't know

32. How long would you estimate it takes your jurisdiction to gather the necessary reporting data and file a request to the Washington State Department of Transportation for reimbursement?

- less than 1 working day
- 1-2 working days
- 3-4 working days
- More than 4 working days
- Don't know

33. How would you characterize the receptiveness of the Washington State Department of Transportation to charges for stormwater management?

- Very unreceptive
- Somewhat unreceptive
- Neutral
- Somewhat receptive
- Very receptive
- Don't know

34. How would you characterize the receptiveness of the Washington State Department of Transportation to supporting documentation that you submit for stormwater management?

- Very unreceptive
- Somewhat unreceptive
- Neutral
- Somewhat receptive
- Very receptive
- Don't know

***35. Have you ever been denied reimbursement?**

- No
- Yes
- Don't know

36. What were the most important reasons for your reimbursement denial? (only list three)

1.
2.
3.

***37. Have you ever been reimbursed less than you billed for?**

- No
- Yes
- Don't know

38. What were the most important reasons for your reimbursement being less than you billed for? (only list three)

1.
2.
3.

You have completed the survey. Thank you very much for participating. PLEASE BE SURE TO CLICK THE 'DONE' BUTTON SO THAT YOUR ANSWERS ARE ENTERED.

Appendix B: Detailed Methodology

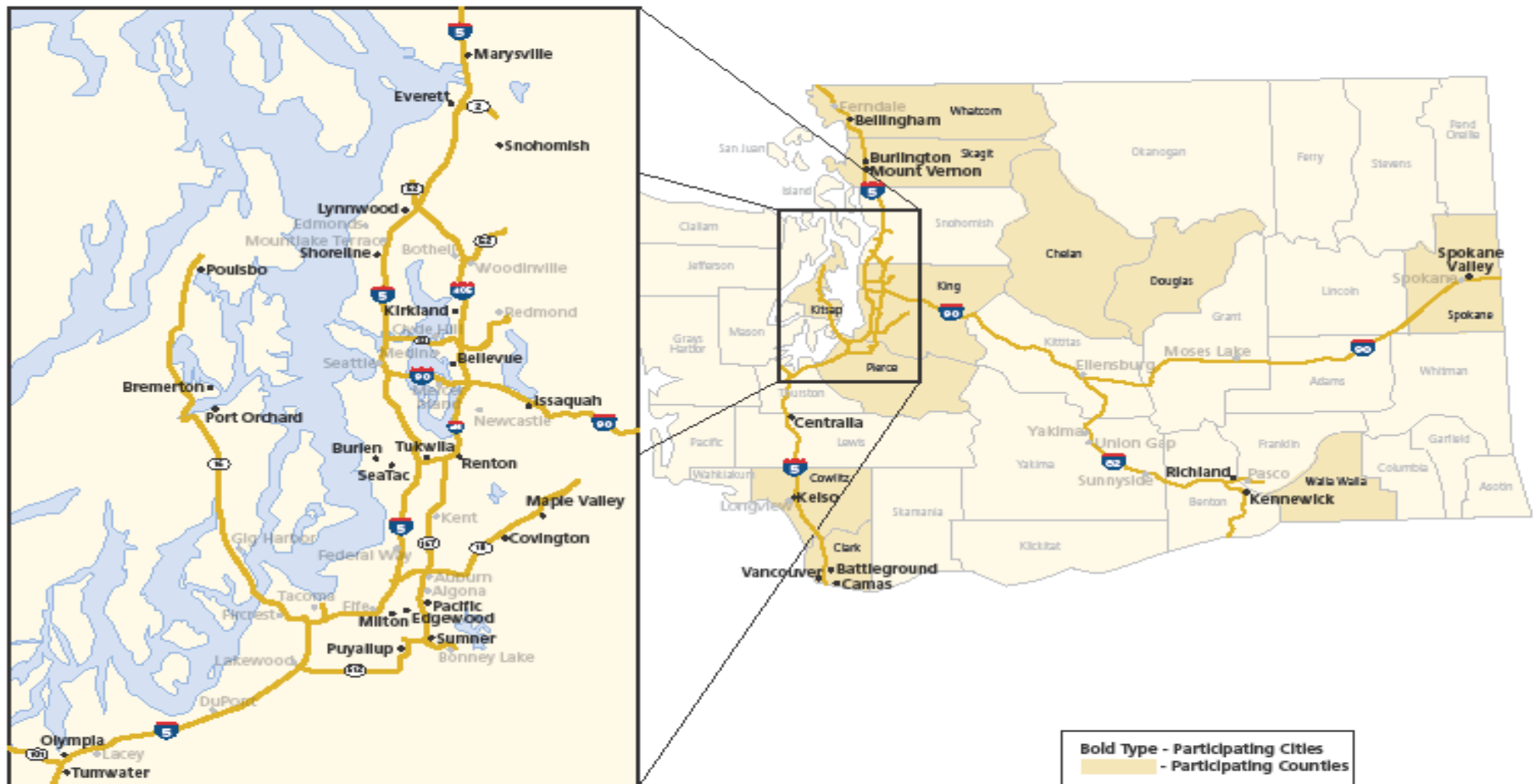
PRR followed a three step process in conducting the survey:

1. Survey question development:
 - Developed survey questions in collaboration with the consultant team and the Joint Transportation Committee
 - Questions were programmed into Survey Monkey online survey software
 - Survey questions were pretested with three cities, with very minor changes being made as a result of the pretests
2. Identification of qualified cities and counties:
 - We used maps and spreadsheets from WSDOT to identify jurisdictions that have an NPDES permit and have limited access highways within their jurisdiction
 - This approach resulted in 81 qualified jurisdictions
3. Invitation process:
 - We appended phone numbers and email addresses for key contacts at each jurisdiction
 - The Association of Washington Cities sent email to all key contacts, explaining:
 - Purpose of survey
 - Benefits of participation
 - That PRR would be calling them to invite participation and answer any questions
 - PRR then called all key contacts and invited each to participate in the survey
 - Those agreeing to participate were sent an email invite with a live link to the survey
 - A follow-up reminder was sent approximately one week after the initial invite email was sent, with a second follow-up reminder sent approximately 3 days after first follow-up reminder
 - An email invite was also sent to all jurisdictions that we were unable to contact by phone
 - Finally, the survey close date was moved from August 26th to September 2nd to allow for additional completes

The above process resulted in 45 completed questionnaires, for a response rate of 56%. (See Appendix C for a map of participating cities and counties.)

Appendix C: Map of Participating Cities and Counties

Washington Cities and Counties with NPDES Permits and Have Limited Access Highways



Appendix D: Characteristics of Responding Jurisdictions

The table below indicates the responding jurisdictions in each region of the state.

- Western Washington (not Puget Sound)

○ Battleground	○ Camas
○ Centralia	○ Clark County
○ Cowlitz County	○ Kelso
○ Vancouver	

- Puget Sound

○ Bellevue	○ Bellingham
○ Bremerton	○ Burien
○ Burlington	○ Covington
○ Edgewood	○ Everett
○ Issaquah	○ King County
○ Kirkland	○ Kitsap County
○ Lynnwood	○ Maple Valley
○ Marysville	○ Milton
○ Mount Vernon	○ Olympia
○ Pacific	○ Pierce County
○ Port Orchard	○ Poulsbo
○ Puyallup	○ Renton
○ Shoreline	○ Snohomish (city)
○ Sumner	○ Tukwila
○ Tumwater	○ Skagit County
○ Whatcom County	

- Eastern Washington:

○ Chelan County	○ Douglas County
○ Kennewick	○ Richland
○ Spokane County	○ Spokane Valley
○ Walla Walla County	

Additional characteristics of responding municipalities include:

- Type of jurisdiction: (n=45)
 - City - 76%
 - County - 24%
- Lane miles of limited access highway: (n=45)
 - Median = 6
 - Range = 1 to 81
- Population: (n=45)
 - Median = 33,011
 - Range = 5,527 to 366,738

- Median income: (n=33)
 - Median = \$45,673
 - Range = \$29,722 to \$80,350
- Square miles of jurisdiction: (n=36)
 - Median = 11
 - Range = 3 to 1,734

APPENDIX D

CASE STUDIES

CASE STUDIES

The project team agreed to research and write eight case studies from a representative cross-section of survey respondents. The case studies are to address at least the following issues:

1. The costs jurisdictions incur to manage stormwater runoff from state highways.
2. The costs that jurisdictions incur in order to impose stormwater fees upon WSDOT.
3. General challenges experienced by jurisdictions in imposing stormwater fees.
4. Barriers and challenges to jurisdictions' imposing stormwater fees on WSDOT.
5. The jurisdictions' level of satisfaction or dissatisfaction pertaining to existing state law and the WSDOT application process to recover stormwater costs.
6. Specific examples of potential improvements where WSDOT and jurisdictions may find efficiencies in the cost and management of stormwater facilities.

Case Study Selection

The following criteria were used to select case study participants:

- ◆ Is the selection eligible to charge WSDOT stormwater rates under RCW 90.03.525?
- ◆ Does the selection create / improve appropriate representation among subjects that (1) now charge WSDOT, (2) did charge WSDOT but no longer do, (3) never have charged WSDOT, and (4) have not but is now considering charging WSDOT?
- ◆ Does the selection create / improve appropriate representation between NPDES Phase I and Phase II communities?
- ◆ Does the selection create / improve appropriate representation between Eastern and Western Washington subjects?

It was further agreed that the mix of case studies should include the following characteristics:

- ◆ At least two respondents should be from Eastern Washington.
- ◆ At least one respondent should be a county.
- ◆ At least one respondent should be an NPDES Phase I permittee.

There were 45 survey respondents. Of these respondents,

- ◆ Twelve (Bellevue, Bellingham, Clark County, Douglas County, King County, Kitsap County, Olympia, Pierce County, Renton, Skagit County, Tukwila, and Vancouver) currently charge the State of Washington under RCW 90.03.525.
- ◆ Two (Issaquah and Puyallup) appear to have charged the State in the past but no longer do.
- ◆ The remaining thirty-three respondents have never charged the State under RCW 90.03.525.
- ◆ Of the 45 respondents, three (King County, Pierce County, and Clark County) are NPDES Phase I permittees.
- ◆ Seven (Chelan County, Douglas County, Kennewick, Richland, Spokane County, Spokane Valley, and Walla Walla County) are located in Eastern Washington.

Applying the above criteria to the survey respondents, the following eight jurisdictions were selected for case studies:

Table 1: Case Study Selections

Jurisdiction	Reasons Selected
City of Issaquah	Used to charge State, no longer does; NPDES Phase II
City of Puyallup	Used to charge State, no longer does; NPDES Phase II
City of Bellingham	Currently charges State; NPDES Phase II; geographic balance
Clark County	Currently charges State; NPDES Phase I; geographic balance
City of Tukwila	Currently charges State; NPDES Phase II
City of Olympia	Currently charges State; NPDES Phase II
City of Richland	Has never charged State; NPDES Phase II; Eastern Washington
City of Spokane Valley	Has never charged State; NPDES Phase II; Eastern Washington

Summary of Results

Selected background information on each of the case study selections is provided in Table 2 below.

Table 2: Case Study Background

Jurisdiction	Population	Rate Approach	Monthly Rate	Eligible Highway Area	Annual WSDOT Payment	Notes
City of Issaquah	30,434	ESU	\$14.08	50 acres	\$0	Actual costs unknown
City of Puyallup	37,022	ESU	\$10.75	20 acres	\$0	Actual costs unknown
City of Bellingham	80,885	Impervious Square Feet	\$7.00	48 acres	\$44,500	Costs estimated at \$75,000
Clark County	425,363	Impervious Square Feet	\$2.75		\$81,489	Costs estimated at \$125,000
City of Tukwila	19,107	Development Density	\$7.75	92 acres	\$62,897	Costs estimated at \$134,000
City of Olympia	46,478	Impervious Square Feet	\$10.58	49 acres	\$33,554	Costs typically exceed charges
City of Richland	48,058	ERU	\$3.85	113 acres	\$0	City reports no WSDOT impact
City of Spokane Valley	89,765	ERU	\$1.75	82 acres	\$0	City reports no WSDOT impact

Each of the case study participants was asked about suggested improvements to cost recovery under RCW 90.03.525. These results, a key outcome of the case studies, are summarized in Table 3 below.

Table 3: Case Study Results Regarding Cost Recovery under RCW 90.03.525

Suggested Improvements	City of Issaquah	City of Puyallup	City of Bellingham	Clark County	City of Tukwila	City of Olympia	City of Richland	City of Spokane Valley
Eliminate required link between WSDOT payments & spending	●	●	●	●	●	●		
Allow jurisdictions to charge non-limited access highways	●	●	●		●	●		●
Develop standard rate methodology for charging WSDOT	●	●	●	●	●	●		
Eliminate requirement that cities charge their own streets	●	●			●	●		
Develop standard application approach for charging WSDOT	●	●		●				
Increase flexibility in determining project / activity eligibility			●	●		●		
Charge full cost (not 30% of rate) to State highways			●			●		
Increase outreach to those not recovering costs	●							

CASE STUDY #1: CITY OF ISSAQUAH

BACKGROUND

Overview of Participant Agency

Demographics

The City of Issaquah is located in King County, east of Renton and Bellevue, in the WSDOT Northwest / King Region. Portions of the City's 9 square miles border Lake Sammamish. The (2010) population of Issaquah is 30,434. The median household income is \$57,892.

Agency Stormwater Program

Program Scope

For a smaller city, the City of Issaquah stormwater program provides comprehensive services including management of stormwater quantity (local flooding), stormwater quality, and habitat restoration. The City is subject to National Pollutant Discharge Elimination System (NPDES) Phase II permitting requirements. The City stormwater utility generates \$4.1 million in annual rate revenue to pay for these services.

Rate Approach

The City of Issaquah utilizes the equivalent service unit (ESU) rate approach. Single family residences are charged a uniform rate, based on the average amount of impervious surface area for single family residences in Issaquah. The charge basis for all other customer types is actual measured impervious surface area by parcel, expressed as a number of ESUs. One ESU is equal to 2,000 square feet of impervious surface area. The rate per ESU for developed property is \$14.08 per month.

Local Program History / Background with WSDOT

State Highways in Jurisdiction

Portions of Interstate 90 (5.46 miles) and State Route 900 (2 miles) lie within Issaquah city limits. These Washington State Department of Transportation (WSDOT) facilities are subject to NPDES requirements under the Department's permit. Interstate 90 and only a small piece of SR 900 are limited access highways, potentially subject to City stormwater rates as provided for in RCW 90.03.525. Within the City of Issaquah, I-90 alone is approximately 50 acres of impervious surface area and carries 120,000 average daily vehicle trips.

Stormwater Services Provided

The City reports that it manages stormwater runoff from both SR 900 and, in spots, I-90. The State is not generally impacted by runoff from the City, although some conveyance may be provided across State right-of-way.

LOCAL RELATIONSHIP WITH WSDOT

Local Costs of State Highways

Managing Runoff from State Highways

The City reports that its cost of managing runoff from State highways is unknown at this time. The City last charged the State in 2003, identifying a total of \$11,280 in expenditures associated with activities and projects that directly reduced State highway runoff impacts associated with the limited access portion of I-90. The City identified similar expenditures of \$73,230 in 2002, with the addition of a capital project not needed in 2003. The City does not charge for SR 900.

Charging the State for Its Impacts

The City reports that it no longer charges the State for highway impacts. City staff estimates that it would take several days to prepare the documentation required to support charging the State for its highway impacts again – described to be a burdensome process against the perceived benefit to the City. Further, the City no longer charges its own streets, a requirement of RCW 90.03.525. The City began exempting its own streets from stormwater rates in 2005.

General Challenges

Satisfaction with Relationship

The City reports that it has been somewhat dissatisfied with its relationship with WSDOT. Their observation is that WSDOT is very careful with fuel tax revenue, generally favoring capital expenditures over maintenance. Maintenance spending has seemed to be driven by lawsuits and other priorities. In one example, it was noted that the maintenance of a trash rack at Lewis Creek has been inconsistent, leading to destructive surges after WSDOT crews unplug it.

Potential Improvements

State / Local Coordination on Facilities Operations and Maintenance

Regarding State and local coordination on facilities operations and maintenance, City staff suggested the following potential improvements:

- ◆ Allow local access into State right-of-way for maintenance as needed;
- ◆ Improve WSDOT responsiveness to local maintenance needs; and
- ◆ Streamline / improve process that now holds up WSDOT projects.

Ability of Local Jurisdictions to Charge under RCW 90.03.525

Regarding charging WSDOT for its stormwater impacts, City staff suggested the following potential improvements:

- ◆ Develop a standard rate methodology for charging the State, provided that there be no charge for highways that do not discharge to local systems;
- ◆ Develop a standard “application” approach for charging the State;
- ◆ Eliminate the requirement that cities charge their own streets in order to charge State highways; costs are incurred by local jurisdictions anyway;

- ◆ Eliminate the requirement for documenting a specific link between WSDOT payments and activities / facilities. At a minimum, provide for straightforward reporting on how WSDOT money is expended;
- ◆ Consider allowing jurisdictions to charge for non limited access highways. Currently, cities own the responsibility with limited ways to recover the cost; and
- ◆ Increase outreach to inform jurisdictions of their ability to recover costs from WSDOT.

CASE STUDY #2: CITY OF PUYALLUP

BACKGROUND

Overview of Participant Agency

Demographics

The City of Puyallup is located in Pierce County, east of Tacoma and west of Sumner. The City is bisected slightly by the Puyallup river and lies both within the river floodplain as well as up on two high plateaus (north and south) looking down on the river. The City encompasses 12.2 square miles and has a population of 37,022 based on the 2010 census. The median household income is \$47,269.

Agency Stormwater Program

Program Scope

The City's stormwater program provides comprehensive services including management of stormwater quantity (local flooding), stormwater quality, and habitat restoration. The City is subject to National Pollutant Discharge Elimination System (NPDES) Phase II permitting requirements. The City stormwater utility generates \$3.2 million in annual rate revenue to pay for these services.

Rate Approach

The City of Puyallup utilizes the equivalent service unit (ESU) rate approach. Single family residences are charged a uniform rate, based on the average amount of impervious surface area for single family residences. The charge basis for all other customer types is actual measured impervious surface area by parcel, expressed as a number of ESUs. One ESU is equal to 2,800 square feet of impervious surface area. The rate per ESU for developed property is \$10.75 per month.

Local Program History / Background with WSDOT

State Highways in Jurisdiction

Portions of State Route 512 (3.51 miles) lie within Puyallup city limits and it carries 86,000 average daily vehicle trips. This equates to approximately 20 acres of impervious surface. This roadway is subject to NPDES requirements under the Department's permit. State Route 512 is a limited access highway potentially subject to City stormwater rates as provided for in RCW 90.03.525.

Stormwater Services Provided

The City reports that it manages some stormwater runoff from SR512. The majority of State Route 512 runoff is contained within a separate WSDOT drainage system with a direct discharge to the Puyallup River. The City has an agreement with WSDOT allowing for City runoff to discharge through the State system. Portions of SR512 from the South Hill Mall area west to the city limits discharge into the City's system draining to Clark's Creek and then to the Puyallup River. The City has been focusing on improving the runoff quality into Clark's Creek due to the impaired condition of the creek. Overall, the State is not generally impacted by runoff from the City and an historic agreement provides for conveyance of City runoff through the State's system in SR 512.

LOCAL RELATIONSHIP WITH WSDOT

Local Costs of State Highways

Managing Runoff from State Highways

The City reports that its cost of managing runoff from State highways is unknown at this time. The City last charged the State in 2003, identifying a total of \$244 in expenditures associated with activities and projects that directly reduced State highway runoff impacts associated with the limited access portion of SR512 for the 2003-5 biennium. The City identified similar expenditures of \$31,605 in 2001-3 and \$33,541 in the 99-01 biennium.

Charging the State for Its Impacts

City staff estimates that it could take several days to prepare the documentation required to support charging the State for its highway impacts again. The initial startup would be expected to be longer than in following years but since the City has not participated since 2003/5 it would be viewed as a new effort. Additionally, the individual(s) who prepared the older plans and submittals are no longer with the City.

General Challenges

Satisfaction with Relationship

The City reports that it has limited contact with WSDOT and those contacts have been satisfactory. The current City staff believes the City no longer charges the State for highway impacts because it no longer charges its own streets, a requirement of RCW 90.03.525.

Potential Improvements

State / Local Coordination on Facilities Operations and Maintenance

Regarding State and local coordination on facilities operations and maintenance, City staff had no suggestions based on limited interactions with WSDOT.

Ability of Local Jurisdictions to Charge under RCW 90.03.525

Regarding charging WSDOT for its stormwater impacts, City staff thought the following potential improvements would be beneficial and encourage them to apply:

- ◆ Develop a standard rate methodology for charging the State;
- ◆ Develop a standard “application” approach for submitting to the State;
- ◆ Eliminate the requirement that cities charge their own streets in order to charge State highways; costs are incurred by local jurisdictions anyway;
- ◆ Eliminate the requirement for documenting a specific link between WSDOT payments and activities / facilities. At a minimum, provide for straightforward reporting on how WSDOT money is expended;
- ◆ Allow jurisdictions to charge for non limited access highways.

CASE STUDY #3: CITY OF BELLINGHAM

BACKGROUND

Overview of Participant Agency

Demographics

The City of Bellingham is located in Whatcom County, on Interstate 5, in the WSDOT Northwest / Baker Region. Portions of the City's 32 square miles border Puget Sound. The (2010) population of Bellingham is 80,885. The median household income is \$37,031.

Agency Stormwater Program

Program Scope

The City of Bellingham stormwater program is a mature program that provides fish enhancement, habitat and stream restoration, stormwater quantity (local flooding) and stormwater quality services. The City is subject to NPDES Phase II permitting requirements. The City inspects some 800 private facilities in addition to maintaining its own facilities. The City stormwater utility generates about \$5.1 million in annual rate revenue to pay for these services. The City funds some stream restoration through other sources.

Rate Approach

The City of Bellingham utilizes an impervious surface area-based rate. The City charges single family residences with small impervious footprints \$4.20 per month. Single family residences with medium impervious footprints are charged \$7.00 per month, the base rate. All other developed property with an impervious footprint of greater than 3,000 square feet is charged \$.004666 per square foot of impervious surface area.

Local Program History / Background with WSDOT

State Highways in Jurisdiction

Portions of Interstate 5 (8.32 miles), State Route 11 (3.29 miles), State Route 539 (2.4 miles), and State Route 542 (1.75 miles) lie within Bellingham city limits. Only Interstate 5 is a limited access highway, potentially subject to City stormwater rates as provided for in RCW 90.03.525. Within the City of Bellingham, I-5 totals more than 48 acres of impervious surface area and carries more than 70,000 average daily vehicle trips.

Stormwater Services Provided

The City reports that it manages stormwater runoff from I-5 and the state routes in its jurisdiction. Little if any runoff from the City impacts State facilities.

LOCAL RELATIONSHIP WITH WSDOT

Local Costs of State Highways

Managing Runoff from State Highways

City staff estimates the cost of managing runoff from limited access State highways to be \$75,000 per year. To determine the cost allocable to managing runoff from limited access State highways, staff used the following general methodology. Staff reviews its costs in those basins impacted by limited access State highways. The State share is estimated by isolating its share of impervious surface area in the basin against the total impervious surface area in the basin. Costs are allocated based on that percentage, by basin. When the City has had large capital projects, staff spreads the costs over several years to reflect a realistic spending pattern. Staff reports that projects have been excluded, by their interpretation of the statute, including a \$5 million fish passage improvement. Staff reports that increased flexibility in determining those projects eligible for cost recovery would be desirable.

Charging the State for Its Impacts

The City has successfully charged the State under RCW 90.03.525 for at least six years, an average of \$44,500 per year. City staff estimates that it takes a couple days of staff time, including some input needed from other departments, to prepare the required documentation, noting that the City has systematized its submittals.

General Challenges

Satisfaction with Relationship

The City noted that it has absolutely no complaints with WSDOT or its staff.

Potential Improvements

State / Local Coordination on Facilities Operations and Maintenance

Regarding State and local coordination on facilities operations and maintenance, City staff suggested the following potential improvements:

- ◆ State-facilities impacting the City are well-maintained; and
- ◆ The City reports that it maintains a good relationship with the WSDOT crew and that they coordinate pretty well.

Ability of Local Jurisdictions to Charge under RCW 90.03.525

Regarding charging WSDOT for its stormwater impacts, City staff suggested the following potential improvements:

- ◆ There should be more leeway granted in determining project eligibility for cost recovery. It was further noted that the scrutiny applied to the inclusion of projects is not warranted in light of the 30% rate applied universally to WSDOT chargeable area;
- ◆ The State has accepted an allocation of 0.5% of City stormwater maintenance costs using the City's methodology, but the City's actual costs of managing runoff from State limited access highways would be much higher.

- ◆ The City charges its own streets, and is neutral on the idea of eliminating that as a requirement in order to charge State highways;
- ◆ City staff believes that combined effect of applying for cost recovery and reporting on how the money was spent is burdensome. In their view, either the application or the report would sufficiently document the highway impacts;
- ◆ Staff would favor recovery of the full cost of managing runoff from State highways. The 30% rate as applied to chargeable area is always less than their calculated actual cost;
- ◆ Cities should be allowed to charge state highways even if they are not limited access; and
- ◆ City staff would support a standardized rate for WSDOT facilities impacting local programs. The rate to WSDOT should not be linked to the City rate, but should instead be a standard, stand-alone rate.

CASE STUDY #4: CLARK COUNTY

BACKGROUND

Overview of Participant Agency

Demographics

Clark County is located in southwest Washington in the WSDOT Southwest Region. Portions of the County's 656 square miles border the Columbia and Lewis Rivers. The (2010) population of Clark County is 425,363. The median household income is \$56,351.

Agency Stormwater Program

Program Scope

The Clark County Clean Water Program provides stormwater quantity (local flooding) and stormwater quality services. The County is subject to NPDES Phase I permitting requirements. The County provides services consistent with its Stormwater Management Plan, exceeding minimum NPDES requirements in both monitoring and public education. The County estimates that 90% of its program costs are related to compliance with its NPDES permit. The Clean Water Program generates about \$4.9 million in annual rate revenue to pay for these services.

Rate Approach

Clark County utilizes an impervious surface area-based rate. The County charges single family residences on lots less than ½ acre \$33 per year, the equivalent of \$2.75 per month. Rates for single family residences on larger parcels decline to a low of \$19.80 per year for residences on parcels larger than 20 acres. All other developed property is charged \$33 per year for every 3,500 square feet of impervious surface area. Due to the size of the County and the number of County roads, County staff reports that the Road fund provides about 40% of the program's revenue from rates.

Local Program History / Background with WSDOT

State Highways in Jurisdiction

Portions of Interstate 5, Interstate 405, State Route 14, State Route 500, State Route 501, State Route 502, and State Route 503 lie within Clark County. Only Interstate 5, Interstate 205, and portions of State Route 14 are limited access highways, potentially subject to County stormwater rates as provided for in RCW 90.03.525.

Stormwater Services Provided

The County reports that it manages stormwater runoff State highways in the County. The County also discharges to State facilities in some areas.

LOCAL RELATIONSHIP WITH WSDOT

Local Costs of State Highways

Managing Runoff from State Highways

County staff broadly estimates the cost of managing runoff from limited access State highways to be \$125,000 per year, clarifying that the true costs is unknown. Staff reports that increased flexibility in determining how revenues from WSDOT should be spent, as needed, would be desirable. Staff further noted that the costs incurred by the State related to management of runoff generated in the County should offset those costs eligible for recovery from the State for its impacts.

Charging the State for Its Impacts

The County has successfully charged the State under RCW 90.03.525 for at least twelve years, receiving \$162,978 in the most recent biennium (an average of \$81,489 per year). County staff estimates that it takes less than \$10,000 to prepare the required documentation, noting that the County has systematized the preparation of its submittals. Staff did indicate that the reporting requirements are burdensome and that they have worked to improve the efficiency of their documentation efforts over time.

General Challenges

Satisfaction with Relationship

The County noted that they have had some difficulty getting WSDOT to engage in agreed-upon capital projects, perhaps in part due to WSDOT staff turnover. County staff reported that WSDOT had requested in 2007 that the County do more with the money it received from WSDOT, but offered little assistance. County staff indicated that projects were held up and that WSDOT engineering staff seemed to be unwilling to relinquish any of their role to County staff, essentially keeping projects from moving forward.

Potential Improvements

State / Local Coordination on Facilities Operations and Maintenance

Regarding State and local coordination on facilities operations and maintenance, County staff suggested the following potential improvements:

- ◆ Collaboration with WSDOT on projects should be more straightforward; and
- ◆ A more consistent, coordinated approach to collaboration is needed.

Ability of Local Jurisdictions to Charge under RCW 90.03.525

Regarding charging WSDOT for its stormwater impacts, County staff suggested the following potential improvements:

- ◆ The process of applying for and reporting on the expenditure of recovered costs from WSDOT should at a minimum be standardized;
- ◆ There should be more flexibility allowed in determining project eligibility for cost recovery;

- ◆ County staff would support a standardized rate for WSDOT facilities impacting local programs. The rate to WSDOT should not be linked to the County rate, but should instead be a standard, stand-alone rate; and
- ◆ Limits on how WSDOT revenues can be spent should be eliminated.

CASE STUDY #5: CITY OF TUKWILA

BACKGROUND

Overview of Participant Agency

Demographics

The City of Tukwila is located in King County, at the intersection of Interstate 5 and Interstate 405, in the WSDOT Northwest / King Region. Portions of the City's 9 square miles border the Green River. The (2010) population of Tukwila is 19,107. The median household income is \$40,718.

Agency Stormwater Program

Program Scope

The City of Tukwila stormwater program provides stormwater quantity (local flooding) and stormwater quality services. The City is subject to NPDES Phase II permitting requirements. The stormwater utility provides some funding for soil decontamination. Much of the stormwater conveyance system is on private property. The City is attempting to take responsibility for these systems through easements or by ensuring that maintenance is provided. The City stormwater utility generates \$3 million in annual rate revenue to pay for these services. The City funds some habitat restoration through the general fund.

Rate Approach

The City of Tukwila utilizes a density of development rate approach. Single family residences are charged a uniform rate. The charges for all other customer types are a function of the gross parcel size and the percentage of the parcel covered by impervious surface area. The percent coverage determines the rate per square foot. The rate for a single family residential parcel is equivalent to \$7.75 per month. The City of Tukwila is characterized by a comparatively large commercial customer base, hence the relatively low (for Puget Sound) unit rate.

Local Program History / Background with WSDOT

State Highways in Jurisdiction

Portions of Interstate 5 (6.49 miles), Interstate 405 (1.19 miles), State Route 99 (1.2 miles), State Route 181 (1.62 miles), State Route 518 (1.3 miles), State Route 599 (1.75 miles), and State Route 900 (0.9 miles) lie within Tukwila city limits. These Washington State Department of Transportation (WSDOT) facilities are subject to NPDES requirements under the Department's permit. Interstate 5, Interstate 405, SR 518, and SR 599 are limited access highways, potentially subject to City stormwater rates as provided for in RCW 90.03.525. Within the City of Tukwila, these limited access highways total almost 92 acres of impervious surface area and carry more than 300,000 average daily vehicle trips.

Stormwater Services Provided

The City reports that it manages stormwater runoff from I-5 and I-405 as it impacts Gilliam Creek, and, most significantly, from SR 518. The lack of detention on SR 518 causes overflows into Gilliam Creek. The City now owns the flap gate, formerly a WSDOT facility, where the creek meets

the Green River. Much of the stormwater volume in the City creek is from WSDOT facilities, but it is difficult to quantify how much. The State is not generally impacted by runoff from the City, although some conveyance may be provided for the creek across State right-of-way.

LOCAL RELATIONSHIP WITH WSDOT

Local Costs of State Highways

Managing Runoff from State Highways

The City reports that its cost of managing runoff from limited access State highways (I-5, I-405, SR 518, and SR 599) was \$133,919 in 2010. Based on the chargeable impervious surface area and the 30% rate applied to limited access State highways, the City charged the State \$62,896.68 for the same period. The City does not charge for SR 99, SR 181, or SR 900.

Charging the State for Its Impacts

The City has successfully charged the State under RCW 90.03.525 for at least twelve years. City staff estimates that it costs \$541 to prepare the required documentation, noting that the City has systematized its submittals. It was also noted that quantifying the impacts of State highways is very difficult and only possible through rough estimation. City staff allocates responsibility for project and maintenance costs between the City and the State by line item.

General Challenges

Satisfaction with Relationship

The City reports that it has been generally satisfied with its relationship with WSDOT. Its only difficulties have been in clearly delineating shares of responsibility for runoff volumes.

Potential Improvements

State / Local Coordination on Facilities Operations and Maintenance

Regarding State and local coordination on facilities operations and maintenance, City staff suggested the following potential improvements:

- ◆ Information such as system mapping should be better shared by WSDOT and between local governments and the State;
- ◆ Differences or lack of differences between stormwater and transportation responsibility should be better defined or acknowledged; and
- ◆ Retrofitting existing WSDOT facilities should remain a priority.

Ability of Local Jurisdictions to Charge under RCW 90.03.525

Regarding charging WSDOT for its stormwater impacts, City staff suggested the following potential improvements:

- ◆ Eliminate the requirement that cities charge their own streets in order to charge State highways; costs are incurred by local jurisdictions anyway;

- ◆ The annual reporting requirement is burdensome and should be either eliminated or produced with less frequency than once a year. If responsibilities are delineated, then additional accounting requirements are not necessary;
- ◆ The rate to WSDOT should not be linked to the City rate, but should instead be a standard, stand-alone rate;
- ◆ Cities should be allowed to charge state highways even if they are not limited access. As an example, the City has spent time and money on SR 181 issues without a mechanism for recovering costs from the State; and
- ◆ As a general philosophical observation, stormwater rates should not be subsidizing the impacts of vehicle trips and reducing the responsibility of the fuel tax.

CASE STUDY #6: CITY OF OLYMPIA

BACKGROUND

Overview of Participant Agency

Demographics

The City of Olympia is located in Thurston County, on Interstate 5, in the WSDOT Olympic Region. Portions of the City's 18.5 square miles border Puget Sound. The (2010) population of Olympia is 46,478. The median household income is \$40,846.

Agency Stormwater Program

Program Scope

The City of Olympia stormwater program is a mature program that provides stormwater quantity (local flooding), stormwater quality, and aquatic habitat services. The City is subject to NPDES Phase II permitting requirements, but generally exceeds them. The City stormwater utility generates about \$4 million in annual rate revenue to pay for these services.

Rate Approach

The City of Olympia utilizes an impervious surface area-based rate. The City charges single family residences \$10.58 per month. Nonresidential parcels are charged \$10.36 per account plus a charge for impervious surface that varies with the date of development. Parcels developed before 1980 are charged an additional \$10.26 per billing unit; parcels developed between 1980 and 1990 are charged an additional \$8.14 per billing unit; and parcels developed after 1990 are charged an additional \$3.90 per billing unit. One billing unit is equal to 2,528 square feet of impervious surface area.

Local Program History / Background with WSDOT

State Highways in Jurisdiction

Portions of Interstate 5 (3.57 miles) and State Route 101 (2.81 miles) lie within Olympia city limits. Both are limited access highways, potentially subject to City stormwater rates as provided for in RCW 90.03.525. Within the City of Olympia, I-5 and SR 101 total more than 49 acres of impervious surface area and carry more than 170,000 average daily vehicle trips.

Stormwater Services Provided

The City reports that it manages stormwater runoff from I-5 and SR 101 in its jurisdiction. There are two major stormwater facilities owned and maintained by the City. One serves only State highway runoff. The second serves SR 101 and the auto mall. The auto mall provides its own treatment, so the facility predominantly manages runoff from the State highway. The City indicated that there is a significant amount of unaccounted for State highway runoff that impacts streams and other local facilities that are City-maintained. Little if any runoff from the City impacts State facilities.

LOCAL RELATIONSHIP WITH WSDOT

Local Costs of State Highways

Managing Runoff from State Highways

City staff indicated that the total cost of managing runoff from limited access State highways is not known at this time. Essentially, they make sure that they can document actual costs in excess of the amount to be charged to WSDOT, and leave it at that. It can be stated with certainty then that their annual costs exceed \$34,000. Staff reports that the limitations placed on the types of facilities and activities eligible for cost recovery are overly constraining.

Charging the State for Its Impacts

The City has successfully charged the State under RCW 90.03.525 for at least twelve years, an average of \$33,554 per year for the most recent biennium. City staff estimates that it takes less than \$1,000 to prepare the required documentation, noting that the City has systematized its submittals. Staff also noted that they have held the rate charged to its streets and to WSDOT for many years, while it has increased its rates to other customers. They have been reluctant to increase charges to City streets.

General Challenges

Satisfaction with Relationship

City staff observed that WSDOT seems to be disengaged from stormwater management, particularly with regard to retrofitting its facilities. They also noted that runoff from State highways is very polluted and requires management. Staff cited two examples:

- ◆ First, there has been a longstanding problem with SR 101 on the west side of the City. WSDOT removed its control structure, allowing runoff to flow through to the City system. The City needs analysis and a retention solution there, and believes WSDOT should help – and could do so at much lower cost than the City.
- ◆ Second, the City will spend an estimated \$130,000 to clean out contaminants (haul sediment) from State highway runoff into the City's Indian Creek facility next year.

Staff also reported that working with WSDOT has improved significantly over the years.

Potential Improvements

State / Local Coordination on Facilities Operations and Maintenance

Regarding State and local coordination on facilities operations and maintenance, City staff suggested the following potential improvements:

- ◆ The State needs to be more engaged and collaborative with regard to mitigating its impacts on local systems.

Ability of Local Jurisdictions to Charge under RCW 90.03.525

Regarding charging WSDOT for its stormwater impacts, City staff suggested the following potential improvements:

- ◆ Increased flexibility in determining those projects and activities eligible for cost recovery would be a significant improvement;
- ◆ Restrictions on how WSDOT payments are spent should be eliminated;
- ◆ Eliminate the requirement that cities charge their own streets in order to charge State highways; costs are incurred by local jurisdictions anyway;
- ◆ Staff would favor recovery of the full cost of managing runoff from State highways. The 30% rate as applied to chargeable area is less than the calculated actual cost;
- ◆ Cities should be allowed to charge state highways even if they are not limited access; and
- ◆ City staff would support a standardized rate for WSDOT facilities impacting local programs. The rate to WSDOT should not be linked to the City rate, but should instead be a standard, stand-alone rate.

CASE STUDY #7: CITY OF RICHLAND

BACKGROUND

Overview of Participant Agency

Demographics

The City of Richland is located in Benton County, on Interstate 182 in the WSDOT South Central Region. Portions of the City's 37.8 square miles border the Columbia River. The (2010) population of Richland is 48,058. The median household income is \$53,092. It should also be noted that the average annual rainfall in Richland is less than 8 inches.

Agency Stormwater Program

Program Scope

The City of Richland stormwater program is a newer program driven in large part by stormwater quality regulations. The City is subject to NPDES Phase II permitting requirements. There is no separate stormwater division. The City provides services required to be compliant with its permit, sweeps streets, and maintains the conveyance system. The City stormwater enterprise generates about \$1.7 million in annual rate revenue to pay for these services.

Rate Approach

The City of Richland utilizes an equivalent residential unit (ERU) rate approach. Single family residences are charged a uniform rate, based on the average amount of impervious surface area for single family residences in Richland. The charge basis for all other customer types is actual measured impervious surface area by parcel, expressed as a number of ERUs. One ERU is equal to 3,000 square feet of impervious surface area. The rate per ERU for developed property is \$3.85 per month.

Local Program History / Background with WSDOT

State Highways in Jurisdiction

Portions of Interstate 182 (5.04 miles), State Route 224 (1.53 miles), and State Route 240 (14.3 miles) lie within Richland city limits. Both I-182 and SR 240 are limited access highways, potentially subject to City stormwater rates as provided for in RCW 90.03.525. Within the City of Richland, limited access State highways total about 113 acres of impervious surface area and carry about 100,000 average daily vehicle trips.

Stormwater Services Provided

The City reports that the State fully mitigates the impacts of its State highways in the City, including SR 224, located in the Yakima River floodplain and served by a number of roadside ditches. Some City runoff discharges into State facilities.

LOCAL RELATIONSHIP WITH WSDOT

Local Costs of State Highways

Managing Runoff from State Highways

City staff reports that no costs are incurred by the City for managing runoff from State facilities. The State manages all of its runoff.

Charging the State for Its Impacts

The City does not charge and has not ever charged the State under RCW 90.03.525.

General Challenges

Satisfaction with Relationship

The City noted that its relationship with WSDOT is problem free.

Potential Improvements

State / Local Coordination on Facilities Operations and Maintenance

Regarding State and local coordination on facilities operations and maintenance, no suggested improvements were noted.

Ability of Local Jurisdictions to Charge under RCW 90.03.525

Regarding charging WSDOT for its stormwater impacts, no suggested improvements were noted.

CASE STUDY #8: CITY OF SPOKANE VALLEY

BACKGROUND

Overview of Participant Agency

Demographics

Incorporated in 2003, the City of Spokane Valley is located in Spokane County on Interstate 90, in the WSDOT Eastern Region. Portions of the City's 38 square miles border the Spokane River. The (2010) population of Spokane Valley is 89,765. The median household income is \$44,000 (from Spokane County). It should also be noted that the average annual rainfall in Spokane Valley is approximately 17 inches.

Agency Stormwater Program

Program Scope

The City of Spokane Valley's largely inherited stormwater system is made up of more than 8,000 drywells and few (if any) piped sections. Most stormwater drainage is directed into swales and drywells. Program costs include rehabilitation of older drywells. There is a push underway to improve the drywell system by adding more swales and reducing sediment. There are some minor localized flooding issues during infrequent rain events. The City is subject to National Pollutant Discharge Elimination System (NPDES) Phase II permitting requirements. The City stormwater utility generates \$1.6 million in annual rate revenue to pay for these mostly contracted services.

Rate Approach

The City of Spokane Valley utilizes an equivalent residential unit (ERU) rate approach. Single family residences are charged a uniform rate, based on the average amount of impervious surface area for single family residences in Spokane Valley. The charge basis for all other customer types is actual measured impervious surface area by parcel, expressed as a number of ERUs. One ERU is equal to 3,160 square feet of impervious surface area. The rate per ESU for developed property is \$21.00 per year, the equivalent of \$1.75 per month.

Local Program History / Background with WSDOT

State Highways in Jurisdiction

Portions of Interstate 90 (10.11 miles), State Route 27 (4.56 miles), and State Route 290 (8.53 miles) lie within Spokane Valley city limits. The City reports that only Interstate 90 is a limited access highway, potentially subject to City stormwater rates as provided for in RCW 90.03.525. Within the City of Spokane Valley, I-90 is more than 82 acres of impervious surface area and carries 65,000 average daily vehicle trips.

Stormwater Services Provided

The City reports that the State fully mitigates runoff from I-90. WSDOT maintains swales on SR 290. The City maintains drywells associated with SR 27 and is in the midst of a discussion with WSDOT about who should be responsible for repairs to those structures.

LOCAL RELATIONSHIP WITH WSDOT

Local Costs of State Highways

Managing Runoff from State Highways

The City reports that it incurs no cost for managing runoff from I-90, the only limited access highway in the City. The City does incur costs for maintaining drywells associated with SR 27, and expects those costs could increase substantially if they accept responsibility for future repairs to those structures.

Charging the State for Its Impacts

The City does not charge and has not ever charged the State under RCW 90.03.525.

General Challenges

Satisfaction with Relationship

The City reports that it has an excellent relationship with WSDOT. They view the two entities as partners trying to solve a problem.

Potential Improvements

State / Local Coordination on Facilities Operations and Maintenance

Regarding State and local coordination on facilities operations and maintenance, City staff suggested the following potential improvement:

- ◆ Revisit the agreement in which cities accept certain responsibilities for non limited access highways. They have found that agreement to be confusing as it relates to stormwater facilities maintenance and repair.

Ability of Local Jurisdictions to Charge under RCW 90.03.525

Regarding charging WSDOT for its stormwater impacts, City staff suggested the following potential improvement:

- ◆ Consider allowing jurisdictions to charge for non limited access highways. Cities need a way to recover the cost of their responsibilities.

APPENDIX E

RECOMMENDATIONS OF EFFICIENCIES

RECOMMENDATIONS FOR EFFICIENCIES IN THE COST AND MANAGEMENT OF STATE LIMITED ACCESS HIGHWAY RUNOFF WITHIN JURISDICTIONAL BOUNDARIES

RCW 90.03.525 governs how cities and counties can recover stormwater costs on state highways that are within their respective jurisdictions. This assessment of the RCW 90.03.525 cost recovery process is conducted to determine opportunities for increased efficiencies in the administration of this state law as well as in the overall stormwater management practices between the Washington State Department of Transportation (WSDOT) and local jurisdictions. This report summarizes the regulatory requirements associated with stormwater and details specific areas for consideration for improvements to the state law, as well as the management practices for implementation of its requirements. Changes are suggested for increasing efficiencies for stormwater management activities between WSDOT and local stormwater utilities.

History of the Clean Water Act

In order to understand the opportunities and limitations for interactions between WSDOT and local jurisdictions, it is necessary to understand the foundation upon which many of their common activities are based. Nationwide, the primary driver is the Clean Water Act. In Washington State, the primary driver is RCW 90.48, the State Water Pollution Control Act initially enacted in 1945.

The Clean Water Act (CWA) began in 1948 as the Federal Water Pollution Control Act (Act). It was the first major U.S. law to address water pollution, but was primarily focused on wastewater and industrial discharges. In 1969, the Cuyahoga River in Cleveland, Ohio, caught fire for the thirteenth time since 1868. The 1969 fire caught the attention of the public and helped spur an avalanche of water pollution control activities which resulted in significant modifications to the Act.

The Federal Water Pollution Control Act was amended many times beginning in 1961, leading to the eventual adoption of the Clean Water Act in 1977. Of particular interest for this report is the 1977 amendment establishing Section 402 of the Clean Water Act, which established the National Pollutant Discharge Elimination System (NPDES) and authorized the Environmental Protection Agency (EPA) to issue discharge permits. These permits are essentially legal authorization to discharge low levels of constituents per the permit language. Even up to 1972, the focus remained on wastewater, oil discharges, sanitary discharges by marine vessels, and mining activities.

Storm sewer systems were not a focus of the Act until 1977, when the courts directed EPA to include both Jurisdictional Separate Storm Sewer Systems (MS4s) and Industrial stormwater discharges in the NPDES permit program.

The 1977 Clean Water Act (P.L. 95-217) outlined the basic structure for regulating pollutant discharges into waters of the United States. The resulting law gave the EPA the authority

- to implement pollution control programs such as setting wastewater standards for industry;
- to set water quality standards for all contaminants in surface waters;
- made it unlawful for any person to discharge pollutants from a point source into navigable waters without a permit;
- established the construction grants program to fund sewage treatment plants; and

- recognized the need for planning to address the critical problems posed by nonpoint source pollution.

Nationwide research indicated that stormwater runoff was a significant cause of water quality impairment. Between 1979 and 1983 EPA's Nationwide Urban Runoff Program (NURP) documented this urban stormwater problem. Local jurisdictions across the country participated in this study, including Bellevue, Washington. The research found the following:

- "Heavy metals (especially copper, lead, and zinc) are by far the most prevalent priority pollutant constituents found in urban runoff;
- Coliform bacteria are present at high levels in urban runoff;
- Oxygen-demanding substances are present in urban runoff at concentrations approximating those in secondary treatment plant discharges (wastewater treatment plants); and
- Detention basins...and recharge devices are capable of providing very effective removal of pollutants in urban runoff."

The federal Water Quality Act of 1987 (P.L. 100-4) provided the most recent series of amendments to the original statute. Findings of the NURP study were cited in requiring local governments and industry to address the pollution sources. Following adoption of the Water Quality Act, EPA established a schedule for NPDES permit issuance for Phase I and Phase II jurisdictions in 1995 and 2003 respectively.

EPA Implementation of the Clean Water Act (CWA)

The EPA administers the NPDES permit program. The Act allows EPA to delegate permitting authority to states provided the state can ensure compliance. EPA retains NPDES authority for federal agencies, such as for the Department of Defense, and for tribes. States may only issue permits for up to five years.

When EPA delegates authority to a state, responsibility for development of an appropriate NPDES program resides with the state with oversight by the EPA. For transportation projects, the Federal Highway Administration (FHWA) relies on the state agency to promulgate appropriate water quality criteria to be used by the Department of Transportation as well as other NPDES permit conditions. As long as the DOT is compliant with their issued NPDES permit requirements, FHWA does not further condition the design of roadway projects relative to stormwater.

Washington State Water Pollution Control Act and NPDES Implementation

EPA delegated NPDES permit authority to Washington State's Department of Ecology in 1987. The State Water Pollution Control Act, RCW 90.48, is the foundation of the NPDES permit program in Washington State. Through this RCW, the state issues a combination State Waste Discharge Permit and NPDES permit. As authorized in RCW 90.48, the State Waste Discharge Permit includes provisions required by the CWA, and additional state-only requirements. The Department of Ecology tracks both sets of requirements – those required by the federal CWA, and the additional state-only requirements. This distinction is important as it relates to citizen lawsuits.

Section 1365 of the CWA authorizes any citizen to bring civil action against any NPDES permit holder suspected or known to be in violation of any provisions of the permit. NPDES permit holders are required to self-report violations of their permit, known as G20 letters, to the Department of Ecology. These letters are public records and subject to the Public Records Act (RCW 42.56). It is not surprising, then to find that NPDES permittees are very engaged with Ecology during the development of their permits, and often seek to limit their third-party liability exposure both during permit development, and in front of the Pollution Control Hearings Board (PCHB) once the permit is issued.

Washington State Permit Development History

The CWA recognized the differences between small and large jurisdictions and set up different permit provisions and timelines for permit issuance. Phase I permits apply to large jurisdictions (over 100,000 in population), and were mandated first in 1995. Phase II permits are required for jurisdictions under 100,000 in population; their permits were required to be issued in 2003.

Ecology issued six NPDES Phase I permits in 1995, and a seventh in 1999. These permits required development and implementation of stormwater management programs to reduce the discharge of pollutants to the maximum extent practicable. Ecology adopted a Stormwater Design Manual in 1992 as a guideline for local jurisdictions to use in crafting development standards relative to stormwater runoff. This manual was one of the foundations for the 1995 permit and has been updated at each permit issuance. These permits were intended to only last 5 years; however, Ecology administratively extended permit coverage until they re-issued them in January of 2007. These Phase I permittees include four counties (King, Pierce, Snohomish and Clark - 1999); two cities (Seattle and Tacoma) and WSDOT. Pursuant to federal regulations, state highway drainage systems meet the definition of an MS4; therefore WSDOT was required to obtain coverage for its highways within these jurisdictions and Water Quality Management Areas. WSDOT published the first version of its Highway Runoff Manual as required by the Puget Sound Highway Runoff Rule (Chapter 173-270 WAC) in 1995, which was then incorporated by reference into its Stormwater Management Program Plan (as required by the 1995 Phase I permits).

In 1995, no local government stormwater Phase I permits were issued for eastern Washington because no cities or unincorporated counties had populations exceeding 100,000.

In 2003, CWA Phase II regulations took effect, but it wasn't until 2007 that Ecology issued any Phase II permits. The Phase II entities complied with the CWA between 2003 and 2007 by submitting a Notice of Intent to comply (NOI); this helped to avoid litigation for failure to comply with the law.

In January of 2007, Ecology issued two Phase II permits – one for eastern Washington, and one for western Washington. This action brought over 80 cities and portions of 5 counties into compliance with the stormwater provisions of the CWA. The two different permits recognized the climatic differences between western and eastern Washington, as well as the state of readiness for the permits east and west of the Cascades. Western Washington jurisdictions have been addressing stormwater management issues for decades, whereas most eastern Washington jurisdictions have not.

The western Washington Phase II permit was appealed to the Pollution Control Hearings Board (PCHB). As a result, Ecology issued an amended western Washington Municipal Stormwater NPDES and State Waste Discharge General Permit (the Permit) in 2009. One of the major changes to the permit language was the requirement to use Low Impact Development (LID) techniques, Best Management Practices (BMPs) and concepts in basin planning, site development planning, and transportation projects: “...*must require non-structural preventative actions and source reduction approaches including Low Impact Development (LID) Techniques, to minimize the creation of impervious surfaces, and measures to minimize the disturbance of soils and vegetation where*

feasible.” This concept is pushed forward into LID techniques and BMPs now required in all Phase I and Phase II western Washington NPDES permits.

In 2009, another major permit change was enacted. WSDOT was issued its own separate stormwater permit, which recognizes the differences between improvements to the linear (limited right-of-way) transportation system, and private development.

Phase I and II General Permit Requirements and WSDOT Specific Permit Requirements

In order to evaluate opportunities for cities and counties and WSDOT to work together on stormwater management, it is necessary to understand permit requirements and their history. These include differences between Phase I and II permits and western and eastern Washington permits. WSDOT operates its transportation system across the state but is only held to meeting its permit requirements within specific geographic boundaries (see Figure 6.1). However, pursuant to a separate implementing agreement with Ecology, WSDOT applies its Highway Runoff Manual to projects statewide, irrespective of permit coverage areas. If WSDOT and a local jurisdiction are to explore the opportunities to share resources and/or maintenance responsibilities, it will be necessary to ensure that the more stringent NPDES permit requirement, if one exists, is utilized so as to protect both parties from claims of non-compliance and potential fines or litigation.

The issues addressed in the city and county permits include:

- 1) Public Education and Outreach
- 2) Public Involvement and Participation
- 3) Illicit Discharge Detection and Elimination
- 4) Controlling Runoff from New Development, Redevelopment, and Construction Sites
- 5) Pollution Prevention and Operation and Maintenance for Municipal Operations
- 6) Annual Reporting
- 7) Monitoring (Phase I only)
- 8) Structural Stormwater Controls (Phase I only)
- 9) Source Control for Existing Development (Phase I only)

The issues addressed in the WSDOT permit include:

- 1) Implement and enforce an approved Stormwater Management Program (SWMP) which includes controlling runoff from new development and redevelopment
- 2) Illicit Discharge Detection and Elimination Program
- 3) Construction Stormwater Pollution Prevention Program
- 4) Stormwater BMP Retrofit Program
- 5) Highway Maintenance
- 6) Ferry Terminal Maintenance
- 7) Research and Monitoring
- 8) Education/Outreach/Involvement Program
- 9) Annual Reporting

All NPDES permittees are required to adopt the Ecology 2005 *Stormwater Management Manual for Western Washington* (or *Eastern Washington* as appropriate) or an approved Phase I permittee’s

manual. WSDOT has developed its own *Highway Runoff Manual*, which Ecology has determined is functionally equivalent to the 2005 Manual and is applicable in both eastern and western Washington.

WSDOT currently participates in regional efforts advancing public education and outreach, revisions to design criteria for Ecology’s *Stormwater Management Manual*, and changes in construction stormwater pollution prevention measures. Further, WSDOT collaborates with the other Phase I jurisdictions on permit requirements overall, and implementation specifically through many standing meetings and professional organizations (i.e., APWA Surface Water Managers’ Subcommittee).

In 2009, Ecology placed requirements in the Phase I and WSDOT permits requiring the use of low impact development (LID) where feasible and practicable. The restricted nature of WSDOT rights-of-way limits the use of LID. Local jurisdictions may have greater opportunity to use LID for local roads and streets due to the availability of land adjacent to roads and streets, as well as off right-of-way.

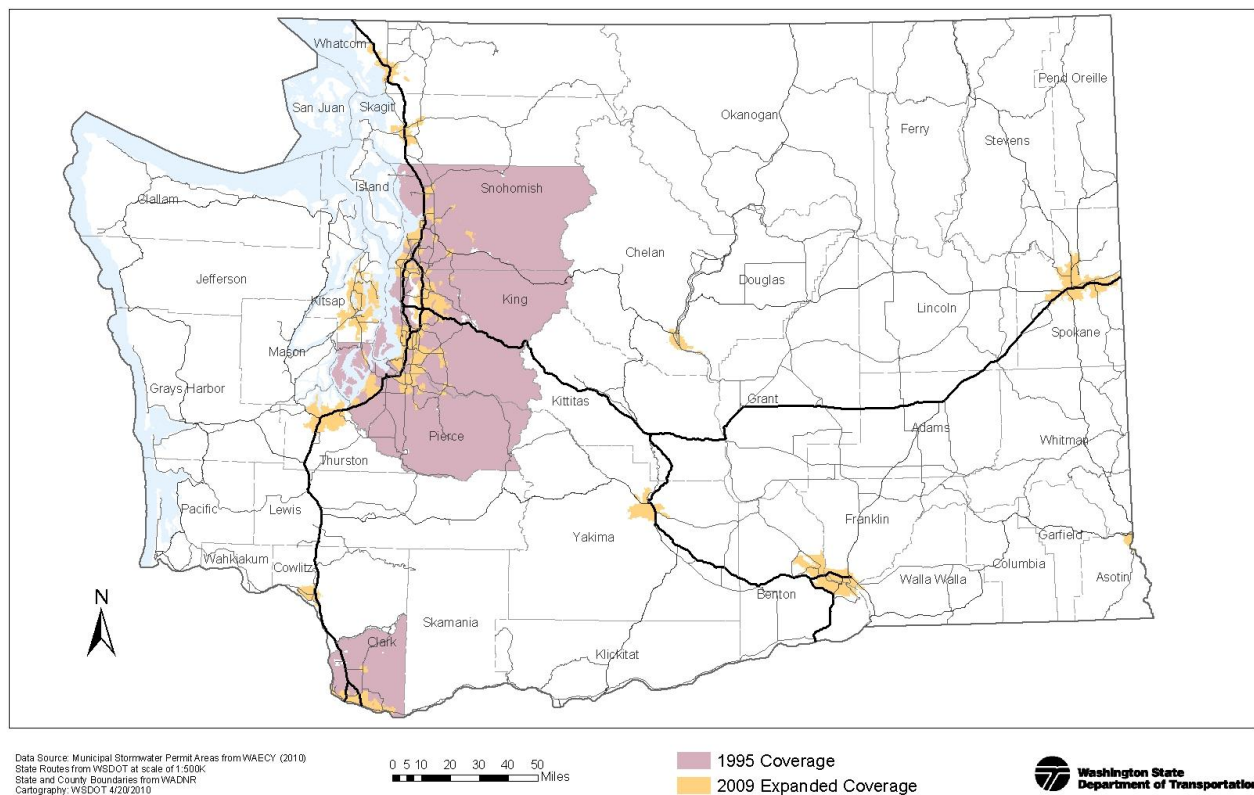


Figure 6.1 WSDOT 2009 NPDES Municipal Stormwater Permit Geographic Coverage

Overlap of NPDES permits

Figure 6.1 shows the relatively limited geographic nature of the WSDOT NPDES permit. The permit coverage was established by Ecology based on concentrations of population centers in accordance with the CWA requirements. Figure 6.2 overlays both the Phase I and Phase II permits with the WSDOT permit and reveals the extents of permit coverage along the WSDOT rights-of-way.

The CWA assigns responsibility for permit compliance to the owner and the operator of stormwater systems.

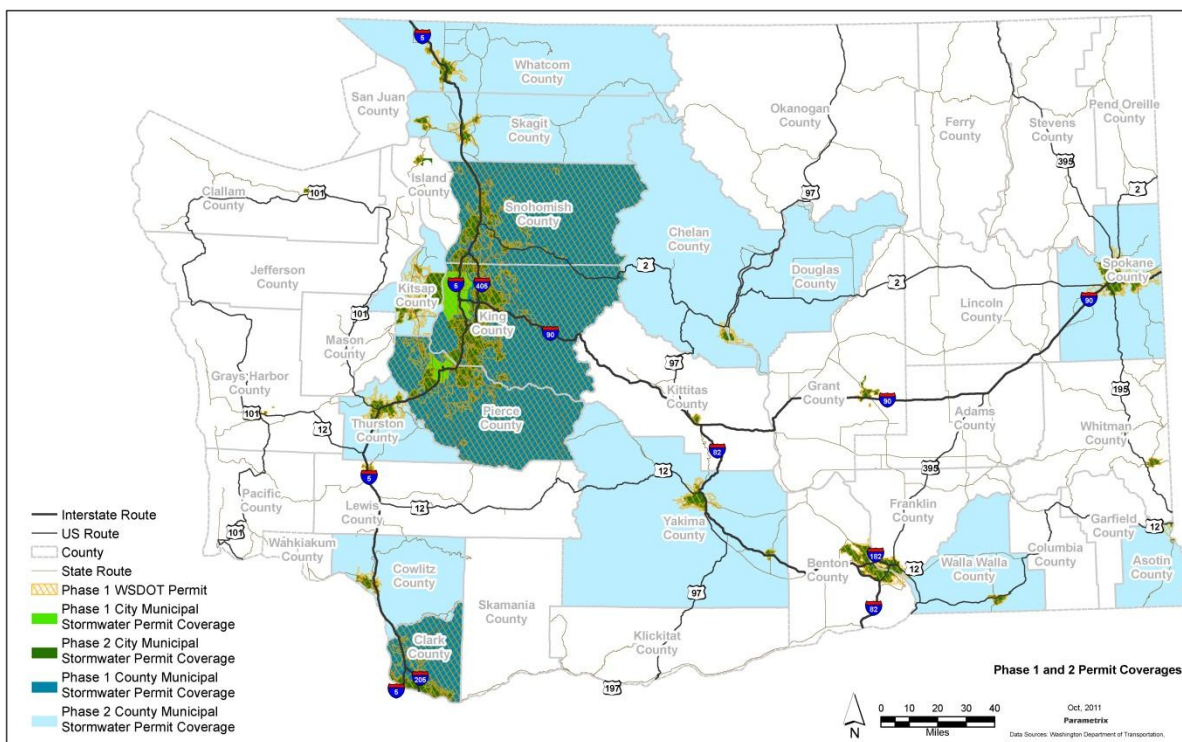


Figure 6.2. NPDES Stormwater Permit Coverages State Wide

Local Responsibility for State Rights of Way:

State RCW 47.24.020 divides maintenance responsibilities between cities and the state for city streets that serve as part of the state highway system. This RCW also provides that the state shall retain ownership of the underlying land when access to the city street is limited and the city shall retain ownership when access to the city street is not limited. Cities and towns are responsible for maintaining all underground utilities including storm water facilities such as catch basins and pipe systems along with many other responsibilities. Under the CWA provisions, the local city or town is operator of the storm water system and if they hold an NPDES permit, the permit requirements cover these activities. Under the CWA provisions, WSDOT is the owner of the right of way and similarly appears to have NPDES permit responsibility for permit compliance.

Primary responsibility for compliance with the CWA resides with the city or town. However, failure on the part of the local jurisdiction to comply with its NPDES permit requirement(s) may leave WSDOT exposed to CWA compliance actions and third-party citizen lawsuits.

Overlapping NPDES Permit Responsibilities			
	Limited Access Highways within City limits (i.e. I-5, I-90)	Unlimited Access Highways within City limits* (i.e. SR 99)	Study findings:
<u>WSDOT</u>	Yes	Yes	WSDOT owns right of way. CWA appears to require the right of way be included in the State’s permit coverage.
<u>Cities</u>	No	Yes	Cities are required by RCW 47.24 to maintain. CWA appears to require the right of way be included in the City’s permit coverage.

*The Department of Transportation and the Association of Washington Cities have a 1997 agreement that clarifies what cities are to maintain and it includes managing stormwater from unlimited access highways.

Managing Runoff from State Highways:

In 1986, the State Legislature enacted RCW 90.03.525 to address how cities and counties can recover costs for managing runoff from limited access highways within their jurisdictional boundaries. The text of 90.03.525 can be found in Appendix A. In addition to this RCW, the following RCWs further identify how other state facilities such as buildings are addressed relative to stormwater utility fees.

- RCW 35.92.021 Public property subject to rates and charges for storm water control facilities.
- RCW 35.67.025 Public property subject to rates and charges for storm water control facilities
- RCW 36.89.085 Storm water control facilities – Public property subject to rates and charges
- RCW 36.94.145 Public property subject to rates and charges for storm water control facilities

Each of these RCW’s states the following and only differs in the referenced RCW governing cities or counties.

Except as otherwise provided in RCW [90.03.525](#), any public entity and public property, including the state of Washington and state property, shall be subject to rates and charges for storm water control facilities to the same extent private persons and private property are subject to such rates and charges that are imposed by counties pursuant to RCW [36.94.140](#). In setting these rates and charges, consideration may be made of in-kind services, such as stream improvements or donation of property.

STORMWATER MANAGEMENT FUNDING FOR CITIES AND COUNTIES

The Utility Concept

A stormwater utility is a stand-alone entity, usually set up as an enterprise fund, within the city or county's legislative authority. It is defined as being financially and organizationally self-sufficient and can be designed to furnish a limited or comprehensive set of services related to stormwater runoff and surface water management.

The following is a summary of the utility concept:

“A stormwater utility provides a reliable, dedicated source of revenue and an organizational structure that is dedicated to stormwater concerns. As a utility, a stormwater management program can be carried out as a “stand alone” operation, with its own budget, implementation plan, and employees dedicated solely to stormwater system operation, maintenance, administration, and education. Also, creating a utility is often more acceptable politically, as many communities tend to resist the creation of new programs using special districts. Creating a utility has the added benefit of freeing up tax dollars from the local government's general fund that would normally be used for stormwater concerns, and this “extra” money can be applied toward other needs.”¹

Legal Authorization

RCW 35.67.020, authorizes cities to “to fix, alter, regulate, and control the rates and charges for their” systems of sewerage, defined in RCW 35.67.010 to include stormwater management. Similar authorization is provided for county programs in RCW Chapters 36.89, 36.94, and 86.15.

Other important RCW sections include 35.67.025, which specifies that all public property “shall be subject to rates and charges for storm water control facilities to the same extent private persons and private property are subject to such rates and charges,” and 90.03.525, which limits the imposition of stormwater rates and charges on state limited access highways.

Stormwater Utility Rates

Most stormwater utility rates are based on impervious surface area, which is widely accepted as an appropriate measure of a property's contribution of runoff. It provides a clear relationship, or “rational nexus,” to service received from a stormwater program.

To minimize administrative and data collection costs, stormwater utilities typically develop a uniform rate for single family residential customers based on an estimated average amount of impervious surface area per developed residential parcel. For all other customer types, the charge basis typically is the actual measured impervious surface area by parcel. The charge itself is typically calculated as a dollar amount per unit of impervious surface area, or an equivalent unit of service. For example, one equivalent service unit (ESU) may equal 3,000 square feet of impervious surface area. An ESU can and does vary from jurisdiction to jurisdiction. ESUs do not include the street because the property owner does not own the street and has no control over it. Maintenance of the street's infrastructure is either paid for by the utility rate payers as an element of their base rate, paid for through a charge by the utility to the general fund or road fund, or conducted by and paid for by a different department within the city or county government.

Stormwater rates, in combination with other funding sources, pay for capital construction of stormwater systems and controls to prevent flooding and improve water quality; maintenance and operations; and implementation of NPDES permit programs.

¹ Stormwater Program Guidance Manual for the Puget Sound Basin.

Alternative approaches to stormwater rates include density of development, usually distinguished by rates for different percentages of impervious coverage applied to the lot size. Both King County and the City of Bellevue utilize forms of the density of development approach.

Other Local Funding Sources for Stormwater Management

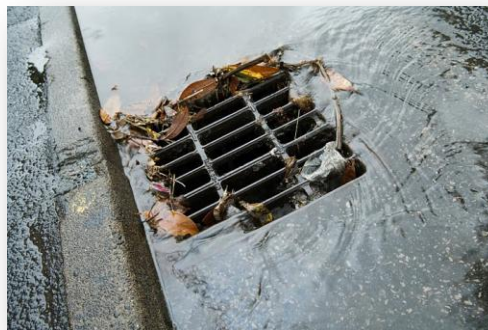
Most Washington stormwater programs subject to NPDES permitting requirements recover their costs through stormwater utility rates. Some secondary funding sources also are available, with varying degrees of applicability.

Capital and Operations Funding:

The Street/Road Fund: City street funds and county road funds have historically been used to fund stormwater management activities within the rights-of-way. This includes construction and maintenance in the rights of way, and design and construction of conveyance, water quality, and flow control facilities related to the roadway.

The General Fund: Property tax and sales tax revenues have been the primary source of general fund resources in Washington cities and counties. Use of general fund money is usually unrestricted, and thus is available for stormwater management.

However, general fund resources are subject to many competing demands (such as public safety, parks, etc.) and cannot usually be considered a reliable source for ongoing funding and bond repayments on capital facility projects.



Capital Funding:

Special Assessments/Local Improvement Districts: Most commonly structured as local improvement districts, these funding mechanisms assess individual properties benefited or served by a specific capital improvement for a share of the cost of that facility. Special benefit must be demonstrated by an increase in assessed valuation due to the improvement; this is often a difficult linkage to demonstrate for stormwater improvements. Local improvement districts are rarely used for stormwater management activities.

Special Fees: Direct charges/fees may be used to recover the direct costs for services performed for a customer or class of customers not generally related to the overall service charge, such as development inspections.

Capital Facilities Charges: Capital, or general, facilities charges are authorized for cities under RCW 35.92.025. Authorization is less straightforward for county stormwater utilities authorized under either RCW 36.89 or 36.94. Capital facilities charges are one-time charges imposed as a condition of development and are designed to recover an equitable share of the cost of capital investment incurred by the utility. Revenues from such charges are dependent on growth and are available for capital purposes only.

Conventional Debt Instruments: The most commonly used long-term debt instruments are revenue and general obligation bonds. Bond anticipation notes are available for short-term “interim” capital financing. These sources are available for capital funding only.

- Revenue bonds are the most common source of funds for construction of major utility improvements. There are no statutory limitations on the amount of revenue bonds a utility can issue; however, utilities are required to meet yearly net operating income coverage

requirements, commonly 1.25 times the annual debt service. In fact, to issue new debt, it may be necessary to demonstrate coverage in excess of this level based on a market-driven target, possibly in the range of 1.5 to 2.0.

Revenue bond debt service is paid out of rate revenues. The terms on revenue bonds are not as favorable as general obligation bonds, but carry the advantage of leaving the city's debt capacity undisturbed. Interest rates vary depending on market conditions.

- General obligation bonds are secured by the taxing power of the city, are typically paid through property tax revenues, and may be subject to a public vote. Cities and counties often instead choose to repay the debt from rate revenues, resorting to property taxes only if the rates fail to meet debt obligation.

The financing costs of general obligation bonds are lower than revenue bonds due to (1) lower interest rates available, (2) no coverage requirements, and (3) no reserve requirements.

- Short-term "interim" financing mechanisms are also available for capital costs. Bond anticipation notes can provide interim financing during construction, while allowing flexibility in the choice of long-term financing instruments. Typically, bond anticipation notes have lower interest rates than bonds, but add to issuance costs.



State and Federal Assistance:

Special Grants and Loans: Some state and federally administered grant and loan opportunities are available for capital funding only.

- Department of Ecology Grants and Loans: The Washington Department of Ecology (Ecology) administers an integrated funding program for three state and federal financial assistance programs to improve and protect water quality. Each funding cycle begins in the fall when Ecology accepts project applications. Ecology rates and ranks applications based on the highest-priority needs; projects include stormwater control and treatment, nonpoint pollution abatement and stream restoration activities, and water quality education and outreach. The amount of available grant and loan funding varies from year to year based on the state's biennial budget appropriation process and the annual congressional federal budget. The three sources of funding for water quality projects are:
 - Centennial Clean Water Fund Grant Program,
 - Federal Clean Water Act Section 319 Nonpoint-Source Grant Program, and
 - Washington State Water Pollution Control Revolving Fund Loan Program.
- Public Works Trust Fund (PWTF): Cities, towns, counties and special purpose districts are eligible to receive loans. Water, sewer, stormwater, roads, bridges, and solid waste/recycling are eligible, and funds may be used for repair, replacement, rehabilitation, reconstruction, and improvements including reasonable growth (generally the 20-year growth projection in the comprehensive plan).

PWTF loans are available at interest rates of 0.5 percent, 1 percent, and 2 percent with the lower interest rates given to applicants who pay a larger share of the total project costs. The

loan applicant must provide a minimum local match of funds of 5 percent towards the project cost to qualify for a 2 percent loan, 10 percent for a 1 percent loan, and 15 percent for a 0.5 percent loan. The useful life of the project determines the loan term up to a maximum of 20 years. PWTF loans are only available for capital expenditures and not for NPDES permit compliance nor maintenance and operations functions.

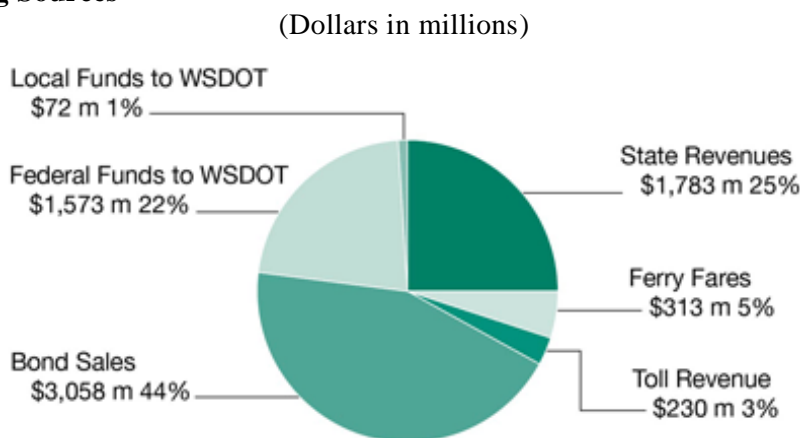
According to the Local Government Financial Reporting System (<http://www2.sao.wa.gov/applications/lgfrs/>), cities collected \$254 million in stormwater fees and charges in 2010. This does not include the additional \$25 million distributed by the state through grants from Ecology. Counties collected \$54 million in stormwater fees and charges and received approximately \$10 million in grants from Ecology for stormwater. Collectively, local governments spent more than \$340 million addressing stormwater in 2010.

WSDOT Funding Breakdown

WSDOT annual funding comes from a variety of sources collected at the state, federal, and local levels. According to WSDOT, the sources include taxes and fees, ferry fares, concessions, carry forward fund balances, and other miscellaneous revenues. Overall, \$9.4 billion in transportation funds is available in the 2011–2013 Transportation Budget; of this, WSDOT retains \$7.0 billion. The remaining \$2.4 billion is distributed to cities, counties, the Washington State Patrol, and other agencies, and used for debt service.

The state fuel tax generates \$2.531 billion; bond sales amount to \$3.058 billion; and federal funds amount to \$1.573 billion. Licenses, permits, and fees collect an additional \$938 million. Ferry fares and fees are another \$317 million total, with other revenue and funds adding another \$946 million. The breakdown on the actual funding available to WSDOT is shown below:

WSDOT Funding Sources



WSDOT Investment in Stormwater

The use of WSDOT funding is prescribed through legislative budget appropriations and a variety of federal and state laws. As such, WSDOT is limited on what types and amounts of funds can be spent on stormwater.

The majority of WSDOT’s stormwater expenditures are for mitigating adverse stormwater runoff affects by building stormwater treatment and flow control best management practices (BMPs) as a part of highway construction projects. As part of WSDOT’s highway construction program during the 2009-11 biennium, it is estimated that at least \$86 million out of a \$3.43 billion 2009-11 capital

program was spent on stormwater. An additional \$38.5 million will be spent statewide by WSDOT for stormwater-related maintenance activities in the 2011-13 biennium. WSDOT payments to local governments in stormwater assessments have steadily increased over time, going from \$1.2 million paid out in the 1995-97 biennium to \$3.8 million paid out in the 2009-11 biennium. Historical increases in WSDOT biennial payments to local governments, paid out of the maintenance budget, are shown below:

	1995-97	1997-99	1999-01	2001-03	2003-05	2005-07	2007-09	2009-11
\$ Total	\$1,232,098	\$1,192,246	\$2,891,317	\$2,856,583	\$2,779,862	\$3,173,498	\$3,458,733	\$3,812,911
# Jurisdictions	17	13	20	19	17	16	15	17

Survey of Cities and Counties

As part of this study, the consultants conducted a survey of cities and counties that have a stormwater utility, are subject to an NPDES General Phase I or II permit, and have one or more limited access highways within their jurisdiction. A total of 81 qualified jurisdictions were invited to participate, and 45 completed the survey.

The survey questions were designed to identify successes and challenges in working with WSDOT on management of stormwater, complying with RCW 90.03.525, and in preparing documentation for cost recovery associated with managing limited access right-of-way runoff on WSDOT's behalf.

Following is a summary of key findings from the survey.

- Stormwater system capacity, costs, water quality, and staff resources are the major challenges to managing stormwater from limited access highways.
- Factors upon which the fee is based, definition of what is eligible for reimbursement, and limited staff resources are the major challenges to complying with RCW 90.03.525.
- Not charging for city streets, burdensome work plan and reporting requirements, and not tracking costs of runoff from state highways are the major reasons for not charging WSDOT.
- Working with WSDOT is okay, but could be improved.

Three-fourths of those jurisdictions that manage stormwater from limited access highways indicated challenges in doing so. The challenges included stormwater system capacity, costs, water quality, and staff resources. Cities and counties in the Puget Sound region were more likely to report challenges in managing stormwater than those in the Western Washington or Eastern Washington regions. Those who only manage conveyance facilities were somewhat less likely to report challenges in stormwater management than those with more complex stormwater management systems.

More than half of those that manage stormwater reported facing challenges complying with RCW 90.03.525. The challenges included factors upon which the fee is based, definition of what is eligible for reimbursement, limited staff resources, and working with WSDOT. Facing challenges complying with the RCW did not differ significantly between those that charge WSDOT and those that don't. Those with retention facilities were somewhat less likely to report problems in complying with RCW 90.03.525 than those with other stormwater management systems.

When those who did not charge WSDOT were asked why not, their reasons included not charging for city streets, burdensome work plan and reporting requirements, not tracking costs of runoff from state highways, and having not charged WSDOT in the past. Most reported spending \$500 to \$1,000 annually to gather the necessary reporting data and file a request. When it came to how long it takes to gather the necessary reporting documentation, many reported spending either 1 to 2 days or more than 4 days. The length of time it takes to gather the reporting documentation did not differ significantly by the number of lane miles of limited access highway in the jurisdiction.

These same jurisdictions reported that the following would motivate them to start charging WSDOT:

- If the amount of reimbursement was increased.
- If the city street charge requirement was eliminated.
- If the planning and reporting was less burdensome (if the options and process were better understood).
- If the limited access highway(s) in their jurisdiction had additional negative impact to increase their cost recovery value.

Most reported the process of working with WSDOT on stormwater management to be either somewhat efficient or neutral. The level of efficiency of working with WSDOT to manage stormwater did not differ significantly between those that charged and those that did not charge WSDOT. Those with retention facilities were more likely to report that the process between them and WSDOT for managing stormwater runoff was inefficient than those with other types of stormwater management systems. Among the jurisdictions who reported inefficiencies, the inefficiencies tended to focus on communication challenges, the regulatory process itself, documentation, and insufficient monetary incentives. In regard to the charging process specifically, the difficulties included the method used to determine charges, justifying how the reimbursed fee is used, and documentation issues.

Case Studies

Following the survey, the consultants conducted case studies of eight survey respondents to glean additional detail to inform the assessment of RCW 90.03.525. For the purposes of this effort, jurisdictions must have charged WSDOT for stormwater under the RCW, or be eligible to do so.

Case study selections included a mix of Phase I jurisdictions, representatives of both small and medium Phase II jurisdictions from Eastern Washington, and representatives of both small and medium Phase II jurisdictions from Western Washington. They included Bellingham, Issaquah, Olympia, Puyallup, Richland, Spokane, Tukwila and Clark County.

The case studies addressed at least the following issues:

- The costs jurisdictions incur to manage stormwater runoff from state highways.
- The costs that jurisdictions incur in order to impose stormwater fees upon WSDOT.
- General challenges experienced by jurisdictions in imposing stormwater fees.
- Barriers and challenges to jurisdictions imposing stormwater fees on WSDOT.
- The jurisdictions' level of satisfaction or dissatisfaction pertaining to existing state law and the WSDOT application process to recover stormwater costs.
- Specific examples of potential improvements where WSDOT and jurisdictions may find efficiencies in the cost and management of stormwater facilities.

Findings of Case Studies

The costs to manage runoff from limited access highways ranged significantly across the jurisdictions surveyed. The effort needed was primarily driven by the amount runoff from limited access highway to the jurisdiction's system, and any basin-specific issues. Not all respondents reported similar levels of interaction primarily due to individual drainage needs. For example, Clark County has a high level of interaction with WSDOT maintenance while the City of Puyallup has little to none. Puyallup's only limited access right-of-way is SR 512 which has a primarily self-contained

WSDOT drainage system. Clark County has significantly greater opportunities to interact with WSDOT maintenance based on the overall size of their system.

Costs Incurred to Impose Stormwater Fees on WSDOT

Of the jurisdictions interviewed, only Tukwila was able to identify a specific quantifiable cost of \$541 annually for submitting the necessary documentation. Based on the general survey responses, the range of costs is between \$500 and \$2,000, with the majority falling between \$500 and \$1,000 annually and one respondent greater than \$2,000. Based on the more intensive case study interviews, one respondent noted their costs could be as high as \$10,000.

Challenges with Imposing Fees

The overall responses from the case studies were consistent with the findings of the general survey.

Those not currently charging WSDOT identified four primary challenges:

- the requirement to charge their own streets,
- confusion about or lack of eligibility for cost recovery,
- quantifying eligible state highway impacts, and the perceived burdens associated with application and
- reporting requirements of RCW 90.03.525.

Those currently charging WSDOT to recover costs identified challenges with providing the necessary justification and providing the annual report.

Satisfaction with State Law and Application Process

For those cities and counties that do not charge WSDOT a fee, there was an overall sense of dissatisfaction with the RCW. In its current form, it prevents them from using it for cost recovery. Without a utility, without charging their own streets/roads, and with the 70 percent reduction in cost recovery claims to WSDOT, no jurisdiction indicated that they planned on changing their procedures or code to position them to be able to recover costs from WSDOT for managing limited access rights-of-way.

Those cities and counties currently charging WSDOT a fee noted three primary reasons for dissatisfaction:

- The RCW's mandated 70% discount to WSDOT. They do not understand why WSDOT gets a 70 percent reduction when no other utility rate payer gets the same significant reduction. The ability to recover just 30% of their costs from WSDOT results in marginal cost benefit to the city or county. Many expressed an interest in seeing the justification for the reduction.
- Submittal of an annual report outlining what every dollar WSDOT paid was used for. Since the application process requires outlining exactly what the WSDOT money *will* be used for, it's duplicative to say what it actually was used for as well. Some respondents suggested the reporting process could be simplified, eliminated, or required every 2 years or longer.
- More than one respondent expressed frustration with not being able to charge WSDOT for non-limited access rights-of-way.

Potential Improvements

Respondents described what potential improvements they would like to see in the program's operation. For detailed descriptions of individual jurisdictional responses, see the discussion on case studies in this report. In general, the suggestions followed very closely with the overall recommendations from the general study:

- Eliminate the requirement that jurisdictions charge their own streets/roads in order to charge state limited access rights-of-way.
- Simplify the annual reporting requirements, or do away with it entirely.
- Provide outreach to inform jurisdictions of their ability to recover costs and for what activities.
- Simplify the process by developing a uniform WSDOT rate that can be applied by every jurisdiction without having to develop supporting documentation.
- Allow jurisdictions to charge non-limited access state rights-of-way.

Identification of Inefficiencies in Stormwater Management

With a basic understanding of the regulatory drivers and limitations on both WSDOT and jurisdictions, inefficiencies in managing stormwater between local jurisdictions and WSDOT can be identified. For purposes of this report, these have been segregated into the following categories:

- RCW 90.03.525 requirements versus jurisdictional realities.
- Physical limitations on drainage systems.
- Differences in NPDES permits.
- Funding limitations between WSDOT and local jurisdictions.

Administration of the Cost Recovery Program.RCW 90.03.525 Requirements vs. Jurisdictional Realities

RCW 90.03.525 was created in response to actions taken by western Washington drainage utilities in the 1970s and 1980s to charge WSDOT for its stormwater runoff. It has not been modified or updated to reflect NPDES Phase I or II permit requirements, nor how stormwater has been managed over the past decade.

The text of RCW 90.03.525 can be found in **Appendix A**.

The RCW establishes restrictive requirements on local jurisdictions seeking cost recovery for managing WSDOT highway runoff. In order to fully interpret RCW 90.03.525, one has to look to RCW 90.03.520 first which defines “State highway right-of-way” to mean only state limited-access highways inside or outside of a city or town. It excludes city or town streets forming a part of the route of state highways that are not limited access highways. Further, it defines “storm water control facility” to mean “any facility, improvement, development, property, or interest therein, made, constructed, or acquired for the purpose of controlling, or protecting life or property from, any storm, waste, flood, or surplus waters.” Since these terms are integral in the interpretation of RCW 90.03.525, this second RCW has to be referenced to fully evaluate RCW 90.03.525.

The RCW 90.03.525 limits cost recovery to those jurisdictions that have a stormwater utility even though jurisdictions may be managing WSDOT runoff from limited access rights-of-way with other funding means. Local jurisdictions must also charge their own roads and streets in order to request cost recovery funds. Few jurisdictions charge their own streets a stormwater rate through their utility as it would effectively be a “charge” from the general fund to the utility. Based on discussions with survey respondents, operation and maintenance of their stormwater systems is being done either through their general fund, road fund or stormwater utility and paid for by the local community. This requirement limits many jurisdictions from using RCW 90.03.525 for cost recovery.

Another obstacle to use of RCW 90.03.525 is the limitation on rates to 30 percent of the rate for comparable property. This is a significant limitation that coupled with the requirement to charge their own streets and roads may be perceived by many jurisdictions as eliminating the benefits of submitting for cost recovery. No documentation to base the 30 percent limitation on WSDOT stormwater charges was found in the course of this study which remains a point of contention with many jurisdictions.

The RCW requires that the cost recovery request be associated with construction, operation, and maintenance of stormwater control facilities. Many jurisdictions have taken this to mean a physical structure or improvement receiving runoff from WSDOT highways, which appears to be substantiated by RCW 90.03.520. This is further clarified in the RCW that the funds are to be “*used solely for storm water control facilities that directly reduce state highway runoff impacts or implementation of best management practices that will reduce the need for such facilities.*” Jurisdictions have struggled to identify specific elements of their projects and/or programs that will meet this requirement. A literal interpretation of storm water control facilities based on RCW 90.03.520 would severely limit jurisdictional ability to submit for cost recovery.

Best Management Practices (BMPs) in this context are not defined in RCW 90.03.525 but have been liberally interpreted by WSDOT in the administration of the cost recovery program.

“Solely” has been interpreted in many ways by local jurisdictions. Stormwater utility Capital Facility Plans rarely identify facilities intended to mitigate from only one property owner such as WSDOT. As such, determination of what portion of a facility is “solely” for mitigation from state highway runoff can be extremely difficult.

The RCW has a section referring to RCW 90.78.010 which used to establish the objectives of an annual plan to be submitted by January 1st of each year. RCW 90.78.010 expired July 1, 2003 without replacement. Therefore, local jurisdictions are left without direction on what needs to be in the plan. For those new to the process, this can be confusing and potentially result in avoidance of the process.

Requiring a plan to be submitted annually is often seen as an unnecessary burden by local jurisdictions. Further, as there is no standard format for these plans, jurisdictions are left to their own devices in developing a plan. A review of the 2010 submittals revealed submittals from a few pages to those in excess of 40 pages. This results in WSDOT having to evaluate multiple different formats resulting in an inefficient review process. Establishing a standard format would save cities and counties and WSDOT time and money administering the annual plan submittal, review, and approval process.

The RCW provides a mechanism for imposing a higher charge on WSDOT with concurrence by WSDOT relative to the construction, operation, or maintenance of specific storm water control facilities. Due to the specific language, it is unlikely this provision would extend to activities not related to storm water control facilities. Further language limits this rate to no more than 100 percent of the allowable rate prior to application of the 30 percent limitation. While imposition of a higher rate appears to be possible, the local jurisdiction is left in a position of proposing it, and if rejected, proceeding with a potentially costly mediation and court process with uncertain outcomes. Comparing the cost difference of new construction to maintenance and operation of existing facilities, the larger cost recovery would likely be for new facility construction not maintenance and operational based on the scale of costs. As such, it is likely that only jurisdictions that are relying primarily on facility construction costs for justification on cost recovery would pursue this path, further limiting the number of potential jurisdictions.

RCW 90.03.525 states:

(4) The legislature finds that the federal clean water act (national pollutant discharge elimination system, 40 C.F.R. parts 122-124), the state water pollution control act, chapter

90.48 RCW, and the highway runoff program under chapter 90.71 RCW, mandate the treatment and control of storm water runoff from state highway rights-of-way owned by the department of transportation. Appropriations made by the legislature to the department of transportation for the construction, operation, and maintenance of storm water control facilities are intended to address applicable federal and state mandates related to storm water control and treatment. This section is not intended to limit opportunities for sharing the costs of storm water improvements between cities, counties, and the state.

The CWA as implemented through RCW 90.48 carries with it the specter of third-party litigation, a.k.a. citizen suits. Provisions of the NPDES permits issued under RCW 90.48 do allow for sharing of permit requirement responsibilities, including operation and maintenance of stormwater control facilities, but this is not the standard operating procedure when designing project-specific facilities.

The 2008 WSDOT *Highway Runoff Manual* specifically directs designers to “...identify all off-site flows coming to the site, including streams, seeps, and stormwater discharges. The transportation facility must allow for passage of all off-site flows; however, every effort should be made to keep off-site flows separate (via bypass) from the highway runoff” (page 2-5).

Based on this, it appears typical project costs presented for legislative funding would not include comingling of city and county and WSDOT stormwater in new facilities. Based on conversations with the cities and counties through the survey and case studies, smaller projects or activities conducted out of regional maintenance facilities appear to take a more practical approach to storm water management. Maintenance supervisors appear to be more willing to collaborate on smaller facilities and allow for mixing of flows. This may be due in part to the inability of smaller projects to separate out flows from a purely physical sense. It may also be due to the higher costs associated with building two separate conveyance systems, one for jurisdictional stormwater, one for WSDOT right-of-way water.

For facilities located within state rights-of-way, WSDOT would appear to remain the ultimate responsible party for violations of any NPDES permit requirements related to operation and maintenance. Similarly, should facilities be constructed outside of state rights-of-way by local jurisdictions, NPDES permit compliance would reside with the local city or county.

RCW Requirement	Jurisdictional Perspective
Must have storm water utility	Non-limiting as most have a utility
Only applies to limited access rights of way	Feel this should be applicable to non-limited access rights of way.
“Storm water control facilities” is limited by RCW. BMPs are undefined	Definition limits cost recovery to physical structures. Allows for discretion on part of WSDOT in approval of annual reports and cost recovery
Must charge own streets/roads	Rational is not understood. Local roadways are maintained, source of funding should not be limiting factor. Seventeen cities and counties currently charge themselves. Of eligible cities, remaining 51 do not.
Cost recovery limited to 30 percent of local rate	Unknown basis. Desire 100 percent recovery.
Recovery limited to “solely” mitigation for WSDOT runoff	Difficult to identify project or management costs for “solely” managing impacts from WSDOT

Must submit annual plan	No value and is costly to develop and produce
Provides mechanism for greater cost recovery, up to 100 percent.	Process is uncertain and potentially costly. Limited application.
Provides for collaboration with local cities and counties	Highway Runoff Manual directs designers to separate flows – no joint facilities
RCW states legislative funding is to enable WSDOT to meet its NPDES obligations for all state owned rights of way.	Based on the limited definition of “state right of way” in RCW 90.03.520, this provision does not allow for full funding of all state rights of way (non-limited access) and therefore requires local cities and counties to bear the burden of stormwater management as operators of the stormwater infrastructure.
RCW does not limit collaboration.	Does not recognize the third party lawsuit provision of the Clean Water Act which is limiting collaboration on joint facilities.

Physical Limitations on Drainage Systems

Opportunities for cross collaboration on design, construction, operation, and maintenance of stormwater control facilities exist throughout the state, both within and adjacent to limited access rights-of-way depending on individual site constraints. RCW 90.03.540 directs WSDOT to coordinate with adjacent local governments, ports, and other public and private organizations to determine opportunities for cost-effective joint stormwater treatment facilities for both new and existing impervious surfaces.

Efforts for cross collaboration can be constrained by the physical settings of the state’s limited access rights-of-way within a drainage basin. Land availability both within and outside of the right-of-way can limit the size of facilities either by limited acreage or by extensive adjacent improvements that would cost too much to remove (i.e., downtown Seattle). Further physical constraints to WSDOT participation may well lie in the contributing drainage basin sizes and physical size of the resulting treatment facility. With limited land available, WSDOT may be constrained on the size of the facility that can be constructed. Further, long-term maintenance and operation of the facility may be significant with insufficient assurances from the jurisdiction on cost sharing.

WSDOT will also be incurring the increased liability under its NPDES permit for managing waters and pollutant loadings from others. This issue should be resolved with Ecology to ensure WSDOT does not take on unnecessary liability. If this can be resolved, WSDOT should be encouraged to develop joint facilities with adjacent jurisdictions and document the process and efforts to that end

Differences in NPDES Permits

Differences between the WSDOT permit and the Phase I and II permits (both Eastern and Western Washington) will have little impact on the design parameters of new facilities or on the operations and maintenance of such facilities. Both Phase I and Phase II permittees are required to adopt either the 2005 *Ecology Stormwater Design Manual* or an equivalent Ecology-approved manual. The design requirements for both water quality treatment facilities, as well as flow attenuation (detention and retention) facilities, are equivalent across all design manuals. Maintenance and operations requirements are also the same and do not differ based on facility ownership. The NPDES permits will not be an impediment to co-development or co-location of facilities excluding the issue of third-

party liability. The WSDOT Highway Runoff Manual (HRM) is somewhat different than the 2005 Ecology manual because the HRM is tailored to highways and other transportation facilities and contains a slightly different set of BMPs than the Ecology manuals, due to the nature of the linear transportation system.

Funding Limitations between WSDOT and Local Jurisdictions

Unlike with a dedicated stormwater utility, WSDOT's funding is subject to legislative action, and in some instances, a vote of the public for transportation improvement packages. Coordination with local jurisdictions has to occur prior to funding packages being proposed which is often many years ahead of local planning efforts. Some funding sources, such as the ferry fares, toll revenue, and bond sales, can also be limited to specific projects or activities or for the duration of the tolling.

City and county stormwater utilities conduct rate analyses on a highly variable frequency across the state. There are no mandated requirements that utilities conduct a rate analysis on a routine schedule. This is left to the jurisdiction to determine based on funding needs. Typically, included in this process is an evaluation of the utility's capital facility needs. Due to the variable nature of the timing of this process across the state, it can be difficult to coordinate jurisdictional stormwater capital facility plans with WSDOT transportation project needs.

Aligning WSDOT's stormwater retrofit facility needs with city and county capital facility planning and utility rate analysis processes would benefit both WSDOT and the local governments by identifying collaborative projects with mutual benefit and funding. WSDOT has a fund category which in part funds stormwater retrofits called the I4 Subprogram. This subprogram is described in greater detail in the following sections. Of importance to note is that a concerted effort to coordinate the WSDOT I4 retrofit subprogram needs with jurisdictions would further enhance the ability of WSDOT to address legacy drainage problems in areas with the greatest environmental benefits.

Administration of Cost Recovery Under 90.03.525

Administration of the cost recovery aspects of RCW 90.03.525 is a very small part of the WSDOT mission. With a total expenditure of \$3.8 million in stormwater charges paid to local governments during the 2009-11 biennium, a portion of one full-time equivalent employee is needed to manage this effort. WSDOT estimates their cost for administering the program at \$11,707 per year.

Recommendations for Consideration

Regulatory Changes

The consultants propose two alternatives to create efficiencies in the process by which cities and counties recover costs from WSDOT for managing stormwater from limited access facilities. Each option has fiscal implications for both the jurisdictions as well as WSDOT. A more in-depth assessment of the potential cost implications will be covered in the final full report to the Joint Transportation Committee. Option A modifies the existing framework outlined in RCW 90.03.525, and Option B creates a new framework.

Option A:

1. Retain requirement that to charge WSDOT a jurisdiction must have a stormwater utility. No fiscal impact to jurisdictions or WSDOT.
2. Eliminate the requirement that a jurisdiction charge its own streets in order to recover the costs of State highway runoff management. Potentially increases the number of cities and counties charging cost recovery from 17 to 80. Potentially increase of \$2 M per year to WSDOT.

3. Modify the requirement for submittal of an annual plan to a semi-annual plan or longer. Streamline application and reporting processes. Cost savings of approximately \$1,500 per jurisdiction per year. Cost savings of approximately \$4,000 per year for WSDOT.
4. Clarify/change what is eligible for cost recovery to be contemporary or flexible enough to recognize the requirements of the Phase I and II NPDES permits. If only physical structures or construction projects are eligible, develop a list of such facilities and distribute to all jurisdictions. Develop a list of BMPs eligible for cost recovery and require it be updated at the re-issuance of the Phase I and II NPDES permits. Clarify what “solely” is intended to mean for cost recovery submittals or eliminate this provision. Develop training and outreach to cities and counties. Negligible fiscal impacts beyond first effort to establish list. First efforts likely to cost WSDOT \$5,000 for meeting with cities and counties to set up agreed upon list and \$2,500 for training and outreach..
5. Revisit the 30 percent limitation. If a reduction for state limited access highway runoff is to be maintained, it is recommended that efforts be undertaken to establish the foundation for such a cost reduction. If no other changes are made, cost recovery for those already receiving funds would increase by approximately \$8 M. Increased fiscal impact to WSDOT is \$8 M.
6. References to RCW 90.78.010 should be eliminated and suitable language on the objectives for any plan submittals included in RCW 90.03.525. As stated previously, this provision of the RCW sunset leaving jurisdictions without a foundation for their annual report preparation.
7. RCW 90.03.525 Section (3) would benefit from expansion to clarify that costs for construction of stormwater control facilities, including design, permitting, land acquisition, construction, and construction oversight, should be based on proportional shares of runoff volumes contributory to the facility. It could be assumed that runoff volumes sufficiently capture all appropriate cost sharing responsibilities.
8. RCW 90.03.525 Section (4) would benefit from requiring WSDOT to explore options for sharing facility size and location with adjacent jurisdictions when planning transportation improvement projects and including documentation of such in the project file. This recommendation is contingent on a successful resolution of the shared liability issue with joint facilities.

Option B:

1. Retain requirement that to charge WSDOT a jurisdiction must have a stormwater utility. No fiscal impacts.
2. Eliminate the requirement that a jurisdiction charge its own streets in order to recover the costs of State highway runoff management. Potentially increases the number of cities and counties charging cost recovery from 17 to 80. Potentially increase of \$2 M per year to WSDOT.
3. Consider establishing a uniform rate for limited access rights-of-way for inclusion in all utility rate structures statewide. Consider separate rates for Western and Eastern Washington. Establishment of a consistent utility rate provides certainty to local jurisdictions and WSDOT for budgeting of future work. Use of a standard rate will negate the need for an annual plan, justification of any cost reduction for the state, and negotiations over what is or is not cost recoverable. This rate would need to be updated periodically, perhaps with each renewed NPDES permit issuance. Fiscal impact to WSDOT would need to be developed but likely not to exceed \$50,000 for the initial study and rate establishment. Final impacts would depend on the rates established.

Recommendations for Stormwater Management Efficiencies

WSDOT I4 Subprogram

As a part of WSDOT's NPDES permit under the Stormwater Management Plan provision, the Department has developed a program for stormwater BMP retrofits for existing transportation corridors that potentially could be partnered with local jurisdictions. WSDOT acknowledges that extensive portions of the state's limited access highways were developed without either water quality treatment or flow attenuation facilities, or have facilities that no longer meet current standards and so the I4 subprogram is an effort to address this deficiency. The program consists of three elements:

1. Stand-Alone: The amount the State Legislature appropriates for stand-alone stormwater retrofits.
2. Project Triggered: Stormwater retrofit to existing and replaced pavement as part of transportation improvement projects per requirement triggers in the Highway Runoff Manual (HRM).
3. Opportunity Based: Retrofit of existing and replaced pavement that occurs as a part of projects when WSDOT determines that it is cost effective to provide retrofits beyond that required in the HRM.

WSDOT looks at new projects with an eye to providing treatment of all new and existing impervious surfaces. If a project is able to treat all the remaining existing impervious surfaces for no more than an additional 20 percent cost over that to treat the new/replaced surfaces and the project is in a medium to high value stream drainage, then all surfaces are treated. If, however, the project is in a low priority drainage basin, then an amount equal to that 20 percent is transferred to the I4 Subprogram to be used in stand-alone retrofit projects in other medium to high value stream basins. This approach is a result of negotiations with Ecology to address historic untreated roadways. Through this means, retrofitting older roadway sections can be funded, albeit slowly, leading to overall improvements to the roadway system and the Puget Sound. A second means of funding the I4 subprogram is through specific allocations from the Legislature for projects identified by WSDOT.

This program offers an opportunity for cooperation between WSDOT and local jurisdictions to fund, design, and build stormwater facilities with a more regional objective, and this cooperation is specifically called for in RCW 90.03.540, Highway Construction Improvement Projects – Joint Stormwater Treatment Facilities.

To make WSDOT's I4 program more collaborative with local governments, WSDOT would need:

- To conduct outreach to local jurisdictions to identify and prioritize facility construction opportunities, and
- evaluate existing facilities to determine what effect they have on reducing runoff to downstream systems, as well as what proportion of the impervious surfaces are receiving treatment to current standards. This will enable WSDOT to develop a needs assessment state-wide for the retrofit program, and
- be involved in jurisdictional comprehensive basin planning efforts and watershed plan development to ensure that collaboration on surface water facilities occurs early in the plan preparation process. This is often where city and county Capital Facility Plans draw projects from for utility rate analysis efforts.

Maintenance and Operations

Currently WSDOT provides contract service to a number of smaller jurisdictions for various maintenance functions along state rights-of-way outside of limited access. Agreements for this work could be revisited with each jurisdiction to determine if additional functions can be performed by the State for the jurisdiction. These agreements could potentially be expanded to include work outside of the state right-of-way, such as adjacent pond or water quality facility maintenance.

Due to the nature of working within limited access highways, it is unlikely many local jurisdictions will have the staff, training, and equipment to meet the strict safety needs for working within many of the limited access rights of way. However, this should be explored further as larger jurisdictions may be able to supplement WSDOT workforce needs in teaming arrangements or with additional equipment rented to WSDOT for infrequent work. This may well reduce capital and operating costs for both parties.

WSDOT may wish to consider looking for expanded partnership arrangements with local jurisdictions on facilities such as sand and deicing storage facilities, transfer stations for street wastes, and supplemental storage facilities for supplies and vehicles similar to existing practices for siting new vector truck decant facilities.

Potential Enhancements to M&O Programs:

1. Explore opportunities for expanding WSDOT contract maintenance activities within local jurisdictions on state non-limited access rights-of-way as well as off right-of-way work. Expansion of work would be fully funded by the contract with the city or county.
2. Review existing maintenance agreements to ensure they are current with existing NPDES Permit requirements and maintenance procedures.
3. Evaluate potential teaming arrangements with jurisdictions for sharing resources such as equipment, personnel, and maintenance facilities both long-term as well as during short-term climatic events (e.g., snowfall and flooding events).
4. Evaluate additional teaming arrangements for cost sharing joint use facilities.

Other Approaches for Consideration

In addition to regulatory changes, consideration for other changes that modify the way the State conducts cost recovery include:

1. Cost recovery is contingent upon the jurisdiction being in compliance with its general stormwater NPDES permit if it has one. A brief statement to that effect would be submitted with any billing information submitted to the state. Failure to be in permit compliance would prevent cost recovery until such time as the jurisdiction is compliant. Payment would be for full cost recovery claims found to be in accordance with the program requirements and not reduced based on being out of compliance for a time.
2. The issue of liability in co-mingled facilities may continue to be a detriment to co-managing runoff. WSDOT and Ecology should seek a solution to remedy the actual and perceived liability risks to enable closer collaboration between jurisdictions and WSDOT on stormwater facilities and BMPs.

APPENDIX F

WSDOT COST IMPACT ANALYSIS

	A	B	C	D	E	F	G	H	I	J	K
1	Cost Estimate Worksheet: NPDES Cities and Counties										
2	All Costs Biennial										
3	Name	NPDES Phase	Limited Access Highway Miles	Cost Recovery Last Biennium	Projected Cost Recovery	Non-limited Access Highway Miles	Cost if Same per Mile as Limited Access	Limited Access Highway Miles Charged	Cost Recovery Last Biennium if Miles	Average Charge per Highway Mile	Eligible but not Charging
5	Western Washington										
7	Aberdeen	II	0	\$ -	10.61	\$ 133,283.15	0	\$ -	\$ -	0	
8	Algona	II	1.34	\$ 16,833	0	\$ -	0	\$ -	\$ -	1	
9	Anacortes	II	0	\$ -	10.07	\$ 126,499.65	0	\$ -	\$ -	0	
10	Arlington	II	1.53	\$ 19,220	6.14	\$ 77,130.87	0	\$ -	\$ -	1	
11	Auburn	II	7.97	\$ 100,119	4.4	\$ 55,272.94	0	\$ -	\$ -	1	
12	Bainbridge Island	II	6.8	\$ 85,422	0	\$ -	0	\$ -	\$ -	1	
13	Battleground	II	0	\$ -	5.17	\$ 64,945.70	0	\$ -	\$ -	0	
14	Bellevue	II	17.19	\$ 535,373	0	\$ -	17.19	\$ 535,373	\$ 31,144.44	0	
15	Bellingham	II	8.32	\$ 88,727	7.44	\$ 93,461.51	8.32	\$ 88,727	\$ 10,664.30	0	
16	Black Diamond	II	0	\$ -	2.34	\$ 29,395.15	0	\$ -	\$ -	0	
17	Bonney Lake	II	0	\$ -	4.18	\$ 52,509.29	0	\$ -	\$ -	0	
18	Bothell	II	11.94	\$ 52,905	1.92	\$ 24,119.10	11.94	\$ 52,905	\$ 4,430.90	0	
19	Bremerton	II	12.92	\$ 162,301	0	\$ -	0	\$ -	\$ -	1	
20	Brier	II	0	\$ -	0	\$ -	0	\$ -	\$ -	0	
21	Buckley	II	0	\$ -	2.9	\$ 36,429.89	0	\$ -	\$ -	0	
22	Burien	II	4.03	\$ 50,625	0.6	\$ 7,537.22	0	\$ -	\$ -	1	
23	Burlington	II	2.08	\$ 26,129	2.32	\$ 29,143.91	0	\$ -	\$ -	1	
24	Camas	II	3.95	\$ 49,620	3.51	\$ 44,092.73	0	\$ -	\$ -	1	
25	Centralia	II	1.84	\$ 23,114	5.48	\$ 68,839.93	0	\$ -	\$ -	1	
26	Clyde Hill	II	0.43	\$ 5,402	0	\$ -	0	\$ -	\$ -	1	
27	Covington	II	5.24	\$ 65,825	0	\$ -	0	\$ -	\$ -	1	
28	Des Moines	II	0	\$ -	3.7	\$ 46,479.52	0	\$ -	\$ -	0	
29	DuPont	II	0	\$ -	0	\$ -	0	\$ -	\$ -	0	
30	Duvall	II	0	\$ -	1.27	\$ 15,953.78	0	\$ -	\$ -	0	
31	Edgewood	II	0	\$ -	3.34	\$ 41,957.18	0	\$ -	\$ -	0	
32	Edmonds	II	0	\$ -	9.29	\$ 116,701.27	0	\$ -	\$ -	0	
33	Enumclaw	II	0	\$ -	5.67	\$ 71,226.72	0	\$ -	\$ -	0	
34	Everett	II	15.37	\$ 193,078	10.47	\$ 131,524.47	0	\$ -	\$ -	1	
35	Federal Way	II	9.45	\$ 118,711	13.18	\$ 165,567.57	0	\$ -	\$ -	1	
36	Ferndale	II	4.71	\$ 59,167	0	\$ -	0	\$ -	\$ -	1	
37	Fife	II	2.8	\$ 35,174	0.86	\$ 10,803.35	0	\$ -	\$ -	1	
38	Fircrest	II	0	\$ -	0	\$ -	0	\$ -	\$ -	0	
39	Gig Harbor	II	5.31	\$ 66,704	0.24	\$ 3,014.89	0	\$ -	\$ -	1	
40	Granite Falls	II	0	\$ -	0.79	\$ 9,924.00	0	\$ -	\$ -	0	
41	Issaquah	II	7.46	\$ 93,713	0	\$ -	0	\$ -	\$ -	1	
42	Kelso	II	6.03	\$ 75,749	2.87	\$ 36,053.03	0	\$ -	\$ -	1	
43	Kenmore	II	0	\$ -	2.02	\$ 25,375.30	0	\$ -	\$ -	0	
44	Kent	II	18.27	\$ 95,188	11.09	\$ 139,312.92	18.27	\$ 95,188	\$ 5,210.07	0	
45	Kirkland	II	5.07	\$ 63,689	0	\$ -	0	\$ -	\$ -	1	
46	Lacey	II	4.1	\$ 51,504	0.7	\$ 8,793.42	0	\$ -	\$ -	1	
47	Lake Forest Park	II	0	\$ -	3.71	\$ 46,605.14	0	\$ -	\$ -	0	
48	Lake Stevens	II	3.97	\$ 49,871	4.21	\$ 52,886.15	0	\$ -	\$ -	1	
49	Lakewood	II	6	\$ 75,372	0.61	\$ 7,662.84	0	\$ -	\$ -	1	
50	Longview	II	0	\$ -	9.43	\$ 118,459.95	0	\$ -	\$ -	0	
51	Lynnwood	II	6.26	\$ 78,638	3.26	\$ 40,952.22	0	\$ -	\$ -	1	
52	Maple Valley	II	1.8	\$ 22,612	3.93	\$ 49,368.78	0	\$ -	\$ -	1	
53	Marysville	II	5.5	\$ 69,091	0.35	\$ 4,396.71	0	\$ -	\$ -	1	
54	Medina	II	1.27	\$ 15,954	0	\$ -	0	\$ -	\$ -	1	
55	Mercer Island	II	7.32	\$ 91,954	0	\$ -	0	\$ -	\$ -	1	
56	Mill Creek	II	5.45	\$ 68,463	0	\$ -	0	\$ -	\$ -	1	
57	Milton	II	1.52	\$ 19,094	0.87	\$ 10,928.97	0	\$ -	\$ -	1	
58	Mount Vernon	II	4.27	\$ 53,640	4.47	\$ 56,152.28	0	\$ -	\$ -	1	
59	Mountlake Terrace	II	2.15	\$ 27,008	0	\$ -	0	\$ -	\$ -	1	
60	Mukilteo	II	0	\$ -	5.87	\$ 73,739.12	0	\$ -	\$ -	0	
61	Newcastle	II	0	\$ -	0	\$ -	0	\$ -	\$ -	0	
62	Normandy Park	II	0	\$ -	2.72	\$ 34,168.72	0	\$ -	\$ -	0	
63	Oak Harbor	II	0	\$ -	4.03	\$ 50,624.99	0	\$ -	\$ -	0	
64	Olympia	II	6.38	\$ 67,108	0	\$ -	6.38	\$ 67,108	\$ 10,518.50	0	
65	Orting	II	0	\$ -	2.28	\$ 28,641.43	0	\$ -	\$ -	0	
66	Pacific	II	0	\$ -	2.22	\$ 27,887.71	0	\$ -	\$ -	0	
67	Port Angeles	II	0	\$ -	8.08	\$ 101,501.21	0	\$ -	\$ -	0	
68	Port Orchard	II	2.11	\$ 26,506	5.61	\$ 70,472.99	0	\$ -	\$ -	1	
69	Poulsbo	II	2.76	\$ 34,671	0.79	\$ 9,924.00	0	\$ -	\$ -	1	
70	Puyallup	II	5.52	\$ 69,342	1.62	\$ 20,350.49	0	\$ -	\$ -	1	
71	Redmond	II	3.64	\$ 45,726	4.86	\$ 61,051.47	0	\$ -	\$ -	1	
72	Renton	II	9.62	\$ 95,051	14.59	\$ 183,280.03	9.62	\$ 95,051	\$ 9,880.56	0	
73	Sammamish	II	0	\$ -	0.14	\$ 1,758.68	0	\$ -	\$ -	0	
74	SeaTac	II	6.41	\$ 74,552	3.91	\$ 49,117.54	6.41	\$ 74,552	\$ 11,630.58	0	
75	Seattle	I	34.51	\$ 433,516	28.69	\$ 360,404.67	0	\$ -	\$ -	1	
76	Sedro-Woolley	II	0	\$ -	4.2	\$ 52,760.53	0	\$ -	\$ -	0	
77	Shoreline	II	3.18	\$ 39,947	3.72	\$ 46,730.76	0	\$ -	\$ -	1	
78	Snohomish	II	0	\$ -	0	\$ -	0	\$ -	\$ -	0	
79	Steilacoom	II	0	\$ -	0	\$ -	0	\$ -	\$ -	0	
80	Sumner	II	5.01	\$ 62,936	0.53	\$ 6,657.88	0	\$ -	\$ -	1	
81	Tacoma	I	12.98	\$ 4,631	17.99	\$ 225,990.94	12.98	\$ 4,631	\$ 356.78	0	
82	Tukwila	II	7.68	\$ 97,489	6.77	\$ 85,044.95	7.68	\$ 97,489	\$ 12,693.88	0	
83	Tumwater	II	4.54	\$ 57,032	0.31	\$ 3,894.23	0	\$ -	\$ -	1	
84	University Place	II	0	\$ -	0	\$ -	0	\$ -	\$ -	0	
85	Vancouver	II	24.1	\$ 432,724	8.43	\$ 105,897.92	24.1	\$ 432,724	\$ 17,955.35	0	
86	Washougal	II	3.33	\$ 41,832	0	\$ -	0	\$ -	\$ -	1	
87	Woodinville	II	1.8	\$ 22,612	2.81	\$ 35,299.31	0	\$ -	\$ -	1	
88											
89	Clark County	I		\$ 162,978						0	
90	Cowlitz County	II		\$ 145,388						1	
91	King County	I		\$ 1,520,694						0	
92	Kitsap County	II		\$ 20,692						0	
93	Pierce County	I		\$ 345,241						0	
94	Skagit County	II		\$ 36,871						0	
95	Snohomish County	I		\$ 161,157						0	
96	Thurston County	II		\$ 145,388						1	
97	Whatcom County	II		\$ 145,388						1	
98											
99								122.89	\$ 1,543,748	\$ 12,562	44
100	Eastern Washington										
102	Asotin	II	0			1.52	\$ 19,094.29				
103	Clarkston	II	0			3.3	\$ 41,454.70				
104	East Wenatchee	II	0			2.97	\$ 37,309.23				
105	Ellensburg	II	0.15			0.64	\$ 8,039.70				
106	Kennewick	II	8.96			1.73	\$ 21,732.31				
107	Moses Lake	II	6.07			9.97	\$ 125,243.45				
108	Pasco	II	9.15			10	\$ 125,620.31				
109	Pullman	II	0			9.04	\$ 113,560.76				
110	Richland	II	19.34			1.53	\$ 19,219.91				
111	Selah	II	1.87			0	\$ -				
112	Spokane	II	15.5			14.19	\$ 178,255.22				
113	Spokane Valley	II	14.67			8.53	\$ 107,154.13				
114	Sunnyside	II	0			3.63	\$ 45,600.17				
115	Union Gap	II	0.67			0	\$ -				
116	Walla Walla	II	0			7.39	\$ 92,833.41				
117	Wenatchee	II	0			5.86	\$ 73,613.50				
118	West Richland	II	0			3.66	\$ 45,977.03				
119	Yakima	II	8.22			0.63	\$ 7,914.08				
121	Asotin County	II									
122	Chelan County	II									
123	Douglas County	II		\$ 21,529							
124	Spokane County	II									
125	Walla Walla County	II									
126	Yakima County	II									
129			427.83	\$ 3,812,910	\$ 3,204,081	378.17	\$ 4,750,583				

Description of Approach:
Approach used to estimate the \$2 million cost impact on WSDOT. Known cost recovery for cities (column D) divided by the eligible centerline miles for those cities (column F) used to estimate an average cost per limited access centerline mile of \$12,562 (column J, cell J99). Cost per mile multiplied by the centerline miles of limited access highways in all remaining Western Washington NPDES Phase II cities (column F) used to estimate those potential costs (column E). Eastern Washington respondents told us that they generally are not impacted, so it was assumed they would not respond if the requirement that they charge their own streets was lifted. We do not have centerline miles for counties, so the average cost recovery for Western Washington counties (\$145,388, shown in column E) was used for other Western Washington Phase II counties. The biennial total was \$3.2 million (cell E129). That cost was divided by two for the annual estimate and rounded up to \$2 million to account for possible other cost recoverers – non NPDES permittees who have utilities and maybe an Eastern Washington applicant or two.

Note: A small number of non-NPDES cities and counties not considered in this analysis could apply for cost recovery. This cost risk is estimated to fall well within the rounding cushion.