Municipal Stormwater NPDES Permit Program

Report to the Legislature

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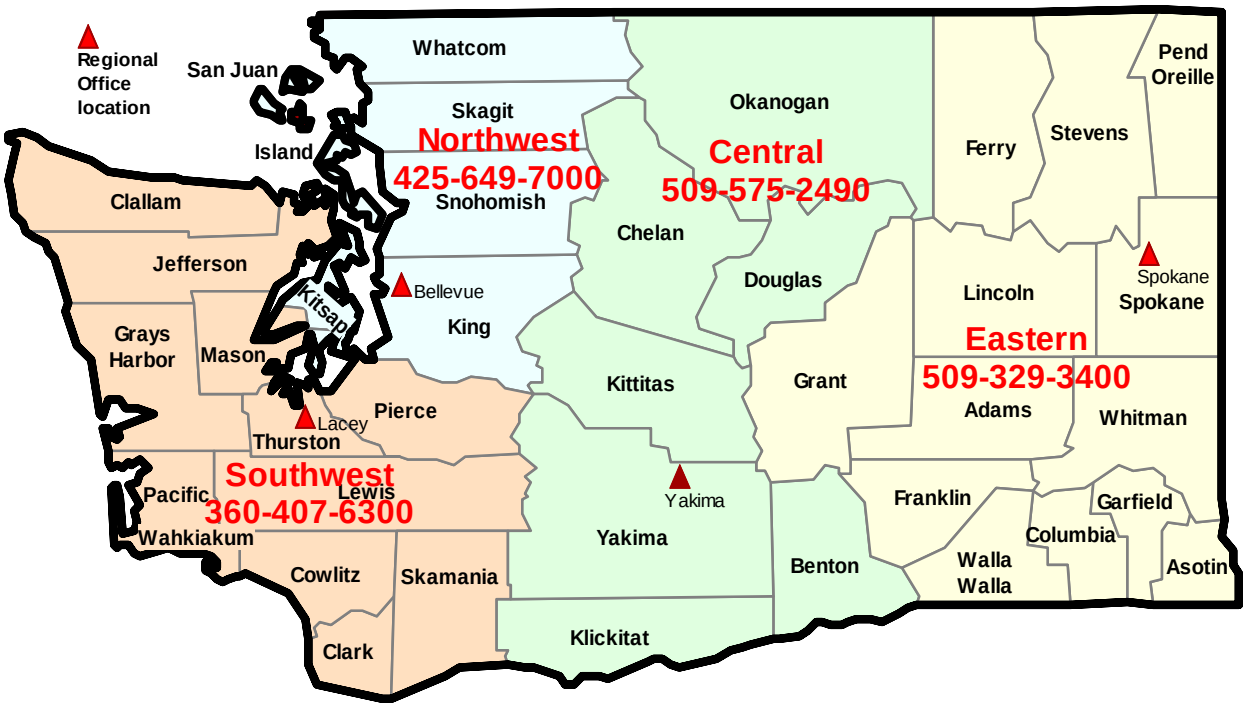

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Report to the Washington State Legislature on the Municipal Stormwater NPDES Permit Program

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Report to the Washington State Legislature on the Municipal Stormwater NPDES Permit Program

Executive Summary

Stormwater is the leading contributor to water quality pollution in our urban waterways. As urban areas grow, it is also the state's fastest growing water quality problem.

Under Federal law, all states are required to address stormwater as a point source discharge. The first phase (Phase I) of the municipal stormwater program focused on large-sized municipalities. In 2000, Phase II of the federal municipal stormwater regulations imposed new requirements for smaller municipalities. There are now over one hundred municipalities in Washington state that require stormwater permit coverage under Phase I or II of the municipal National Pollutant Discharge Elimination System (NPDES) stormwater permit program. These municipalities vary in size, existing stormwater programs and funding ability. This diversity makes development and implementation of stormwater permits challenging.

This report provides Ecology's proposal for Washington's stormwater permitting program and recommendations for other stormwater management actions. This report is based on input from two stormwater advisory groups - one from the east side of the Cascades and one from the west side[1]. These recommendations also include the work of many technical and administrative policy experts from inside and outside the agency.

Ecology's proposal for Phase I is to maintain the progress the Phase I communities made under the first permit, and continue the improvement of environmental practices.

Ecology's proposal for Phase II is to:
Implement the federal "six-plus-two" minimum requirements that say municipalities must have the following elements in place:

1) Public education and outreach
2) Public involvement/participation
3) Illicit discharge detection and elimination
4) Construction site stormwater runoff control
5) Post construction stormwater management
6) Pollution prevention/good housekeeping

[1] See Appendices B and C.

Plus:

- Requirements based on an approved total maximum daily load (TMDL or water cleanup plan) or equivalent analysis
- Evaluations of program compliance

In addition, based on state law and for more efficient implementation, Ecology will:

- Include protection to ground water as required under the state's Water Pollution Control Act, where not covered by existing programs
- Include areas of cities and counties that are slated for future growth

To implement these requirements, Ecology proposes to:

- Develop separate general stormwater permits for Eastern and Western Washington
- Develop a combined Phase I and Phase II permit for Western Washington
- Use a narrative Best Management Practices (BMPs) approach to stormwater control rather than numeric water quality-based effluent limitations
- Define the level of effort required for each of the minimum requirements as a part of the permit writing process
- Base requirements on recognized practices from existing programs
- Use compliance schedules where appropriate
- Focus phase II permit efforts on development of local programs that protect existing water quality rather than restoration of degraded areas except where mandated by TMDLs
- Require that phase I and II jurisdictions conduct permit compliance monitoring to evaluate the effectiveness of the stormwater program and monitor pollutant sources
- Develop permit fees for Phase II municipalities through the current rule amendment process

Stormwater permits are crucial to effective stormwater management and compliance with federal law. However, Phase I and II municipal stormwater permits cannot prevent all stormwater impacts. Ecology provides several recommendations for further action by state and local governments. The actions fall into four categories:

- Preventing impacts from new stormwater discharges
- Reducing impacts from existing stormwater discharges
- Making changes to the relationship between built and natural environments
- Adaptive management and feedback

Report to the Washington State Legislature on the

Municipal Stormwater NPDES Permit Program

Purpose

Federal rules require the Department of Ecology to develop permits for municipal stormwater. This report to the legislature describes Ecology's proposals for the municipal stormwater permits and its recommendations for stormwater management in the state. It describes the proposed scope and content of the permits. Ecology will develop the detailed requirements through the normal permit process. Ecology used input from local governments, environmental groups, state agencies, business, agricultural interests and tribes to develop these proposals and recommendations. Input from these stakeholders is reflected in two advisory group reports on municipal stormwater. (Attached) This report also includes a series of recommendations for other stormwater management measures that are important for protecting the quality of Washington's waters, but which are beyond the scope of the permit proposals.

Background

What is Urban Stormwater[2]?

Stormwater is the water that runs off roads, pavement and roofs during rainstorms or snow melt. Stormwater can also come from hard grassy surfaces like lawns, play fields, and from graveled roads and parking lots.

Stormwater flows over land through intentional and unintentional conveyances to surface water bodies such as lakes, streams or wetlands, or, in some instances, to areas where it infiltrates into ground water. In the course of flowing over the urban landscape, stormwater picks up pollutants from the myriad of human activities in residential, commercial and industrial areas. In addition, the large impervious surfaces in urban areas reduce the amount of water that goes into the ground and, as a result, increases the quantity and peak flows of runoff during the wet season.

[2] Urban stormwater includes all of the stormwater generated in urban areas, including stormwater discharges that do not enter the municipal stormwater system.

Why is Urban Stormwater a Problem in Washington?

Pollutants in, or resulting from, stormwater can cause a wide range of impacts. Some pollutants such as metals, oil and grease, and organic toxins are toxic to aquatic plants, fish and insects if concentrations are high enough. Sediments cause tissue abrasion and gill clogging in fish, they reduce light and impair algae growth, they smother fish spawning habitat and transport other pollutants. Fertilizers, pet waste and failing septic systems change lakes and ponds. They speed plant growth and result in algae blooms, murky, smelly water and poor drinking water quality. Temperature-sensitive fish and invertebrates cannot survive in the overly warm water that is often an effect of stormwater runoff.

Stormwater contributes about 7 percent of the total flow from all point and nonpoint sources but about 60 percent of the total lead (Pb), 30 percent of the total zinc (Zn, the most from any one source), and nearly all of the total fecal coliform bacteria.[3] (See Table 1).

Human Health: In general, untreated stormwater is unsafe. It contains toxic metals, organic compounds, and bacterial and viral pathogens. Untreated stormwater is not safe for people to drink, and is not recommended for swimming.

Salmon Habitat: In western Washington urban stormwater impairs streams that provide salmon habitat. Paved surfaces cause higher winter stormwater flows that erode stream channels, destroying spawning beds. Also, because more water flows away during the wet season, streams can lose summertime base flows, drying out habitat needed for salmon rearing. Over the past few years surveys of spawning adult Coho salmon in Seattle and Bellevue found that very high percentages of adult females (up to 90 percent) are dying before they spawn. Coho rely on runoff from the first significant rainfall events in the fall to move upstream. Although the precise causes of these acute die-offs are not yet known, stormwater pollution is likely to be involved. The problem is under active scientific investigation, and it appears to be widespread throughout urban streams in Puget Sound.[4]

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[3] Arnold, F.D., J.A. Lowe, and D.R.G. Farrow. 1987. *The national coastal pollutant discharge inventory, estimates for Puget Sound.* Draft report. Produced by Strategic Assessment Branch, National Oceanic and Atmospheric Administration, Rockville, MD. October 1987. Cited in: Richter, J. 1988. *State of the Sound, 1988 Report.* Produced by the Puget Sound Water Quality Authority, Seattle, WA. May 1988. page 117

[4] Personal communication: Jamie Glasgow, Washington Trout, and Nathaniel Scholz, NOAA Fisheries.

Table 1: Common Pollutants in Stormwater and Some Potential Sources[5]

Pollutant	Potential Sources
Lead	Motor Oil, Transmission Bearings, Gasoline[6]
Zinc	Motor Oil, Galvanized Roofing, Tire Wear, Down Spouts
Cadmium	Tire Wear, Metal Plating, Batteries
Copper	Brake Linings, Thrust Bearings, Bushings
Chromium	Metal Plating, Rocker Arms, Crank Shafts, Brake Linings, Yellow Lane Strip Paint
Arsenic	ASARCO Smelter, Fossil Fuel Combustion
Bacterial/Viral Agents	Domestic Animals, Septic Systems, Animal & Manure Transport
Oil & Grease	Motor Vehicles, Illegal Disposal of Used Oil
Organic Toxins	Pesticides, Combustion Products, Petroleum Products, Paints & Preservatives, Plasticizers, Solvents
Sediments	Construction Sites, Stream Channel Erosion, Poorly Vegetated Lands, Slope Failure, Vehicular Deposition
Nutrients	Sediments, Fertilizers, Domestic Animals, Septic Systems, Vegetative Matter
Heat	Pavement Runoff, Loss of Shading Along Streams
Oxygen Demanding Organics	Vegetative Matter, Petroleum Products

[5] Adapted from a number of sources: Novotny, V. and G. Chesters, 1981. *Handbook of Nonpoint Pollution.* Van Nostrand Reinhold Company, New York, p. 322. Galvin D. and R. Moore, 1982. *Toxicants in Urban Runoff*, METRO Toxicant Program, Report #2. METRO, Seattle, pp 3-89 - 3-92. PTI Environmental Services, 1991. *Pollutants of concern in Puget Sound.* Puget Sound Estuary Program, U.S. EPA, Seattle, pp 47-51. URS et al, 1988. City of Puyallup, Stormwater Management Program. *Technical Memorandum WQ-1: Stormwater Quality Issues.* Table 1.

[6] Although lead is no longer an additive to gasoline, it is still present in trace amounts and remaining lead on the ground is picked up by stormwater runoff.

Drinking Water: In some areas of Washington, notably Spokane County and parts of Pierce and Clark counties, gravelly soils allow stormwater to sink quickly into the ground. Untreated stormwater could contaminate aquifers that are used for drinking water.

Economic Development: Where water bodies are not healthy, salmon do not exist, shellfish beds are closed, and water-related recreational opportunities are limited. In areas with degraded water bodies, new stormwater and discharge permits can be difficult or impossible to issue. Businesses are more likely to be attracted to an area where getting a stormwater permit will not be so difficult and where the quality of life is enhanced by healthy waters that support salmon, shellfish, and various recreational opportunities. New businesses bring new families and new housing to communities, adding economic stability.

Shellfish Industry: Washington's multimillion-dollar shellfish industry is increasingly threatened by closures due to stormwater.

Degraded Water Bodies: Across Washington state, probably without exception, stream channels in urban and developing areas have been drastically altered by residential, commercial and industrial land development. Fish resources and other beneficial uses have been and will continue to be severely degraded, and in many cases permanently lost, due to the impacts of urban land development.

Municipal Stormwater[7] Permits

In 1987, Congress amended the Clean Water Act (CWA) to include stormwater discharges in the provisions of the National Pollutant Discharge Elimination System (NPDES) permit program. The CWA created a permit requirement for municipalities of over 100,000 people. This is Phase I of the municipal stormwater permit program. The CWA also directed EPA to study remaining sources of stormwater discharges and propose regulations, based on the study, to designate and control other stormwater sources. This is Phase II of the municipal stormwater permit program.

The CWA also required that permits for municipal stormwater discharges:

[7] Municipal stormwater discharges refers to stormwater carried through and discharged from municipal stormwater systems (*i.e.* municipal separate storm sewer systems (MS4s). Municipal stormwater is a subset of urban stormwater as not all urban stormwater enters the municipal stormwater system. Urban stormwater includes all of the stormwater generated in urban areas, regardless of whether the stormwater enters a municipal stormwater system.

i. Include a requirement to effectively prohibit non-stormwater discharges; and
ii. Require controls to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP).

EPA published the Phase I stormwater permit regulations on November 16, 1990. The Phase I regulations identified the first municipal stormwater permit holders in this state: Seattle, Tacoma, the unincorporated portions of King, Pierce and Snohomish counties, and the Washington State Department of Transportation (WSDOT) where WSDOT has stormwater discharges located in any of the listed municipalities. Permits were issued to these dischargers in 1995. In 1999, a Phase I permit was issued to Clark County. Ecology must renew these permits. EPA has since frozen the scope of the Phase I permit program and no new municipalities will be added in the future.

On December 8, 1999 EPA published the Phase II stormwater permit regulations. The Phase II regulations extend the permit requirement to all urbanized areas, as defined by the US Census Bureau. Approximately 100 additional municipalities may be required to obtain permit coverage under the Phase II regulations. No Phase II permit has yet been written for municipalities in Washington. With each future national census, the number of Phase II municipalities will change to reflect changes in designated urbanized areas.

Federal Municipal Stormwater Permit Framework

The regulations adopted by EPA establish a permit requirement for stormwater discharges from all conveyances owned or operated by the municipality *and* public entities such as WSDOT, ports, and special districts that are located within the municipality. The permit does not apply to privately-owned stormwater systems that discharge directly to waters of the state.

The EPA Phase I regulations establish permit application requirements for the Phase I municipalities. The permit applicant must propose a stormwater management program. However, it is up to the permitting authority (in this case Ecology) to define the permit requirements.

The EPA Phase II regulations establish permit requirements for the Phase II municipalities. EPA broadly defines several minimum control measures that the permitting authority must further define in the actual permit.

2003 legislative session

During the 2003 state legislative session, considerable interest and debate occurred on the new federal requirements for municipal stormwater permits. These new federal requirements impose new responsibilities on municipalities and other public entities to manage their stormwater discharges. Stakeholders expressed concerns to the legislature that:

- Permit requirements would place a fiscal and operational burden on local governments,
- Permit requirements needed to be sufficient to provide meaningful environmental benefits, and
- Permit requirements should be reasonable to attain, and not expose municipalities to undue risk of lawsuits.

Although the legislature did not adopt a bill during session, the House and Senate each passed different versions of HB 1689. Both versions contained a list of issues related to municipal stormwater permits and directed the Department of Ecology to convene stakeholder committees to frame the policy issues and identify alternatives for addressing each issue. In the spirit of that legislation, Ecology convened two stormwater advisory groups during the summer of 2003.

Stormwater Advisory Groups Formed

Ecology used the common elements of both the House and Senate versions of HB 1689 to form two advisory groups; one for eastern and one for western Washington. Ecology asked the groups to advise and assist it on municipal stormwater permits.[8] At the conclusion of its deliberations, each advisory group submitted a report on its findings to Ecology in early December, 2003. Those reports reflect the views of the advisory groups and do not include Ecology's views or proposals. The advisory group reports are attached in Appendices B and C. Ecology considered the input and recommendations from both the eastside and westside groups when developing the recommendations in this report.

Eastern Washington Stormwater Group

Both bills directed Ecology to use the Eastern Washington Stormwater Management Steering Committee as its advisory group for issues related to stormwater management and Phase II permits in Eastern Washington. The Eastern Washington Stormwater Management Steering Committee formed in June 2001 to assist the department in developing a stormwater manual for best management practices tailored to the

[8] See Appendix A for the list of issues discussed by the advisory groups.

distinct climatic and geologic conditions in eastern Washington. The Steering Committee also developed a model stormwater management program for Phase II municipalities on the eastside. Ecology invited this group to participate in the review of stormwater issues raised in the 2003 Legislature.

The eastern Washington stormwater group met five times, from August through November 2003. The group included members of the Eastern Washington Stormwater Management Steering Committee and other interested parties.[9] Group members primarily represented municipal agencies, and were the individuals involved in stormwater management at the local level working directly with local constituents.

Western Washington Stormwater Group

Ecology formed a Westside Stormwater Group (WSG) to provide input on the range of issues regarding municipal stormwater permitting. The WSG included representatives from local governments, state agencies, the environmental community, business, agriculture and the shellfish industry.[10] The WSG met seven times from August to November 2003. The group was charged to:

> *By December 1, produce a report that summarizes the range of perspectives on a set of issues relating to stormwater permitting and management. Identify alternative courses of action and their implications. Delineate areas of agreement and disagreement.*

As part of their discussions, WSG representatives from Phase I and Phase II communities described steps they have taken to successfully manage stormwater in their communities. The WSG was also briefed on the elements of the Puget Sound Water Quality Management Plan, a state- and federally-recognized comprehensive approach to stormwater management for the Puget Sound region. The shellfish industry and environmental community also briefed the WSG on topics of specific concern to them. For many issues, Ecology presented a variety of options on the scope and implementation of stormwater permitting.

The WSG did not seek to reach consensus on any specific issue. Instead, WSG members and attendees articulated a variety of administrative, legal, financial, and environmental considerations associated with alternative approaches to permitting.

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[9] See Appendix B, Final Report from the Eastern Washington Stormwater Management Steering Committee, for the full list of participants.
[10] See Appendix C, Final Report from the Western Washington Stormwater Group, for the full list of participants.

Municipal Stormwater Permit Program: Goals and Permitting Principles

The long term goal of the program is protection and restoration of beneficial uses of the state's water bodies. It is important to keep the municipal stormwater permit program in the proper context. The permit is not the only tool to use to reach this goal. The permit is one step in a much longer process. While there are a number of things that should and must be done to effectively protect water quality from adverse impacts due to urban stormwater runoff, not all of them are appropriate for inclusion into municipal stormwater permits.

In broad terms, Ecology has identified the following goals for the re-issuance of the phase I permits and the issuance of the first phase II municipal stormwater permits.

The goal of the renewed Phase I permit is:

- To maintain the progress the Phase I communities made in the first permit term
- To see improvement in local environmental practices for managing stormwater
- To issue a permit that is not just a paper exercise
- To recognize that permit requirements will change over time.

The goal of the first Phase II permit is:

- To see improvement in local environmental practices for managing stormwater
- To issue a permit that is not just a paper exercise
- To recognize that permit requirements will change over time.

Ecology has made several preliminary decisions regarding how permits would be issued and how permit requirements would be expressed.

Direction – Administrative Aspects of the Permit

Ecology has decided to create:

- Separate permits for Western and Eastern Washington
- One general permit for Eastern Washington
- One combined phase I and phase II general permit for Western Washington with different permit requirements for phase I and phase II
- Permit requirements for phase II (Western *or* Eastern Washington) that will be the same for all phase II jurisdictions but could contain provisions for different ramp-up or compliance timelines
- Some limited ability to tailor or modify permit requirements to meet local jurisdictional needs

Direction – Compliance and Compliance Measures:

Ecology has made the following decisions:

- Permit compliance will be based on actions, not outcomes
- Ecology plans to use a narrative best management practices (BMP) approach rather than numeric water quality-based effluent limitations
- Ecology intends to develop objective performance measures for as many permit requirements as possible
- Ecology will focus the phase II permitting efforts on developing local stormwater programs that protect existing water quality rather than restoring areas of degraded water quality (*e.g.* this permit will not require capital upgrades to existing stormwater systems unless required by a TMDL)
- For phase II stormwater permits, to generally follow EPA's phase II stormwater requirements (six-plus-two minimum requirements)
- Municipal stormwater permits must also comply with state law (chapter 90.48 RCW) for technology-based requirements and prohibition of pollution of state waters

In general Ecology intends to follow the federal phase II stormwater regulations for the phase II permits. Under the federal phase II municipal stormwater regulations EPA did not establish much in the way of explicit requirements for each of the minimum measures.

The permitting model envisioned by the EPA for phase II established a general outline of a stormwater program (the six minimum measures) that permit holders were required to fill in. EPA's original approach did not require that the permitting authority review and approve the locally developed municipal stormwater programs. The U.S. Ninth Circuit Court invalidated that portion of the EPA phase II rules because the lack of review by the permitting authority did not provide assurance that the federal "maximum extent practicable" (MEP) standard was met. The decision also cited the lack of an opportunity for public review and comment on the approval or disapproval of local stormwater programs as grounds for invalidating that portion of the EPA phase II rules. [11]

Ecology does not have sufficient staff resources to individually review and approve every phase II municipal stormwater program. Ecology estimates it would take between 25 and 30 staff to review and approve all the phase II municipal stormwater programs individually. As a consequence, Ecology is not proposing to follow the EPA general outline approach. Instead, Ecology is proposing to establish in the municipal stormwater

[11] *Environmental Defense Center v. EPA,* 319 F.3d 398 (9th Cir. Jan 14, 2003), vacated and replaced by *Environmental Defense Center v. EPA,* 9th Cir. Sept 15, 2003.

permits explicit requirements, or best management practices, which if implemented would represent the reduction of pollutants to the maximum extent practicable. This approach would define up front, as part of the permit development and issuance process, the minimum acceptable elements of a stormwater program. The advantages of this approach are that it would satisfy the public involvement requirements of both the federal and state clean water acts and ensure that the federal requirement to control pollutants to the maximum extent practicable is met. It would also require considerably fewer staff resources for Ecology to administer. A disadvantage to this approach is that there would be less flexibility to tailor local stormwater programs to reflect local priorities and needs.

Ecology's Proposed Approach

Based on the advisory committee input and its own analysis, Ecology has developed a proposed approach to the municipal stormwater permits. The approach is laid out here. This framework will guide the permitting process unless we are directed otherwise. Additional detail will be developed through the permit development process.

Permit Development Schedule

Ecology will begin drafting the Phase II municipal stormwater permits in early 2004. Ecology plans on having a draft permit available for review and comment during late 2004 or early 2005. Ecology anticipates having final general permits available in 2005. We will provide updates to interested persons via email and website on the progress of the permit development.

Scope of the Municipal Stormwater Permits

The federal rules establish minimum requirements for the scope of the permits. They also require the permitting agency to determine if a broader scope is needed to address specific concerns in the state.

Areas Covered

The federal NPDES rules for municipal stormwater identify the regulated areas (areas covered by municipal stormwater permits) based on US Census population data[12]. Under the federal NPDES rules, the Phase I municipal stormwater permit applies to the entire regulated city or county, and to special district stormwater discharges located within

[12] Urbanized area maps for Washington are available at: http://www.ecy.wa.gov/programs/wq/stormwater/phase_2/maps.html

those regulated areas. (To date, the only special district that has a permit in Washington is the Department of Transportation.) The Phase II rules only require permit coverage for the census-defined urbanized areas. In other words, for Phase II municipalities (cities and counties), only the portion of their jurisdiction located within or discharging to a municipal storm sewer system in the census-defined urbanized area is required to obtain coverage.

The federal rule language results in large areas that are not subject to stormwater requirements, such as:

- Urban Growth Areas located outside of the census-defined urbanized areas
- Industrial and commercial areas without residential populations
- Incorporated areas that are not included in the census-defined urbanized areas but which are located within regulated cities. [13]
- Cities located within Phase I counties but outside of the Phase II census-defined urbanized area.

These gaps in coverage can create problems in several ways. First, both permitted and non-permitted areas drain to surface water bodies. If only portions of the stormwater discharges are required to reduce pollutants, then the surface water is not likely to improve. Worse, it will probably continue to degrade. Development can be diverted away from areas with stormwater requirements to adjacent areas that do not require stormwater to be managed. Having regulated and unregulated areas within the same jurisdiction is also more difficult to implement.

Ecology and both of the advisory groups agreed that applying stormwater controls prior to development is more cost effective than trying to retrofit existing developments. For this reason, including the urban growth areas under the permit will provide the greatest potential for reducing degradation of the state's surface waters. Under the Growth Management Act, cities have been required to identify future areas for planned dense development. Many of these urban growth areas, however, lie outside of the federal census-defined urbanized area and are not part of the incorporated city. Since these areas are located in the county, the counties will be responsible for requiring appropriate stormwater

[13] For instance, large areas of commercial/light development such as the Kent Valley in King County. See Seattle Urbanized Area map at the above address

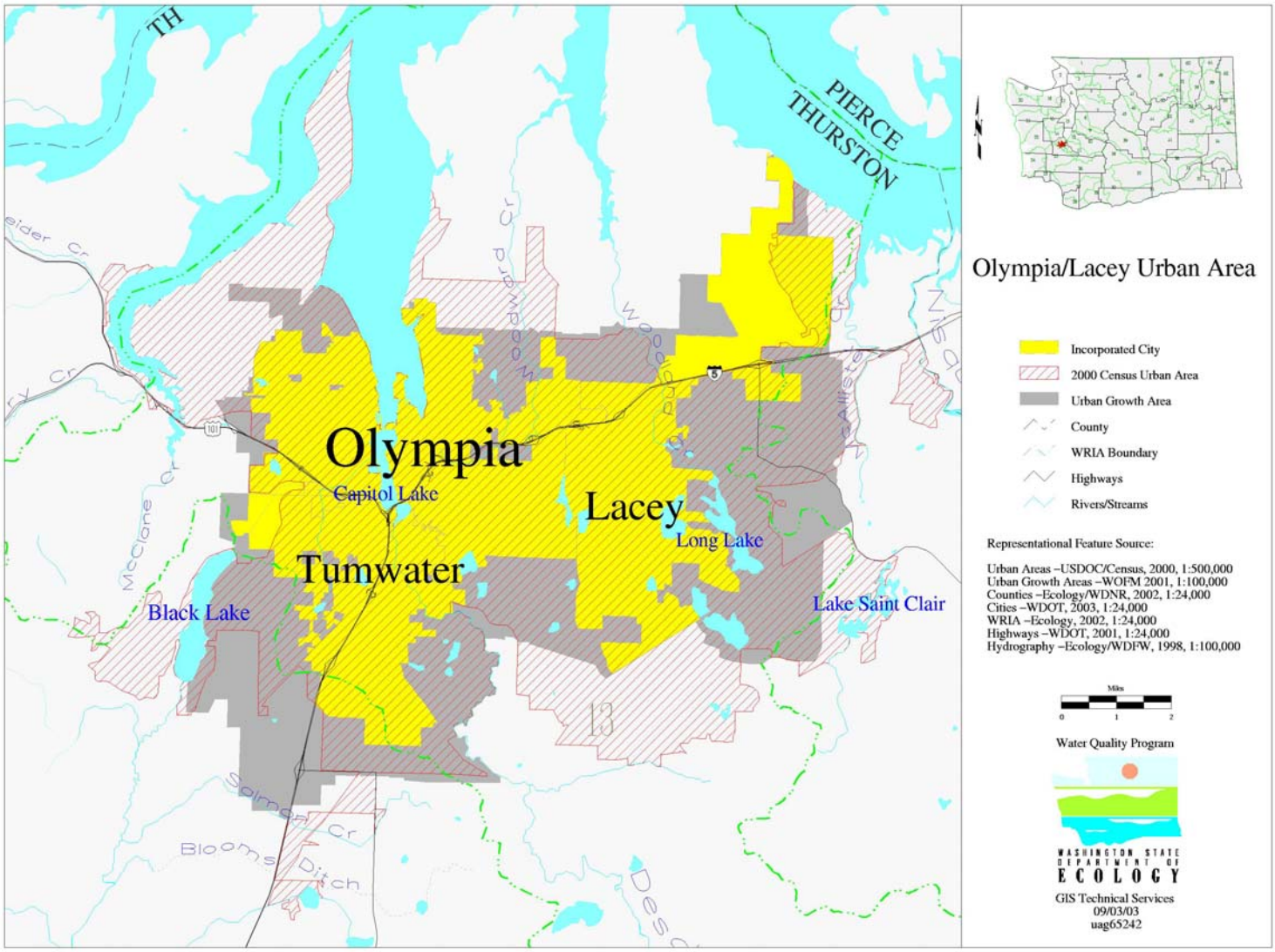

Figure 1: Olympia/Lacey Urban Area

controls on new development in areas slated for urban growth. Cities and counties will need to either work together on implementation or have stormwater programs with consistent requirements. Ecology strongly encourages local coordination since the cities are expected to assume responsibility for the stormwater system when it annexes the urban growth area.[14]

Ecology's Proposal:

Realistically, most cities and counties will simply implement their program across their entire jurisdiction. Ecology proposes to cover the entire incorporated area of a city if part of the city triggers the permit requirement for Phase II. For counties covered under the permit, Ecology proposes to include areas identified for future urban growth (*i.e.* urban growth areas identified in accordance with the state's Growth Management Act) in addition to the census-defined urbanized areas.

Designation Criteria

The federal stormwater rules require that the permitting agency (Ecology) develop criteria to identify additional jurisdictions that should be required to obtain permit coverage. The criteria must be designed to evaluate whether a stormwater discharge results in, or has the potential to result in, exceedances of water quality standards or impairment of beneficial uses.

EPA recommends use of the following criteria:

- Discharge to sensitive waters
- High population density
- High growth or growth potential
- Contiguity to an urbanized area
- Significant contributor of pollutants to waters of the United States, or
- Ineffective protection of water quality concerns by other programs

Ecology Proposal:

Ecology has not identified what designation criteria it will use to designate additional jurisdictions for permit coverage. Ecology will

[14] See Figure 1 which illustrates the differences between urbanized areas, incorporated areas and urban growth areas. Additional maps for Washington's urbanized areas with urban growth boundaries are available at:
http://www.ecy.wa.gov/programs/wq/stormwater/phase_2/maps.html

involve the 10 cities that the federal regulations require us to evaluate[15] in the development of the designation criteria. At this time, Ecology does not have a schedule nor a process identified for the development of the designation criteria.

Types of Discharges

Under the federal rules, the only stormwater discharges that are regulated under municipal stormwater permits are discharges from municipal separate storm sewer systems (MS4s) to surface waters. MS4s located within the census-defined urbanized area are required to obtain an NPDES stormwater permit. Private stormwater discharges to surface waters are not required to obtain stormwater permit coverage (except for a temporary construction stormwater permit for development that disturbs greater than one acre of land) unless they are required because of the nature of their business to obtain an industrial stormwater permit.

As noted previously, with uncontrolled and untreated discharges entering the same receiving waters as those from regulated MS4s, the receiving waters may see some gradual improvement due to controls in the municipal systems, but are unlikely to see full recovery. Washington cannot rely on the municipal stormwater permits to protect and maintain the quality of our state's water bodies. Ecology, however, does not have the legal authority to issue a permit to control these direct stormwater discharges, except on a case-by-case basis. Local governments do have the authority to adopt ordinances to control direct stormwater discharges.

Ecology's Proposal:

Ecology proposes that the Phase I and Phase II permits only address discharges from the MS4 system. Ecology recommends that local jurisdictions regulate direct discharges to surface waters from new development within their jurisdiction as the most cost-effective approach since retrofitting existing development can be much more costly than preventing the damages, but Ecology has no authority to require adoption of such ordinances.

Discharges to Waters of the State including Ground Water

When Ecology writes and issues permits, the permit must satisfy both federal and state law. For phase II stormwater requirements, this means satisfying the phase II municipal stormwater requirements and the requirements in the state's Water Pollution Control Act (chapter 90.48

[15] Under federal rules, Ecology is required to evaluate, at the minimum, all cities with populations of 10,000 or greater. In Washington, the cities requiring evaluation include: Aberdeen, Anacortes, Centralia, Ellensburg, Moses Lake, Oak Harbor, Port Angeles, Pullman, Sunnyside, and Walla Walla.

RCW). The federal stormwater requirements and, more specifically, the federal NPDES stormwater requirements are narrowly directed at addressing stormwater discharges to "waters of the United States." In both the federal Clean Water Act (CWA) and the federal regulations implementing the CWA, "waters of the United States" is defined as including waters possibly subject to interstate commerce. This has generally been interpreted as including surface waters and waters that are tributary to surface waters and generally does not include discharges to ground water.

Under state law Ecology is required to address discharges to "waters of the state" when making permit decisions. Waters of the state are defined in 90.48.020 RCW and include underground waters within the jurisdiction of the state of Washington.

The phase I permit issued in 1995 addressed both discharges to surface waters and discharges to ground water. The permit requirements for discharges to ground water were clarified in the guidance document, "*Municipal NPDES Permit—Clarification of Permit Conditions,*" that stated, "The requirements for ground water protection are the same as those already included for stormwater management." The permit clarified that discharges to surface water are regulated under the NPDES and state permit authorities; and discharges to ground water are regulated only under state authorities.

Ecology also administers the Underground Injection Control (UIC) program established under the federal Safe Drinking Water Act also provides regulatory coverage for many (but not all) stormwater discharges to ground water. The UIC program requires that injection wells be registered and meet "a non-endangerment standard" to protect underground sources of drinking water. (Note: unlike the federal NPDES requirements, the Safe Drinking Water Act does not contain provisions for enforcement by third party lawsuits.)

Ecology's Proposal:

The phase II permits, like the phase I permits, would address discharges to ground water. Where there are existing regulatory programs which address discharges to ground water, Ecology will defer to those programs rather than duplicate or add new requirements. For discharges to ground water that are covered under the underground injection control program, Ecology will defer to the UIC program for the control of those discharges and will not regulate those discharges under the phase I and phase II municipal stormwater permits.

Special Purpose Districts

Special purpose districts are included as regulated entities in the federal rule's definition of a MS4, which states:

"MS4 means a conveyance or system of conveyances….. (i) owned or operated by a state, city, town, county, parish, district, association or other public body …having jurisdiction over disposal of …stormwater, or other wastes, including special districts created under State Law such as a sewer district, flood control district or drainage district or similar entity …..; (ii) Designed or used for collecting or conveying storm water." 40 CFR 122.26(b)(8)(b) *emphasis added*

Ports, drainage districts, flood control districts, universities, school districts and prisons are some of the special districts in Washington that may be affected by the federal stormwater regulations. MS4s owned or operated by special purpose districts are subject to regulation under the NPDES municipal stormwater program.

Ecology's Proposal:

Ecology intends to provide permit coverage for the special districts affected by Phase II; however, they will not be a permitting priority for the first permit term. Ecology has not yet determined which types of special districts would be required to obtain permit coverage and which ones may be waived from permit requirements.

Integration of Phase I and Phase II

Ecology's Proposal:

Ecology is planning to develop two general permits, one for eastern Washington and the other, a joint Phase I/Phase II permit for western Washington. The climate and geology are different enough between the two regions to warrant different technical requirements for managing stormwater. While most stormwater in western Washington discharges to surface waters, much of the stormwater in eastern Washington filters into ground water.

The separate Phase II permits for eastern and western Washington will reflect the different climatic, geologic and environmental conditions between eastern and western Washington and the different degrees of risk of damage from unmanaged stormwater flows.

Western Washington General Permit

For western Washington, Ecology proposes to issue a joint Phase I and Phase II municipal stormwater permit. A combined permit should foster communication and coordination between the Phase I and Phase II

municipalities. The decision to combine the permit will be re-evaluated as the permit is developed.

Under federal law, the Phase I communities have slightly different requirements than do the Phase II communities. Both Phase I and Phase II entities are required to develop and implement a stormwater management program. However, while the Phase II rules include minimum requirements for a stormwater program that must be included in the permit, the federal Phase I rules only specify application requirements. The rules intend that applicants propose their stormwater program in their application for permit coverage and that the permit essentially reflect those stormwater program elements.

Thus, the combined permit will include different requirements for Phase I permit holders than for Phase II permit holders.

Eastern Washington General Permit

Eastern Washington does not have any Phase I communities, so the permit will only be a phase II permit. Ecology has been working with jurisdictions in eastern Washington to develop a model stormwater management program and stormwater manual appropriate for eastern Washington. The Phase II permit for eastern Washington is expected to reflect the results of this work.

Watershed-based permits

Ecology is not proposing the development of watershed based permits at this time, for the following reasons:

First, many jurisdictions, and particularly counties, would be split among different watersheds. As happened with the first Phase I permit, this would result in municipalities being subject to multiple permits. Second, Ecology can include watershed-specific conditions in the Phase I and II permit as necessary without needing to develop multiple permits. Third, Ecology did not see significant environmental or administrative benefits from having watershed permits. Finally, Ecology does not have the resources available to develop and administer separate watershed permits.

Content of the Permit

The Clean Water Act requires that permits be issued to allow municipal stormwater discharges to surface waters. These permits must prohibit discharges of anything other than stormwater and require controls to reduce the discharge of pollutants to the maximum extent practicable (MEP).

Phase I

The Phase I municipal stormwater permit rules establish permit application requirements instead of permit content requirements. The rules required submittal of a two-part application. Part I of the application calls for a description of the municipality's existing stormwater management program. Part II of the application consists of a proposed stormwater management program that must include:

- Outfall locations
- Characterization data
- Adequate legal authority
- Proposed management program
    - Maintenance
    - Comprehensive plan
    - Roads and highways
    - Flood control facilities
    - Pesticides, herbicides and fertilizer
    - Control of illicit discharges
    - Industrial facilities
- Monitoring
- Fiscal analysis
- Annual report

Phase II

Under the Phase II federal rules, permits must require regulated MS4s to "develop, implement, and enforce a stormwater management program designed to:

- Reduce the discharge of pollutants to the maximum extent practicable (MEP);
- Protect water quality; and
- Satisfy the appropriate water quality requirements of the Clean Water Act."[16]

Specifically, the Phase II regulations require that the stormwater management programs include "six minimum control measures" including:

1) Public education and outreach
2) Public involvement and participation
3) Illicit discharge detection and elimination
4) Construction site stormwater runoff control
5) Post-construction stormwater management in new and redevelopment

[16] 40 CFR § 122.34(a)

6) Pollution prevention and good housekeeping practices for municipal operations.

Aside from the six minimum measures, permits must include:

- Any more stringent effluent limitations based on an approved total maximum daily load (TMDL) or equivalent analysis
- Evaluations of program compliance, the appropriateness of identified BMPs, and progress toward identified measurable goals

This full set of requirements is often referred to as the "six-plus-two" minimum requirements.

The Puget Sound Water Quality Management Plan[17] provides recommendations for local comprehensive stormwater programs. The recommended plan includes 13 distinct components:

- Development controls
- Site plan review
- Inspections at construction sites
- Maintenance and operations
- Source control
- Illicit discharges
- Public education
- Identification and ranking of existing problems
- Low impact development
- Watershed and basin planning
- Stable funding
- Monitoring
- Implementation schedule

The components recommended by the Puget Sound plan are similar to the six-plus-two minimum requirements. Additionally, the plan adds elements for low impact development, identification and ranking of existing problems, and stable funding which are not currently included in the federal minimum requirements.

Ecology's Proposal:

Ecology proposes that the Phase II permits include the six-plus-two minimum requirements and not include additional measures, such as

[17] 2000 Puget Sound Water Quality Management Plan. Puget Sound Action Team. Olympia Wa. http://www.psat.wa.gov/Publications/manplan00/MGMTPLAN.pdf

retrofit requirements or basin planning, for this first permit term. While Ecology strongly encourages local governments to conduct basin planning to most effectively manage their stormwater, the priority for the phase II permit is to bring all phase II communities to at least a minimum standard of developing and implementing a stormwater management program. Ecology also recognizes that many communities in the Puget Sound basin have already begun to implement stormwater management programs. The permit should not encourage those who have existing stormwater management programs to reduce their programs.

Level of Effort and Maximum Extent Practicable

The federal rules do not describe the minimum level of effort required for each of the minimum stormwater program requirements. That is left to the permitting authority.

Ecology's Proposal:

Ecology will describe the level of effort needed during the permit development process. At this point, exactly what will be required for each minimum measure is not known. We have, however, developed general principles that will guide the development process:

- For each program element, we will base the requirements on recognized practices from existing programs. In other words, we won't include as permit requirements practices that have not been shown to be feasible.
- All permit requirements will be expected to result in environmental benefits.
- For phase II communities, there will be two permits, one for western Washington and one for eastern Washington. These permits will reflect the differences between eastern and western Washington. In each of the permits, the final requirements for this permit term will be the same for all Phase II permit holders.
- "Tiering" in the sense of different final requirements under one permit will not be included except for the difference between Phase I and II.

Water Clean-up Plans, or Total Maximum Daily Loads (TMDLs)

The Total Maximum Daily Load (TMDL), or water cleanup plan, process is established by Section 303(d) of the Clean Water Act (CWA). Federal law requires states to identify sources of pollution in waters that fail to meet state water quality standards, and to develop TMDLs to address those pollutants. The TMDL establishes limits on pollutants that can be

discharged to the water body and still allow state standards to be met. After a TMDL is approved by EPA, the limits on pollution set in the TMDL must be included in permits that are issued to cover discharges into that water body.

The EPA phase II regulations state that, if a TMDL is in place, the permit holder must comply with any more stringent effluent limitations in the permit, including permit requirements that modify, or are in addition to, the minimum control measures. The Phase I regulations do not specifically address TMDL implementation.

Ecology's Proposal:

For both the Phase I and II municipal stormwater permits Ecology is proposing that requirements needed to comply with an EPA-approved TMDL be included in the permit at the time it is issued or reissued. If it is urgent that the TMDL actions be implemented before it is time to reissue the permit, Ecology will issue an administrative order to require implementation. This gives permit holders an opportunity to appeal these requirements.

Use of the stormwater management manuals

Ecology published the Stormwater Management Manual for western Washington in August 2001, and is in the process of completing a similar Manual for eastern Washington. Both manuals are intended to provide developers, local governments and others with the most up-to-date information on how to properly manage stormwater to prevent adverse water quality impacts. Ecology worked with stormwater managers to develop a technical manual of best management practices for stormwater to avoid or minimize environmental impacts.

Both the western and eastern Washington stormwater management manuals are guidance manuals. The manuals do not have any independent regulatory authority and do not establish new environmental regulatory requirements or standards. Elements of the manuals or the manual itself may become a permit requirement only after a public review process and careful consideration of the regulatory authorities for the permit.

The stormwater manuals provide direction on how to address at least three of the six minimum requirements; construction site sediment and erosion control, post construction stormwater controls from new development and re-development, and pollution prevention/good housekeeping for municipal operations. However, the threshold requirements for applying the best management practices are different from federal requirements.

The EPA phase II regulations require permit holders to develop, implement and enforce a program to reduce pollutants in stormwater runoff from construction activities. Phase II permit holders are also required to develop and implement and enforce a program and reduce pollutants in stormwater runoff from new development and redevelopment projects. This requirement is limited to projects which disturb one acre or more. Permit holders are not required under the EPA phase II rules to regulate projects which disturb less than one acre unless the smaller project is part of a common plan of development or sale which disturbs more than one acre.

The EPA phase I requirements also require permit holders to control construction site stormwater runoff and post-construction stormwater runoff from new development and redevelopment; however the federal rules did not establish any project size thresholds for which these requirements would have to be applied. Initially, Ecology required phase I municipal permit holders to either adopt Ecology's stormwater manual or an equivalent manual. At the time the phase I permits were issued, the applicable Ecology stormwater manual was the Stormwater Management Manual for the Puget Sound Basin which was published in 1992. Since the EPA Phase I rules did not set thresholds, Ecology required the use of the project thresholds which were part of the Manual at that time.

Based on input from technical experts, the current manuals set the threshold requirements at various levels for various areas and activities, but always much lower than one acre. A study done by local scientists in western Washington confirms that failure to regulate smaller sites does not protect beneficial uses and negates much of the effect of regulating large sites.[18]

Ecology's Proposal

As part of the permit development, Ecology will evaluate the minimum requirements in the Stormwater Management Manual for western Washington, and the core elements in the Stormwater Management Manual for eastern Washington, to determine whether they are appropriate for inclusion in the municipal stormwater permits. Portions of the manuals that apply will be used as a starting point for permit requirements. The justification for the requirement will be the technical and regulatory standards for the permit, not the fact that it is in the manual.

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[18] Booth, Derek B., and C. Rhett Jackson. 1997. Urbanization of aquatic systems: Degradation thresholds, Stormwater Detection, and the Limits of Mitigation. Journal of the American Water Resources Association; October 1997; V. 33 No. 5, p. 1077-1090.

Ecology proposes using the federal phase II thresholds for phase II municipal stormwater permits rather than the lower technically based thresholds that are contained in both the eastern and western Washington stormwater manuals.

Compliance schedules

We recognize that a compliance schedule with interim deadlines will be necessary for many jurisdictions to reach the expected level of effort. Different jurisdictions (based on size, rate of growth or other relevant criteria) *may* have different compliance schedules to allow time to ramp-up so they can eventually meet the same set of permit requirements.

The final performance standard for the end of the permit term will be the same for all Phase II MS4s.

Phase I entities are expected to have different end points for compliance compared to Phase II communities due largely to their capacity and progress to date in developing and implementing stormwater programs. They also have differing requirements from Phase II entities. Ecology is likely to propose a single compliance schedule for all Phase I entities.

Implementation of the Permit

Tailoring Permits

The federal Phase II rules intended to allow regulated parties to design aspects of their stormwater management programs. These "tailored" programs would fit the unique circumstances of each community. Although tailored programs provide significant benefits, there are also major challenges to this approach. First, the permit holder must justify the proposed revisions. This typically requires a significant level of effort, either in basin plans or engineering or hydrologic studies. Second, Ecology must review and approve the revisions. Ecology has limited resources to provide this service.

Due to the resource limitations, the permits will not assume tailoring of programs. Ecology will allow permit holders to tailor their programs, either through an individual permit or as an option under the general permit. However, this will not be a simple option. Depending on the demand, there may be significant waiting periods to get approval. Permit holders may be covered under the general permit while they are waiting.

Funding Sources

For both municipalities and Ecology, the Phase II program requires new resources. New resources will be required for local governments to

implement the Phase II stormwater requirements. Ecology will also require new resources to write and administer permits and provide technical assistance and guidance.

Local Governments

State law allows municipalities to fix rates and charge customers for services and benefits provided from any stormwater control facility. Options for starting and continuing to operate a municipal stormwater management program include grants, loans, bonds, and fees collected through a stormwater utility. These funding approaches are not mutually exclusive. A local government can pursue one or several sources of funding at any given time.

Ecology has limited amounts of grant and loan funds available to assist municipalities. Generally, grant funds cannot be used to comply with permit requirements. Therefore, once the permit is in effect, only loan funds will be available. Stormwater projects will compete with all other water quality projects for grants and loans. There is no dedicated funding source for stormwater projects at this time.

Ecology

Washington state law (RCW 90.48.465) requires Ecology to establish annual fees to fully recover expenses related to issuing and administering the waste discharge permit program.

Currently, fees are charged to Phase I Stormwater municipalities. All seven permit holders pay the same annual fee to Ecology. The FY2004 phase I permit fee is set at $31,272.

Ecology does not have a specific fee category for phase II municipal stormwater permits. Under the current rule, if a fee category is not established, the fee is based on the gallons per day of discharge. This information is not typically available for municipal stormwater.

Ecology is revising the permit fee rule. The initial fee schedule for phase II will be established by rule and can be adjusted no more than once every two years. The new rule will be in effect by July 1, 2004.

Ecology's Proposal:

For the phase II municipal stormwater permits, Ecology has proposed two options:

1. Set a flat fee for phase II jurisdictions regardless of size. This would set a fee totaling approximately $8,020 per year. Phase I communities, which are larger, would still pay $31,272 per year.

2. Establish phase II fees using a flat rate based on the number of housing units inside the geographic area covered by the permit then adjusting fees for economically disadvantaged communities. The maximum fee would be the Phase I fee.

The final option will be developed through the rule development process. The amount of projected revenue will directly affect the resources available to Ecology to administer the permit. Ecology's current proposal would generate approximately $600,000 per year which would fund approximately six new staff to administer the expected 100+ phase II permits. Lower revenue levels will require a permit with fewer resource requirements for Ecology. To set the fee after the permit has been issued would require legislative action.

Program Evaluation

Federal rules require Phase I and Phase II communities to have monitoring programs. Though the Phase I rules do not specify a particular type of monitoring other than illicit discharge detection, the mandated annual reports require data collection to report on program implementation, assess management practice effectiveness, and identify water quality improvements or degradation. In addition to the required detection of illicit discharges, the Phase II rules require an evaluation of program compliance, appropriateness of management practices, and progress toward achieving measurable goals. Both the Phase I and Phase II rules intend this monitoring to influence changes in stormwater management programs to better protect water quality.

The types of monitoring needed may be broken down into two major categories: compliance monitoring and environmental outcome monitoring. At this time, Ecology is proposing that for the municipal stormwater permits, both Phase I and II entities conduct permit compliance monitoring. Ecology will determine, through the permit development process, what level of environmental effectiveness monitoring, if any, may be required for the Phase I and Phase II municipalities.

Compliance Monitoring:

This type of monitoring, to determine compliance with permit requirements, is focused on pollutant sources, the effectiveness of actions taken to reduce stormwater impacts and actions performed, not

on environmental outcomes. It would include data collection and interpretation in the following areas:

1) Documentation for achievement of measurable objectives (*e.g.*, project reviews, construction site inspections, inspections of public and private stormwater facilities, maintenance of facilities, and enforcement actions).

2) Documentation of effectiveness of treatment practices and source control practices. This effectiveness monitoring is required under the federal rules; however, the results of the effectiveness monitoring will not be used for determining compliance.

3) Documentation of the relative sources of pollutants to develop and implement source control programs for TMDL or toxic clean-up programs.

Monitoring for Environmental Outcomes:

The intent of environmental monitoring is to answer whether our stormwater programs are adequate to protect our aquatic resources and uses, and whether we are making progress toward reduction of existing impacts. Environmental monitoring is the critical step in a strategy that should lead to improved programs that achieve environmental goals.

The Phase I and II permit development process will explore the extent to which the permits should be the vehicle to collect this information. If the permits will require environmental monitoring, what are the most efficient methods by which it can be accomplished? If the permits do not require environmental monitoring, how can we gauge the success of stormwater programs? Which entity (ies) are most appropriate to accomplish this monitoring?

While environmental monitoring isn't designed to show compliance with permit conditions, it has been incorporated into NPDES permits for wastewater discharges for many years. In that sense, some or all of the monitoring could be viewed as permit compliance monitoring. That too will be a point of discussion in permit development.

Recommendations: Broader Stormwater Management Needs

In developing the proposal for the municipal stormwater permits, Ecology recognizes that permits alone cannot prevent all stormwater impacts and

preserve aquatic natural resources and their associated beneficial uses. There are multiple reasons for this.

First, both the Phase I and II municipal stormwater permits apply only to discharges owned or operated by the municipality or other public entity. The permits do not cover privately-owned direct discharges.

Second, the Phase II permit will only require new development controls to sites that disturb at least one acre of land. A report by local researchers in western Washington shows that the cumulative impact of unregulated stormwater from sites smaller than one-half acre is sufficient to cause major and permanent stream channel degradation and habitat loss.[19] As a result, if controls on sites smaller than one acre are not implemented, continued degradation of water bodies in areas of new development will occur.

Finally, land development as currently practiced results in significant changes in the natural hydrology of watersheds. Those changes severely impact the aquatic resources, and are particularly harmful to fish.

As a result of the limited scope of the permits, the permit requirements should have the effect of slowing degradation, but cannot successfully prevent further harm to streams, lakes, ground water and marine waters that receive urban stormwater. Ecology has developed recommendations for further action by state and local governments. The actions fall into four categories:

- Preventing impacts from new stormwater discharges
- Reducing impacts from existing stormwater discharges
- Making changes to the relationship between built and natural environments
- Adaptive management

Preventing Impacts from Stormwater Discharges

Because of the irreversible nature of stormwater impacts on urban streams, one of the greatest needs is an effective strategy to prevent impacts from new development. The Puget Sound Water Quality Management Plan is one example of a comprehensive approach to stormwater management. While implementation of the plan is voluntary, many jurisdictions within the Puget Sound Basin have begun implementation its recommendations.

[19] Booth and Jackson, loc. cit.

The local and national information we have so far show shows that, if we want to prevent impacts to water bodies in areas where significant human populations reside, we must radically reduce impervious surfaces (*e.g.* surfaces that don't allow rain to soak in), retain high percentages of native vegetation, particularly in established forests, and severely minimize road densities and roads crossing streams. In other words, we must drastically change land development practices.

Ecology's Recommendations:

To address the known shortcomings of the stormwater permits, and to effectively prevent continued degradation of waters of the state, there are three stormwater management needs that Ecology recommends be considered outside of the permit:

I. Controlling Stormwater Discharges from all New Development

The most cost effective way to control stormwater discharges is to design and build in stormwater treatment and flow control BMPs *at the time a development is built*. Retrofitting stormwater controls into an already developed area is more expensive and less effective. There is a need to establish new development controls for stormwater to provide consistency and predictability for developers and to apply those controls to all sites, including those less than one acre in size. In addition, state vesting laws should be assessed to determine the extent of degradation resulting from development being built to outdated standards.

II. Stormwater Basin Planning

In areas where new development is occurring in a relatively undeveloped basin, site-specific controls alone cannot prevent impacts and preserve aquatic resources. Recent research should be used to identify development strategies that may protect the resources. Scientific modeling of the basin can help predict the extent of potential impacts and the effectiveness of alternative land development options to help avoid or minimize those impacts.

III. Land Use Planning

The findings of basin planning and scientific modeling should be incorporated into land use planning conducted under the Growth Management Act, and into local programs to protect critical areas. Critical areas include fish habitat; areas where endangered, threatened, or sensitive species have a primary association; and commercial and recreational shellfish areas. Fish habitat and shell fishing are not currently sustained in any

areas with significant urban development. So, protection of Critical areas will require changes in land development practices, or restrictions on the extent and location of development draining to critical areas, and possibly both.

Reducing Impacts from Existing Stormwater Discharges

The municipal stormwater permits alone do not address most existing stormwater discharges. Both the Phase I and Phase II municipal stormwater permits apply only to discharges from stormwater systems owned or operated by the permit holder. Often there are additional stormwater discharges into waters of the state from privately owned systems, most often from property directly adjoining water bodies. In addition, the Phase II stormwater permit requirements do not call for actively identifying and controlling sources of pollutants or flow-related impacts to urban streams. The Phase I permits call for applying controls to existing discharges to reduce pollutants to the maximum extent practicable, however, the level of effort to be applied must be defined in the permit.

Ecology's Recommendations:

To address the known shortcomings of the stormwater permits, and to reduce the impact of existing stormwater discharges to waters of the state, there are two stormwater management needs that Ecology recommends state and local governments consider:

I. <u>Setting Goals for Urban Water Bodies</u>

To assess the need for appropriate stormwater pollution and flow controls in urban watersheds, local governments should establish resource goals for those watersheds. Water bodies in areas dominated by urban development cannot be restored to a condition equivalent to a pristine stream or lake. While we have countless examples of reductions and losses of salmon and other fish in urbanizing areas, we do not have any examples of successfully restoring healthy, native salmonid populations in urban or urbanizing areas. We also haven't any cases of successfully reopening marine shorelines in urban areas to recreational or commercial shell fishing. We must also acknowledge the value of urban water bodies and the need to make them safe for human contact, as well as to provide some basic level of habitat in these waters for certain types of fish and wildlife.

II. Stormwater Basin Planning

Stormwater basin planning is needed to quantify flow-related impacts and sources of pollution to urban water bodies. This information is needed to target resources spent on structural and non-structural controls (such as maintenance and public education) so that goals for urban water bodies can be met. In many basins, this planning can be combined with the planning for new development described earlier.

Making Changes to the Relationship Between Built and Natural Environments

Society's goals for livability and environmental protection cannot be achieved by permits alone. Stormwater impacts are just one part of growing concerns nationally about community livability, loss of open space, traffic congestion, and air and water quality.[20] Following are some examples of actions that, if implemented, could improve the health and preserve the aquatic natural resources of urban water bodies. However, they are generally beyond the type of actions that can be required through a stormwater NPDES permit.

I. Reduce dependence on automobile and road density

Sixty-five percent of impervious surface in urban areas is used for roads and parking areas for automobiles. Transportation-related impervious surfaces cause greater impacts to urban streams, both in runoff quantity and quality, than similar areas of rooftop or other types of surfaces.[21] This is because roads are directly connected to streams and have more pollution-generating activities. In addition, where roads are excavated, groundwater is collected and discharged to streams. Reducing dependence on the automobile and the areas occupied by roads and parking areas will reduce stormwater impacts.

II. Reduce use of chemicals

Insecticides and herbicides (collectively termed pesticides) have been detected in rivers and streams in King County. Twenty-three pesticides were detected in water from urban streams during rain storms, and the concentrations of five of these pesticides were at levels that pose danger to aquatic life.[22]

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[20] U.S. EPA. November 2000. Our Built and Natural Environments: A Techical Review of the Interactions between land Use, Transportation and Environmental Quality
[21] May, Christopher W. 1996. Assessment of Cumulative Effects of Urbanization on Small Streams in the Puget Sound Lowland Ecoregion: Implications for Salmonid Resource Management. PhD Dissertation, University of Washington.
[22] USGS Fact Sheet 097-99. April 1999

Since it is difficult to remove pesticides from water, their use should be reduced in order to protect the waters of the state.

III. Implement Low-Impact Development and Preserve More Undisturbed Areas

Washington's population is projected to increase by 22 percent from 2000 to 2010. Urban land area in the United States has quadrupled since 1954. In most large metropolitan areas, urban land area rose more than twice as fast as population did between 1950 and 1990.[23] Passage of the Growth Management Act in this state was spurred, in part, by this disparity between urban land area and population growth rates. Compact-style development, with a smaller footprint, reduced impervious surfaces, natural areas within the urban core, and improved water detention can help local communities meet the Growth Management Act's goals of accommodating growth while protecting the environment.

IV. Protect and Restore Stream Buffers

Stream side buffers serve many useful functions in preserving aquatic natural resources and promoting healthy surface waters. Researchers recommend broad buffers, relatively unbroken by road crossings, with mature conifers and native shrubs. Protecting buffers in newly-developing areas and restoring buffers in developed areas can reduce the need for structural stormwater controls.

Adaptive Management and Feedback

Environmental Outcome Monitoring for Adaptive Management

"Adaptive management" is constantly looking at what we are doing, finding what works and what doesn't, and changing what we are doing based on what we learn. Stormwater management programs require a substantial expenditure of funds at both the local and state levels, and by private development. Knowing that these funds are being spent effectively is a serious concern. It is also extremely important that we answer whether our stormwater programs are adequate to protect our aquatic resources and uses, and whether we are making progress toward reduction of existing impacts. For these reasons, Ecology recommends that environmental monitoring be conducted not to determine permit

[23] U.S. EPA. November 2000. Our Built and Natural Environments: A Technical Review of the Interactions between land Use, Transportation and Environmental Quality

compliance, but in order to revise permits and stormwater programs as more is learned about the best ways to manage stormwater.

The following types of environmental monitoring should be conducted, at the local and regional levels, to form the basis of an effective adaptive management program:

1) Biological health of receiving waters
    a) In areas with substantial new development, measuring the loss of beneficial uses, and the degradation of biological diversity and biological condition
    b) In areas with substantial development and degraded resources, establishing the current condition to help set priorities and determine watershed goals.
    c) Identification of causes of impacts (*e.g.*, fish mortality) in urban streams.
2) Chemical health of receiving waters
    a) Assessing whether surface waters, sediments, and ground waters are achieving appropriate water quality standards that are intended to protect the resources
3) Physical health of receiving waters
    a) Assessing whether the physical attributes critical to habitat for biological resources are being protected. This includes stable channel bed and banks, pebble size, pool to riffle ratios, adequate riparian areas.
4) Public health protection
    a) Determining whether the biological resources (*e.g.*, shellfish) are safe to eat. Have they been contaminated by bacteria and toxics?
    b) Determining whether surface waters are safe for swimming and contact recreation.
5) Physical status of watershed as an environmental indicator
    a) Tracking land cover changes to correlate their association with receiving water and aquatic resource impacts. This would include impervious cover vegetation cover; riparian zone status; and stream crossings.

Conclusion

Stormwater is the leading contributor to water quality pollution in our urban waterways, and as urbanization increases, it is also the state's fastest growing water quality problem. Ecology is required to implement the federal Clean Water Act and state Water Pollution Control Act in

Washington state. Within the framework created by these statutes, Ecology must develop permits for municipal stormwater.

In this report, Ecology has laid out a proposed framework for these permits. This framework balances the requirements of state and federal law to provide a workable next step in municipal stormwater management.

The proposal does not address all urban stormwater management needs nor will it prevent all stormwater impacts. There is no known substitute for preserving natural land cover and soils. If we are to protect the beneficial uses of our water bodies, citizens, state and local governments must work together to change our land development practices.

Appendix A

List of issues:

(a) Types of discharges being regulated under these permits[24];

(b) Areas being regulated by these permits under phases one and two of the federal national pollutant discharge elimination system permit program as they relate to municipal borders;

(c) Issuance of these permits[25] on a watershed basis;

(d) Integration of permits and permit requirements for phase one and phase two of the federal national pollutant discharge elimination system permit program;

(e) Application of these permits to ground water discharges;

(f) Level of effort required of municipalities to satisfy permit requirements regarding:

(i) Public education and outreach;

(ii) Public participation and public involvement;

(iii) Illicit discharge detection and elimination;

(iv) Construction site runoff control;

(v) Post construction runoff control;

(vi) Pollution prevention and good housekeeping;

(vii) Implementation of applicable total maximum daily loads; and

(viii) Program evaluation and reporting;

(g) Protection for shellfish areas;

(h) Costs and benefits associated with each permit element not required under federal law;

(i) The use of land use planning and existing land use plans and rules as a best management practice for storm water management; and

(j) Potential funding sources for implementation of permit requirements.

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[24] The permits referred to are the National Pollutant Discharge Elimination System municipal stormwater permits – Phase I reissued and the new Phase II permits.
[25] NPDES municipal stormwater permits, Phases I and II

Appendix B

Eastern Washington Review of NPDES Phase II Legislative Issues

Stormwater Management
FOR EASTERN WASHINGTON

December 15, 2003

Washington State Legislators
Olympia, Washington

RE: EASTERN WASHINGTON REVIEW OF NPDES PHASE II LEGISLATIVE ISSUES

Dear Washington State Legislators:

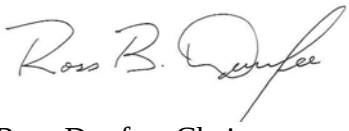
Thank you for providing our group the opportunity to offer our professional opinions and advice concerning the imminent National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater program for eastern Washington. Ecology staff has been very supportive in development of this report. However, eastern Washington continues to have multiple and divergent views concerning the need and priority for costly stormwater programs. Though the report discusses a variety of issues related to the NPDES Phase II permit, we continue to emphasize the concern that creates the greatest stress for eastern Washington cities and counties – funding.

The NPDES Phase II program is required through federal and state laws - not by local choice. Eastern Washington officials will find selling stormwater programs to taxpayers very difficult when local budgets are already broken from other mandated programs, a weakened economy, and a no-new-tax mentality. Currently, federal and state governments provide no funding for these new required programs.

Local agencies do not have the ability to fix the funding problem. Only the state of Washington has adequate leverage to bring this issue to the federal level. Only the state of Washington can develop equitable funding solutions between federal, state and local agencies. We request that an equitable funding solution be prepared and in place prior to implementation of the NPDES Phase II program or at a minimum relax the "level of effort" to that of the federal program given that the state is intending to go beyond what is required by federal law.

Many eastern Washington community representatives have worked very hard to bring this report to completion. We hope you find it useful in your deliberations on stormwater issues and we will be pleased to work with you to develop meaningful legislative solutions.

Sincerely,



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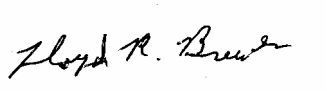

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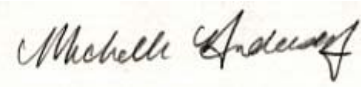

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FOR EASTERN WASHINGTON

Eastern Washington Review of NPDES Phase II Legislative Issues

Submitted To: Washington State Department of Ecology and Washington State Legislature

Submitted By: Eastern Washington Stormwater Steering Committee and Interested Participants

Date: December 1, 2003

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Executive Summary

The U.S. Environmental Protection Agency (EPA) passed National Pollutant Discharge Elimination System (NPDES) Phase II stormwater regulations in 1999 that expand the requirement for stormwater permits to all municipalities located in "urbanized" areas greater than 50,000 population, as defined by the Bureau of the Census. The regulations also require an evaluation of cities outside urbanized areas that are more than 10,000 in population to determine if a permit is necessary for some or all of these cities. Under the new NPDES Phase II rule, as many as 30 municipalities in eastern Washington will need municipal stormwater permits. The Washington State Department of Ecology will be developing and issuing the permits in 2004, leaving little time for eastern Washington jurisdictions to prepare for the requirements.

The eastern Washington stormwater group, which included members of the Eastern Washington Stormwater Management Steering Committee and other interested parties (primarily local agency representatives), met five times from August through November 2003 to discuss the issues relating to NPDES Phase II Stormwater permitting that were raised during the 2002 Washington State Legislative Session. The task the group was asked to accomplish was:

> *By December 1, 2003, produce a report that frames significant policy issues relating to the development of a National Pollutant Discharge Elimination System permit for municipal separate stormwater discharges in eastern Washington, identifies options to address these issues, clarifies different positions related to these options, and identifies areas of consensus. The issues that the group was asked to consider were derived from the common elements of the House and Senate versions of HB 1689 (the list of issues is included in Attachment A at the end of this report).*

From the time of introduction of the NPDES Phase II regulation, it became apparent that eastern Washington jurisdictions feel they have been put into an unpleasant situation that will require them to raise money to pay for a new stormwater program. They made it clear that funding stormwater programs will be difficult at best since their constituents do not view stormwater as a priority issue when compared to other local needs.

Throughout the discussion of stormwater issues, a variety of common themes arose that were generally supported by the eastern Washington stormwater group, which are discussed in detail in this report. These common themes and perspectives included:

- **Many eastern Washington jurisdictions will have significant difficulty paying for the required stormwater programs.** The lack of federal and state funding for these mandated requirements places a burden on local jurisdictions. Compliance is not optional, and jurisdictions are forced to generate funds at a local level through fees, utility rates, and other modes. Regulated jurisdictions expect considerable difficulty in gaining approval for allocation of funds for the NPDES Phase II program from their communities and elected officials when faced with other issues and mandates considered to be higher priorities.

- **NPDES Phase II stormwater permits should be written based on the minimum federal requirements.** Many of the eastern Washington stormwater group participants indicated that they may support the encouragement of local jurisdictions to go beyond the federal requirements and expand the geographic area covered by the permit to include areas that correspond with Urban Growth Areas associated with the Growth Management Act, commercial/industrial districts, and/or other planning area boundaries as applicable for local conditions that have a potential to result in exceedances of water quality standards.

- **Stormwater programs need to be developed to ensure that equity to businesses is maintained.** This refers primarily to the potential for new businesses to locate in areas where standards are the least costly. The evaluation of which areas should be covered by the Phase II regulations should consider these equity issues.

- **Stormwater permits should be structured to limit local jurisdictions' liability from third party lawsuits.** Concern was expressed that including regulation of stormwater discharges to groundwater under the NPDES Phase II program may increase the potential for liability under third party lawsuits. Many discharges of stormwater to groundwater are regulated under the Safe Drinking Water Act or other State laws, which have no provisions for third party lawsuits. Local liability should not be increased due to the NPDES permitting approach chosen by Ecology and validated by the Legislature.

- **Compliance measures should be based on meeting the NPDES Phase II requirement of narrative NOT numeric standards.** Narrative standards, such as Maximum Extent Practicable, should be clearly defined and understood to mean the application of appropriate actions (e.g., Best Management Practices). Best Management Practices are an example of narrative standards that are considered to be appropriate controls consistent with the federal narrative standard of Maximum Extent Practicable, as has been shown in case law.

- **Changes in state law (RCW 90.48) should be considered to keep stormwater compliance standards separate from municipal or industrial wastewater/sewer standards (consistent with the intent of the federal law).** It was viewed that state law requires the permit to be written to include state law requirements associated with discharges to groundwater and that implementing state law under the federal NPDES permit increases the potential for third party liability. In addition, it was viewed that there is not enough specificity regarding the use of narrative (not numeric) standards. The state should consider adopting language similar to the federal standard of Maximum Extent Practicable for municipal stormwater (as has been suggested by the Ten Cities Group and King County). Attachment E includes proposed revisions to RCW 90.48.

- **The level of effort required of local jurisdictions in eastern Washington to comply with the Phase II permit should be consistent with the minimum requirements outlined in the Model Municipal Stormwater Program for Eastern Washington,** which were developed based on the six minimum measures contained in the federal NPDES Phase II Rule. However, flexibility needs to be included to allow permittees with few or no existing stormwater programs in place to have a realistic amount of time to locate funds and develop their programs.

- **The eastern Washington stormwater group is concerned about the implications of including Total Maximum Daily Load (TMDL) requirements into NPDES Phase II stormwater permits.** The group spent a considerable amount of time discussing TMDLs and learning what the implications are when TMDLs are implemented on a receiving water. Concern that TMDLs will likely increase the level of effort required to manage stormwater and thus create more economic hardship on eastern Washington communities was expressed.

I. Introduction

The following sections provide background on the project and a description of how the report is organized.

A. Project Background

The U.S. Environmental Protection Agency passed NPDES Phase II stormwater regulations in 1999 that expand the requirement for stormwater permits to all municipalities located in "urbanized" areas greater than 50,000 population, as defined by the Bureau of the Census. The regulations also require an evaluation of cities outside urbanized areas that are more than 10,000 in population to determine if a permit is necessary for some or all of these cities. Under the new Phase II rule, as many as 30 municipalities in eastern Washington will need municipal stormwater permits. The Washington State Department of Ecology will be developing and issuing the permits next year in 2004. (Additional background information on stormwater runoff, stormwater regulations, and stormwater program elements are included in Attachment C.)

In the spring of 2003, the Washington State Legislature considered legislation (HB 1689) that would have required Ecology to work with the existing Eastern Washington Stormwater Management Steering Committee and a newly formed western Washington advisory group to review a set of issues associated with stormwater permitting and to prepare a joint report on this process. While the legislation did not pass, Ecology nonetheless requested that the Eastern Washington Stormwater Management Steering Committee, which had been formed in June 2001, participate in the review of stormwater issues raised in the 2003 Legislature. Ecology also formed a separate Westside Stormwater Group (WSG) to review the issues. Ecology will then prepare a report to the Legislature that considers the responses from both the eastside and westside groups and propose their approach for developing Phase II permits.

The eastern Washington stormwater group met five times, from August through November 2003, to discuss the issues relating to NPDES Phase II Stormwater permitting that were raised during the 2003 Washington State Legislative Session. The group included members of the Eastern Washington Stormwater Management Steering Committee and other interested parties. The group members primarily represented municipal agencies and are the individuals involved in stormwater management at the local level working directly with local constituents. (Additional information on the eastern Washington stormwater group composition and process used during the review of legislative issues is provided in Attachment D).

During the condensed timeline that the group met, numerous topics and issues were covered. Considerable information was brought forward and discussed, which resulted in valuable education for both the participants and Ecology representatives.

Key Related Issues

Several key related topics and critical timing issues were noted to be vitally important during this effort. They are summarized as follows:

- The timing of this effort aligns with and supports the development of the NPDES Phase II permit for management of stormwater in eastern Washington.

- Economic impacts to local agencies, economically disadvantaged communities, property owners, essentially everyone in community, will be burdensome in this current economic climate of significant budget shortfalls.
- Lack of local agency resources to respond to development of new stormwater programs, both in terms of technical capabilities and funds, will be troublesome.
- Many eastern Washington stormwater group members are the practitioners responsible for implementing their programs and they want a practical, defensible approach.
- Implementation is expected to be a challenge for local agencies, because constituents will not likely see stormwater as a priority issue. This will make it difficult to get support, especially when other municipal programs and needs that are viewed as a higher priority are competing for limited funds.
- Integration of NPDES Phase II requirements with other related state law regulations will have to be done by local agencies to address all of the requirements together (e.g., UIC, TMDLs, GMA, ESA). This is perceived to be complex and may also involve third party liability risks that must be anticipated and mitigated beforehand, as much as possible.

All these factors above, and those included in the cover letter and Executive Summary, were considered during the discussion and development of responses described in this report.

B. Report Organization

This report highlights discussions held by the eastern Washington stormwater group related to the issues described in the House and Senate legislation (HB1689), as well as other topics identified by members at their first, and subsequent, meetings. For purposes of flow and logic, the individual issues have been organized in a manner consistent with the list attached to the letter dated June 25, 2003 from Tom Fitzsimmons to Ross Dunfee, Chair of the Eastern Washington Stormwater Management Steering Committee (see Attachment A).

The report is formatted using the categories listed below. Some issues, however, were not covered in full detail, so some sections of the report deviate slightly from this format and are not as comprehensive.

> **Background** – This section provides background and regulatory information on the issue.
>
> **Discussion –** This section provides an overview of the eastern Washington stormwater group's discussions and perspectives on the issue, which are described in more detail in the following subsections:
>
> > **Considerations** – This subsection describes the often wide range of opinions and perspectives expressed by the group on the *Administrative*, *Legal*, *Cost and Equity*, and *Environmental* characteristics of the issue. These considerations represent opinions and perspectives.
> >
> > **Approach Options** – This subsection describes options for approaching or addressing the issue. In some cases it is indicated if a majority and/or minority preference was identified by the group.

The following issues are addressed in the next sections of this report:

Section II. Review of NPDES Phase II Permitting Issues Identified by the Legislature
- A. Types of Discharges Regulated under NPDES Phase II Permits
- B. Areas Being Regulated Under NPDES Phase II Permits
- C. Issuance of NPDES Phase II Permits on a Watershed Basis
- D. Integration of NPDES Phase I and Phase II Permits *(not applicable to E WA)*
- E. Application of NPDES Phase II Permits to Groundwater Discharges
- F. Level of Effort required of Phase II Municipalities to Satisfy Permit Requirements
- G. Protection for Shellfish Areas *(not applicable to E WA)*
- H. Costs and Benefits Associated with Permit Elements not Federally Required
- I. Use of Land Use Planning as a Stormwater Best Management Practice
- J. Potential Funding Sources for Phase II Permit Implementation

Section III. Review of Additional Issues Relating to Stormwater Management
- A. Other State Law Concerns Relating to Stormwater Management
- B. NPDES Phase II Permit Fees

II. Review of NPDES Phase II Permitting Issues Identified by the Legislature

During the eastern Washington stormwater group meetings, the issues identified by the legislature during the 2002 session, and included as an attachment to the letter from Tom Fitzsimmons to Ross Dunfee (see Attachment A) were discussed. The following sections provide background, discussion, considerations, perspectives, and approach options on these issues.

A. Types of Discharges Regulated under NPDES Phase II Permits

Background

The federal Clean Water Act state that regulated municipal separate storm sewer (MS4) operators must obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges from municipal storm sewers to surface waters (except under certain, defined circumstances). A MS4 is defined as "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned or operated by the municipal entity."[1] Streams, lakes, overland flow, and other natural waterways are not generally part of the MS4 system. The federal rules do not require NPDES municipal stormwater permittees to address direct discharges[2] to surface waters from private properties.

The State Water Pollution Control Act requires counties, municipalities, industries, and commercial operations to obtain a state waste discharge permit to dispose of wastes into the waters of the state. A state permit could, therefore, cover some discharges of wastes directly to surface waters. At this time, the state does not have a permit program regulating direct discharges to surface waters, except for businesses currently subject to the Industrial General Stormwater Permit, Construction General Stormwater Permit, or Individual NPDES permits.

Discussion

A variety of considerations relating to "types of discharges covered" were discussed by the eastern Washington stormwater group. It was recognized that stormwater discharges from private properties that go directly to surface water or to the ground may be a problem. However, the participants felt strongly that it should be left up to local jurisdictions to decide whether or not to include these private discharges in their local stormwater program.

Considerations:

Administrative

- Multiple local, state, and federal permits, ordinances and programs are in place that relate to stormwater management. All of these need to be considered and integrated when implementing the federal NPDES Phase II stormwater requirements.

Legal

- Businesses outside Phase II regulated areas may impact water quality within a regulated jurisdiction and limit effectiveness of TMDL compliance efforts.

[1] 40 CFR 122.26(b)(8)

[2] In this context, "direct discharges" are those stormwater discharges that do not flow through the MS4 itself but come from properties within the municipality's jurisdiction.

Environmental Benefit and Impact

- Stormwater from private properties that discharge directly into a surface water may result in pollution problems in eastern Washington, since they are not regulated. However most private direct discharges to ground/groundwater are regulated under UIC and direct discharges from industrial facilities are covered under Industrial Stormwater Permits. Given the generally low number of streams in Eastern Washington, the remaining unregulated direct discharges are not expected to be a large problem.

Approach Option with Majority Support:

- Require minimum federal requirements relating to types of discharges regulated in the permit and leave additional decisions to local jurisdictions.

  Considerations Associated with this option:
  - This option was supported because it meets minimum federal requirements, leaves decisions to local government, and was viewed as the most cost effective.
  - Concerns regarding this option included the possibility of inconsistent requirements by different jurisdictions creating equity issues and that environment problems may not get addressed that could have been avoided if included under a permit.

Approach Option with Minority Support:

- Require minimum federal requirements AND recommend and encourage local governments to include direct discharges from private properties into their stormwater programs.

  Considerations Associated with this option:
  - This option was supported because it informs the permittee of the direct discharge issue and engages them in an evaluation of the issue as it relates to their jurisdiction.
  - Concerns regarding this option included the difficulty of clarifying local government authority based on "encouragement" by the state and the potential associated conflict between local government and industries.

B. Areas being Regulated under NPDES Phase II Permits

Background

This discussion pertains to the issue of areas being regulated by National Pollutant Discharge Elimination System (NPDES) permits under Phases I and II of the federal NPDES permit program as they relate to municipal borders. The Clean Water Act (CWA) regulations describe the specific situations under which municipally owned Separate Storm Sewer Systems (MS4s) are required to obtain coverage under an NPDES permit for stormwater discharges. The Phase I permit requirements apply to large and medium-sized MS4s that meet either of the following two requirements:

- The MS4 is located in an incorporated place with a population over 100,000 (as recorded in the 1980 or 1990 census). The permit applies to the entire city.
- The MS4 serves unincorporated areas in a county that had a population of at least 100,000 residents at the time of the 1980 or 1990 census. Only the unincorporated portion of the county must have permit coverage.

The Phase I municipalities in Washington State have been under permit coverage since 1995. There are seven Phase I jurisdictions; four counties, two cities and WSDOT. No new "Phase I" municipalities will be identified.

Phase II requirements apply to smaller MS4s which discharge to surface waters, and are either:

- Located in census defined urbanized areas (as recorded in the 2000 census and defined below); or
- Designated by the permitting authority (Ecology) as having the potential to result in exceedances of water quality standards or other significant water quality impacts, including habitat and biological impacts.

Under the NPDES Phase II regulations governing smaller municipalities, only the portion of a MS4 that is located within a census-defined urbanized area (i.e., population density greater than 1,000 individuals per square mile) and discharges to surface waters is regulated. Ecology is required to "develop a process, as well as criteria" which may be used to designate additional MS4s for inclusion in the Phase II permit, based on explicit state-defined criteria, possibly to include discharges to sensitive waters, high growth or growth potential, high population density, or contiguity to urbanized areas[3]. Ecology is also required to evaluate municipalities with density of at least 1,000 people per square mile and a population greater than 10,000. Ecology has authority to designate municipalities outside urbanized areas or waive the permit requirement for municipalities within the urbanized areas if certain criteria are met.

Depending on the criteria that Ecology follows, up to100 cities and counties across the state will become subject to the Phase II permit.

[3] These criteria are mentioned as guidance in the NPDES regulations at CFR 123.35(b)(1)(ii). Washington has not yet developed its criteria.

The State Water Pollution Control Act Chapter states a policy to maintain the highest possible standards to insure the purity of state waters, consistent with multiple purposes under RCW 90.48. The statute provides, "Consistent with this policy, the state . . . will exercise its powers, as fully and as effectively as possible, to retain and secure high quality for all waters of the state. . . ." The statute has greater scope than the federal stormwater regulations. Ecology is subject to the provisions of both the state and the federal statutes.

Discussion

A variety of considerations and concerns relating to this issue were discussed by the eastern Washington stormwater group. The majority of discussion revolved around 1) coordination between jurisdictions within a specific permit area, 2) equity to similar businesses located inside and outside permit areas, and 3) the requirement for cities and counties to coordinate on development standards within UGAs set under the Growth Management Act and how this may be affected by NPDES Phase II Stormwater requirements.

Considerations:

Administrative

- Different geographic areas that span various jurisdictional boundaries may be covered by the permit.
- It may be challenging to include multiple requirements relating to different regulations into one permit.
- Cities and counties that share urbanized areas may benefit from coordinating their approaches to be consistent and effective.
- Ecology must evaluate whether communities with over 10,000 population should be regulated under the NPDES Phase II program (bubble cities). Their local conditions and characteristics should be considered in this evaluation.

Legal

- Phase II Permit should only cover the area required in the federal regulations.
- Businesses outside Phase II regulated areas may impact water quality within a regulated jurisdiction and limit effectiveness of TMDL compliance efforts.
- Phase II programs implemented in Census Defined Urban Area may contradict the intent of the Growth Management Act and associated regulations.
- Phase II regulated jurisdictions that have receiving waters with TMDL requirements may have more stringent requirements placed on them in order to achieve compliance with TMDL limits. Unregulated direct discharges outside of the Phase II regulated (urbanized) area could have a disproportionately larger portion of the TMDL pollutant load allocation making it difficult for Phase II jurisdictions to achieve compliance. Additionally, since direct discharges are not permitted, their TMDL compliance would not be regulated or enforced without a court order.

Cost and Equity

- Businesses may be treated differently depending on whether or not they are included in a geographic area covered by the permit. This could result in businesses moving to non-regulated areas or legally challenging the Phase II regulated jurisdiction.
- Census Urban Areas may not accurately reflect actual conditions and do not consider areas with low populations such as industrial areas or urban growth areas.
- Local government may not have the funds, and will have difficulty raising the funds, to implement a stormwater program – especially one that extends beyond what is required federally.
- Economic incentives for expanding the area covered may be of help to local jurisdictions.
- Should industries inside and outside of urbanized areas be handled the same and treated equally?

Environmental Benefit and Impact

- Water quality is the driving force behind the NPDES stormwater legislation.
- The failure of some Census Defined Urbanized Areas to capture industrial areas or areas where most growth will occur results in a significant disconnect between the intent of NPDES and the area where programs are required (*prevent future problems by regulating new development, but programs are not required in growth areas; reduce pollution from existing development, but programs are not required in industrial areas which present the greatest pollution potential*).

Approach Options with Majority Support:

- Require the minimum census defined urban area coverage, but recommend and encourage local governments to expand the area covered to include the growth management area boundaries to ensure that urbanizing areas and business and commercial districts are included.

  Considerations associated with this option:
  - This option was supported because it minimizes third party liability, maintains local flexibility and decision making, and satisfies federal requirements.
  - Concerns regarding this option included: the possibility that the Growth Management Act may obligate local jurisdictions to expand their programs to the urban growth area boundary; that it may not meet the intended environmental objective by not covering certain industrial and commercial areas; that it may be difficult for local jurisdictions to expand their programs due to political pressure and legal challenges; that areas to be annexed in the future may not stay current with stormwater programs and facilities; and that it may result in inconsistencies and conflicts between cities, counties and regions.

- Geographic area covered by permit should include city limits and urban growth area boundaries, including industrial and commercial districts.

  Considerations associated with this option:
  - This option was supported because: it would cover the areas having the potential to result in exceedances of water quality standards or water quality impacts, such as approved planning boundaries and commercial/industrial districts; require city and county coordination / consensus building; create equity for businesses in urban areas; provide greater environmental benefit; and establish more consistency and equity.
  - Concerns regarding this option included: the additional large financial burden on local governments; challenges associated with city legal responsibilities in urban growth areas outside of the city limits; and legal challenges due to the "discretion" used by Ecology in setting the requirements.

Approach Options with Minority Support:

- Additional geographic areas to be covered by the permit (beyond the urban defined census areas) should be determined by local jurisdictions.

  Considerations associated with this option were viewed to be the same as those listed under the second Approach Option with Majority Support – Geographic area covered by permit should include city limits and urban growth area boundaries, including industrial and commercial districts.

- All of city limit should be included to eliminate unregulated islands.

  Considerations associated with this option:
  - This option was supported because it may address concerns relating to areas that may be annexed in the future and the need for them to stay current with stormwater programs and facilities.

C. Issuance of NPDES Phase II Permits on a Watershed Basis

Discussion

Ecology is proposing to issue one NPDES Phase II permit for eastern Washington. The eastern Washington stormwater group supports the approach of issuing one Phase II permit for eastern Washington. If Ecology changes their approach for issuing Phase II permits in eastern Washington, the group would like to have the opportunity to provide their comments and perspectives.

D. Integration of NPDES Phase I and Phase II Permits

Discussion

Since there are no NPDES Phase I permitted jurisdictions in eastern Washington, this issue does not apply to eastern Washington. Therefore, it was not an issue discussed by the eastern Washington stormwater group.

E. Application of NPDES Phase II Permits to Groundwater Discharges

Background

The Phase I permit did not require specific actions related to discharges to groundwater. Instead, permittees followed language of a guidance document (*NPDES Municipal Permit – Clarification of Permit Conditions), which* stated, "the requirements for groundwater protection are the same as those already included for stormwater management."[4] Discharges to surface water are regulated under the NPDES and state permit authorities; discharges to groundwater are regulated only under state authorities. An issue before the state is whether or not the Phase II permit should regulate stormwater discharges to groundwater.

The federal rules call for the regulation of applicable municipal stormwater discharges to surface waters. EPA has also stated that discharges of pollutants to groundwater via a hydrologic connection provided by groundwater recharge of surface waters are subject to NPDES permitting requirements. Under the federal regulations, direct discharges to groundwater with no hydrologic connection to surface water are not subject to NPDES regulation.

The Underground Injection Control (UIC) program established under the federal Safe Drinking Water Act also provides regulatory coverage for many (but not all) stormwater discharges to groundwater. The UIC program requires that injection wells[5] be registered and meet "a non-endangerment standard" to protect underground sources of drinking water. (Note: Unlike the federal NPDES requirements, the Safe Drinking Water Act does not contain provisions for enforcement by third party lawsuits.) In Washington state the UIC rule is currently undergoing revisions.

The State Water Pollution Control Act defines waters of Washington State to include lakes, rivers, ponds, streams, underground waters, salt waters, and all surface waters and watercourses within the state's boundaries (emphasis added).

Discussion

A major concern expressed by the eastern Washington stormwater group involves the potential for increased third party liability associated with implementing state law requirements under a federal permit. Since many discharges to groundwater are regulated under the Safe Drinking Water Act or state laws, which have no provisions for third party lawsuits, the group expressed significant concern about the option of permitting discharges to groundwater under RCW 90.48, which includes provisions for third party lawsuits through the associated NPDES federal regulations. The majority of their discussion revolved around how to meet both federal law and state law to address both surface and groundwater and how to structure the permit or permits to limit third party liability.

[4] [need citation]

[5] Injection wells include man-made or improved holes in the ground that are deeper than they are wide at the ground surface, or improved sinkholes or subsurface fluid distribution systems

Considerations:

Administrative

- The Underground Injection Control Program can be used to cover discharges to subsurface infiltration systems such as dry wells; a reference to the applicable section of the Stormwater Management Manual for eastern Washington could be used.
- Up to three separate permits/processes could be developed (i.e., surface water discharge, UIC discharges (subsurface systems), surface infiltration discharges to the ground). And, the number of permits used could simplify or complicate compliance (e.g., three simple permits vs. one complex permit).

Legal

- Both federal and state law requirements need to be met.
- Third party liability may be reduced by keeping permit requirements associated with discharges to ground separate from discharges to surface water.
- Protection from third party liability could be achieved by changing state law and removing the requirement for discharges to the ground to be covered along with surface water discharges in the NPDES Phase II permit.
- Stormwater infiltration from infiltration ponds/basins would not be regulated under the UIC program and would need to be included in a combined or waste discharge permit or left uncovered by a permit.

Cost and Equity

- Including private stormwater discharges to the ground into NPDES Phase II permits goes beyond the federal NPDES requirements, would increase local jurisdiction costs, and may negatively impact private property owners.

Environmental Benefit and Impact

- New private groundwater discharges should be considered in local stormwater programs, such as using local plan review and inspection programs to ensure that UIC standards are met.

Approach Options (In Priority Order):

- Have separate NPDES Phase II and State Waste Discharge permits. The NPDES Phase II permit would address surface water only, and the State Waste Discharge permit would address discharges to groundwater, except those discharges to groundwater that are covered by the UIC program.

- Have the NPDES Phase II permit function as a combined NPDES and State Waste Discharge Permit, except those discharges to groundwater that are covered by the UIC program.

For both options, it should be clarified that local governments would not be responsible for regulation of private UICs.

F. Level of Effort required of Phase II Municipalities to Satisfy Permit Requirements

Background

The Clean Water Act requires that municipal stormwater discharges obtain permit coverage for discharges to surface waters. The Act states that permits for discharges from municipal storm sewers:

- Shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
- Shall require controls to reduce the discharge of pollutants to the *maximum extent practicable*, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.[6] (emphasis added)

Under the Phase II federal rules, MS4 permits will require regulated MS4s to "develop, implement and enforce a storm water management program designed to:

- Reduce the discharge of pollutants to the *maximum extent practicable* (MEP);
- Protect water quality; and
- Satisfy the appropriate water quality requirements of the Clean Water Act.[7](emphasis added)

The Phase II regulations state further that such stormwater management programs must include "six minimum control measures"[8] to meet the conditions of the NPDES permit. The regulations also direct MS4 operators to comply with "any more stringent effluent limitations in [the] permit, including permit requirements that modify, or are in addition to, the minimum control measures based on an approved total maximum daily load (TMDL) or equivalent analysis. The permitting authorities may include such more stringent limitations based on a TMDL or equivalent analysis that determines such limitations are needed to protect water quality"[9] Phase II MS4 operators are also required to evaluate program compliance, the appropriateness of identified Best Management Practices, and progress toward identified measurable goals. This full set of requirements is referred to as the "six plus two" minimum requirements.[10]

For Phase I, EPA regulations required that the regulated MS4s describe their stormwater management program in their applications. The federal Phase I regulations did not specify permit requirements, only application requirements for the large and medium MS4 dischargers.

The Phase II rule contemplates that each permittee will describe its individualized pollution control program in a Notice of Intent (NOI) to seek coverage under a general Phase II permit.

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[6] Section 402(p)
[7] Section 402(p)(3)(A)
[8] The six minimum control measures include: (1) public education and outreach; (2) public involvement/participation; (3) illicit discharge detection and elimination; (4) construction site stormwater runoff control; (5) post construction stormwater management in new and redevelopment; and (6) pollution prevention/good housekeeping for municipal operations.
[9] 40 CFR 122.34(e)(1)
[10] There were differences in perspective whether it was more appropriate to count six measures or eight.

However, the 9th Circuit invalidated and remanded this portion of the Phase II rule because the NOIs are not subject to any mandatory review by the permitting authority to determine whether the MEP standard is met. What level of review by Ecology is adequate remains an open question. The 9th Circuit stated that its holding "should not preclude regulated parties from designing aspects of their own stormwater management programs, as contemplated under the Phase II Rule."[11] It is unclear whether the decision will be appealed or what path EPA will take for Phase II permits.

There are also state laws which would affect how permits would have to be written. Specifically the requirement for "all known, available and reasonable methods of prevention and control (AKART) under RCW 90.48.010, and the requirement under chapter 90.48 RCW that permits be written so as to prevent pollution of state waters. There is considerable debate over the relationship between the state requirement for AKART, and preventing pollution and the federal MEP standard.

Discussion
~ Associated with Minimum Measures ~

The Eastern Washington Stormwater Management Steering Committee and representatives participating in the Model Program Subcommittee spent many months and hours helping to develop, shape and review the contents of the Model Municipal Stormwater Program for Eastern Washington which was finalized in September 2003. At the beginning of the process invitations to participate were extended to a wide range of stakeholders (e.g., affected jurisdictions, environmental groups, businesses) and opportunities to comment on the draft and final draft Model Program were provided. Even though these extensive opportunities for involvement were provided, not all affected jurisdictions and organizations participated.

The primary objective of the Model Program is to help local governments achieve compliance with the NPDES Phase II Municipal Stormwater Permit requirements. The Model Program focuses on the federal requirements, and as such, was developed to address discharges to surface water.

During the meetings held to discuss the legislative issues, the majority of the eastern Washington stormwater group discussion associated with this "level of effort required" issue revolved around the opinion that following the Model Program should represent compliance with the NPDES Phase II Stormwater Permit.

Considerations:

Administrative

- The Eastern Washington Stormwater Steering Committee and Model Program Subcommittee view the Model Municipal Program for Eastern Washington as forming the foundation for the Phase II permit. However, it is unclear if Ecology views the Model Program as an acceptable level of effort for Phase II jurisdictions.

[11] Texas Cities Coalition on Stormwater et al. v. EPA, No. 00-70822, 13767, 13802 (9th Cir. Sep. 15, 2003)

- The Model Municipal Program for Eastern Washington was developed as an example program and is not viewed to be specific to any one jurisdiction. It is intended to provide a menu of options for each jurisdiction to pull from beyond the described base level of effort (e.g., some jurisdictions may have discharges to ground and want to tailor their program to ensure protection of drinking water and ability to respond to groundwater impacts).

Legal

- The Phase II permit will have to define the required level of effort for regulated jurisdictions, per the outcome of recent court cases.

Cost and Equity

- The costs discussed in the Model Municipal Program for Eastern Washington are considered as a zero base (e.g., relating to jurisdictions that do not have any stormwater management program elements currently in place).

Environmental Benefit and Impact

- The Model Municipal Program for Eastern Washington did not address TMDLs, the Endangered Species Act, or discharges to ground.

Approach Option with Majority Support:

- If an eastern Washington jurisdiction implements the minimum requirements outlined in the Model Municipal Stormwater Program for Eastern Washington, they should be viewed by Ecology as satisfying the NPDES Phase II Stormwater permit requirements, including the associated narrative standards (e.g., Maximum Extent Practical or All Know Available and Reasonable Technologies).

Discussion
~ Associated with Total Maximum Daily Loads (TMDLs) ~

A TMDL or Total Maximum Daily Load is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. Water quality standards are set by States, Territories, and Tribes. They identify the uses for each waterbody, for example, drinking water supply, contact recreation (swimming), and aquatic life support (fishing), and the scientific criteria to support that use. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The calculation must include a margin of safety to ensure that the waterbody can be used for the purposes the State has designated. The calculation must also account for seasonal variation in water quality. The Clean Water Act, section 303, establishes the water quality standards and TMDL programs.

As discussed in the Level of Effort Required section of this report, the federal NPDES Stormwater regulations, at 40 CFR 122.34(e)(1), direct MS4 operators to comply with "any more stringent effluent limitations, including permit requirements that modify, or are in addition to, the minimum control measures based on an approved total maximum daily load (TMDL)." NPDES Phase II Stormwater permittees will be required to implement measures to meet existing TMDLs, including 1) implementing a series of actions required to meet the TMDL (EPA's current policy calls for using appropriate Best Management Practice), and 2) evaluating and monitoring the effectiveness of the actions implemented.

The eastern Washington stormwater group spent considerable time learning about TMDLs, discussing different scenarios relating TMDLs to stormwater, and discussing considerations relating to stormwater discharges and permit compliance. As a result of these discussions, the group became very concerned about: future impacts to local agencies relating to the level of effort and even practicality of implementing stormwater TMDL requirements; Phase II permits becoming a TMDL enforcement mechanism for Ecology; and increased potential for third party liability associated with TMDL compliance requirements. A variety of needs were also identified, including the need for local jurisdictions to get involved with TMDL processes and for waste load allocations to be assigned to stormwater discharges.

Considerations:

Administrative

- It is uncertain if the need to comply with TMDLs will shift Phase II Stormwater Permit compliance requirements in the future (e.g., from a narrative/BMP approach to numeric standard requirements).
- A uniform technical guidance document that describes and guides review of stormwater contributions and responses in the TMDL process is needed.

Legal

- More stringent requirements to address TMDLs will be integrated into NPDES Phase II permit, thus making the Phase II permit an enforcement tool for compliance with TMDLs.

Cost and Equity

- Stormwater is typically a very small contributor to the water quality problems associated with TMDLs, and increased requirements for municipalities to retrofit their stormwater systems to address TMDL related water quality impairment may not be equitable.

Approach Option with Majority Support:

- Phase II permits should keep requirements associated with TMDLs to a minimum and use narrative standards to address response to TMDLs. In addition, Phase II permit requirements should allow flexibility in local jurisdiction response to TMDLs (e.g., allow for effluent trading) and provide opportunities for different response options to be used.

G. Protection for Shellfish Areas

Discussion

Since there are no shellfish areas in eastern Washington, this issue does not apply to eastern Washington. Therefore, it was not an issue discussed by the eastern Washington stormwater group.

H. Costs and Benefits Associated with Permit Elements not Federally Required

Discussion

The eastern Washington stormwater group discussed the costs and benefits associated with the permit elements not federally required (discharges to ground and areas being regulated) in tandem with these specific issues. This discussion is included under Section II B, Areas Being Regulated Under NPDES Phase II Permits, Section II E, Application of NPDES Phase II Permits to Groundwater Discharges, and Section III A, Other State Law Concerns.

Since the permit has not been written, there was no further discussion on this issue.

I. Use of Land Use Planning as a Stormwater Best Management Practice

Discussion

The group discussed local planning associated with compliance with the Growth Management Act and its relationship to the Phase II permitting and in tandem with other issues. This discussion is included under Section II B, Areas Being Regulated Under NPDES Phase II Permits.

J. Potential Funding Sources for Phase II Permit Implementation

Background

Neither federal nor state funds have been allocated to help local jurisdictions develop or implement the mandated NPDES Phase II stormwater program. State law does not require local jurisdictions to fund their stormwater management programs in any particular manner, but does allow municipalities to fix rates and charge property owners (tax payers) for services and/or benefits provided from any stormwater control facility. Options for starting and continuing to operate a stormwater management program include grants, loans, bonds, and fees collected through a stormwater utility.

Discussion

The eastern Washington stormwater group often discussed the difficulty local eastern Washington jurisdictions will have paying for new stormwater programs. They expressed their frustration that the Phase II stormwater requirements represent an unfunded federal and state mandate. The group discussed the desire for the federal and state governments to share in the costs, but recognized that securing state and/or federal funds for local stormwater programs from existing funded priorities is unlikely. This undermines the likelihood of adequate compliance and achievement of environmental goals.

Considerations:

Administrative

- Gaining support of eastern Washington tax payers and local elected officials for new stormwater program funding will be very difficult.
- It would be most ideal if stormwater regulation primacy were returned to EPA.

Legal

- Local jurisdictions have limited options for funding their required stormwater programs due to the lack of state and federal funding assistance for developing and implementing NPDES Phase II stormwater programs. This will require all of the funds to be acquired at the local level.
- The state should be prohibited from creating unfunded mandates for local governments.

Cost and Equity

- Local Phase II regulated jurisdictions will have to pass on the cost of developing and implementing their stormwater programs to tax payers at the local level.
- State should fund 100% of local stormwater programs to address concerns regarding a local jurisdictions ability to achieve compliance.

Approach Options (No Majority or Minority Support Attributed):

- Centennial Clean Water grants should be expanded to assist eastern Washington jurisdictions conduct the planning activities needed to 1) set up a stormwater funding program and 2) prepare for implementation their stormwater requirements.
- Send this unfunded and mandated stormwater program back to the federal government unless they agree to finance one third of the total statewide program for all municipal agencies (one third from federal government, one third from state government, and one third from MS4s).
- Washington State to keep this unfunded mandated stormwater program and finance two thirds of the total statewide program for all municipal agencies (two thirds from state government, and one third from MS4s).
- Without federal and state funding, Phase II regulated municipal agencies will pass on the cost of developing and implementing the new stormwater programs to the local tax payers through stormwater utility and special district fees, plan review fees, permit fees, and/or system connection charges.

III. Review of Additional Issues Relating to Stormwater Management

During the eastern Washington stormwater group meetings, several other issues were discussed. The following sections provide background, discussion, considerations, perspectives, and approach options on these issues.

A. Other State Law Concerns Relating to Stormwater Management

Background

The eastern Washington stormwater group identified multiple concerns relating to how stormwater is regulated by Washington state law. To a significant degree, these concerns and this issue relate to how state law differs from the federal regulations, the application of narrative standards (e.g., MEP versus AKART), the affect of state law on third party liability relating to stormwater compliance, and the need for efficient coordination between several separate sets of regulations that relate to stormwater. The following sections provide background on the state and federal regulations relating to stormwater:

State Law – RCW 90.48 – Water Pollution Control

90.48.010 Policy enunciated. "It is declared to be the public policy of the state of Washington to maintain the highest possible standards to insure the purity of all waters of the state consistent with public health and public enjoyment thereof, the propagation and protection of wild life, birds, game, fish and other aquatic life, and the industrial development of the state, and to that end require the use of all known available and reasonable methods by industries and others to prevent and control the pollution of the waters of the state of Washington. Consistent with this policy, the state of Washington will exercise its powers, as fully and as effectively as possible, to retain and secure high quality for all waters of the state. The state of Washington in recognition of the federal government's interest in the quality of the navigable waters of the United States, of which certain portions thereof are within the jurisdictional limits of this state, proclaims a public policy of working cooperatively with the federal government in a joint effort to extinguish the sources of water quality degradation, while at the same time preserving and vigorously exercising state powers to insure that present and future standards of water quality within the state shall be determined by the citizenry, through and by the efforts of state government, of the state of Washington."

90.48.080 Discharge of polluting matters in waters prohibited. It shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the determination of the department, as provided for in this chapter.

State Law – WAC 173-220-170 – Relationship with non-NPDES permits

Discharges of pollutants or other wastes that require permits from the department under RCW 90.48.160, which are not satisfied through permits issued under this chapter, shall be subject to the permit requirements of RCW 90.48.160, et seq. Except where permits under RCW 90.48.160 are issued by a municipal corporation pursuant to chapter 173-208 WAC, permit requirements under this chapter and permit requirements under RCW 90.48.160 shall be contained in a single permit document.

[Statutory Authority: RCW 90.48.035 and 90.48.260. 82-24-078 (Order DE 82-39), § 173-220-170, filed 12/1/82; Order DE 74-1, § 173-220-170, filed 2/15/74.]

Federal Law – PL 92-500 – Clean Water Act *(and subsequent amendments)*

The 1972 amendments to the Federal Water Pollution Control Act (known as the Clean Water Act or CWA) provide the statutory basis for the NPDES permit program and the basic structure for regulating the discharge of pollutants from point sources to waters of the United States. Section 402 of the CWA specifically required EPA to develop and implement the NPDES program. The 1987 amendments to the CWA requires NPDES permitting compliance for non-point sources, including stormwater.

Federal Law – Title 40 CFR part 144 – Underground Injection Control (UIC)
[promulgated under Part C of the Safe Drinking Water Act (SDWA) PL93-523, as amended]

The Underground Injection Control (UIC) Program, authorized by the Safe Drinking Water Act, is designed to prevent ground water contamination from injection wells. Most injection wells in the Pacific Northwest are relatively simple devices used to emplace fluids into the shallow subsurface under the force of gravity. Examples include sumps, drywells, and drainfields. The threat posed to ground water quality varies markedly, and depends mostly upon the volume and nature of the fluids injected, well construction, and the hydrogeologic setting. The federal UIC regulations are based upon a protective performance standard.

State Law – RCW 43-21A.445 – Underground Injection Control (UIC)

The Underground Injection Control (UIC) Program protects ground water quality by regulating the disposal of fluids into the subsurface. Most UIC wells or injection wells are simple devices that allow fluids into the shallow subsurface under the force of gravity. For example, in Washington State, thousands of UIC wells, mainly dry wells, are located along parking lots and roads to manage stormwater runoff. The potential for ground water contamination from UIC wells can occur and is dependent on the well construction and location, the volume and quality of the fluids injected and the hydrogeologic setting. The Department of Ecology was delegated authority by the Environmental Protection Agency (EPA) in 1984 to administer the program in the state of Washington.

Discussion

The majority of the eastern Washington stormwater group discussion associated with this issue revolved around the frustration that the stormwater requirements are part of RCW 90.48 and the need to clearly state that compliance with stormwater regulations must be based on narrative standards and not numeric water quality limits. A considerable amount of time was spent learning about the regulations and discussing associated implications, which resulted in valuable education for both the participants and Ecology representatives. Related discussion involved application of narrative standards (e.g., Maximum Extent Practical versus All Known Available and Reasonable Technologies), the concern that AKART may be a more strict standard, the preference for using MEP, and the need to consistently define MEP.

Considerations:

Administrative

- Compliance phasing options should be considered as it is decided when a jurisdiction must meet a TMDL/water quality requirement.

- It should be defined that the Model Municipal Stormwater Program for Eastern Washington equals MEP.

Legal

- Risk and liability associated with stormwater could be increased in process of tying together federal and state requirements relating to surface and groundwater.
- RCW 90.48, sections 173-226, do not allow a common sense approach for regulating stormwater. AKART and wastewater/sewage requirements are not compatible with typical stormwater management techniques.
- There is a need for clarification and consistency in defining Maximum Extent Practical (MEP) and how MEP relates to (or equals) All Known Available and Reasonable Technologies (AKART).

Cost and Equity

- Use of a presumptive approach and application of narrative standards such as MEP makes the most sense for stormwater management – not numeric water quality standards.
- Use of narrative standards protects local government from excessive costs, reduces liability, and allows for easier implementation of stormwater programs.
- Narrative standard selection should consider cost. MEP has a link to cost in the federal regulations and may be preferred over AKART.

Approach Option with Majority Support – Relating to "How to Comply":

- RCW 90.48.080, WAC 173-226, should be amended to directly address stormwater separate from other wastewater and sewage requirements (consistent with the intent of the federal law). If not amended, a compliance schedule should go into the permit to allow jurisdictions adequate time to get into compliance with RCW 90.48.080

Approach Option with Majority Support – Relating to "How MS4's are Judged to be in Compliance":

- Compliance measures should be based on actions taken (e.g., Best Management Practices implemented) rather than outcomes (e.g., water quality changes).

B. NPDES Phase II Permit Fees

Background

State law (RCW 90.48.465) requires Ecology to establish annual fees to fully recover Department expenses related to implementing the waste discharge permit program. The fees shall be based on factors relating to the complexity of permit issuance and compliance and may be based on other factors as well (e.g., pollutant loading, toxicity). The initial fee schedule shall be established by rule and adjusted no more than once every two years.

Discussion

The eastern Washington stormwater group discussed the difficulty local eastern Washington jurisdictions will have paying for new stormwater programs and associated permit fees. They expressed their concern that the legislators are funding state programs through local agency permit fees and unfunded mandates.

Considerations:

Administrative

- The ability for Ecology to administer the Phase II program and adjust permit requirements for different local jurisdictions may increase the required permit fees, however, tailoring the permits for individual jurisdictions may enable local jurisdictions to reduce their stormwater program and compliance costs.

Cost and Equity

- Some Phase II regulated eastern Washington jurisdictions may not be able to secure enough funds to pay for a new stormwater program and associated permit fees.

Approach Options (No Majority or Minority Support Attributed):

- Change the law (RCW 90.48.465) so local jurisdictions are not required to pay a permit fee (to pay for the state program) for this federal and state unfunded mandate.

- Develop a Phase II permit fee structure that 1) is equitable, 2) minimizes the level of effort required of Ecology staff to administer (thus keeping the fee costs lower), and 3) still allows adequate opportunities for Ecology staff to work with local jurisdictions to develop locally appropriate permit conditions.

IV. Attachments

A. June 25, 2003 Letter to Ross Dunfee from Tom Fitzsimmons
B. July 22, 2003 Letter to Ross Dunfee from Megan White
C. Background on Stormwater
D. Eastern Washington Stormwater Group Composition and Project Process Overview
E. Proposed Revisions to RCW 90.48 Water Pollution Control

Attachment A – June 25, 2003 Letter to Ross Dunfee from Tom Fitzsimmons

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

JUN 30 2003

June 25, 2003

Mr. Ross Dunfee, Chair
Eastern Washington Stormwater Steering Committee
Benton County Public Works
P.O. Box 1001
Prosser WA 99350

Dear Mr. Dunfee:

I respectfully request the continued assistance of the Eastern Washington Stormwater Steering Committee in addressing eastside stormwater management issues.

Background
Urban stormwater runoff presents very real challenges and choices for Washington. Stormwater runoff is polluting our state waters and reducing the quality of life for our citizens. New federal stormwater regulations call for addressing these problems, yet we are becoming increasingly aware of the financial pressures they will place on many of our local governments and businesses across Washington. The challenge we face is crafting an approach to urban stormwater that addresses new and existing federal stormwater requirements, protects our state's interest in clean water and complies with existing state laws, recognizes the need for our businesses to remain competitive, and addresses the fiscal constraints faced by many of our local governments.

Ecology is contacting the Eastern Washington Stormwater Steering Committee in acknowledgment of the Washington State Legislature's interest in municipal stormwater discharges as evidenced in the House and Senate versions of HB 1689. I have directed my staff to use the common elements of both bills to initiate a process that will advise and assist Ecology regarding permits for municipal separate storm sewer systems.

Tasks
The Eastern Washington Stormwater Steering Committee will work within a facilitated process to frame significant policy issues related to the development of a National Pollutant Discharge Elimination System permit for municipal separate stormwater discharges in eastern Washington, identify options to address these issues, clarify different positions related to these options, and identify areas of consensus. The issues under consideration are from the legislation and are listed in the enclosed Attachment.

The committee may prioritize the issues under consideration and add other issues if desired. After receiving input from both this committee and the Western Washington Municipal Stormwater Advisory Group, and no later than December 15, 2003, Ecology will submit a progress report to the Legislature and the Governor. Ecology will proceed with drafting municipal stormwater permits in early 2004. The Eastern Washington Stormwater Steering Committee will also advise and assist Ecology regarding the development of the eastside permit for municipal separate storm sewer systems.

The existing Eastern Washington Stormwater Steering Committee may continue to use the facilitator that was selected in 2001. The committee will assist in developing the scope of work for the facilitator, establishing the meeting schedule, and overseeing the committee process. The committee will invite continued participation by other interested parties and notify all potentially regulated communities of proposed meeting dates.

Timetable and Workload Commitments
We propose that development of the scope of work for the facilitator be accomplished through email communication during July, and that the first meeting of the committee be held on **August 21, 2003** in Moses Lake. We anticipate that the committee will meet once a month from August through November 2003, with additional meetings in 2004 to discuss permit provisions. Many members of the committee will be representing a broader constituent group or caucus. It will be necessary for members to communicate with their constituents, both to represent those interests fairly and to relay information back to others.

It is our intention to work hard, give serious consideration to the diverse views on stormwater, and produce a report by December 15, 2003. If you have any questions about this process, please contact Karen Dinicola at (360) 407-6550 or kdin461@ecy.wa.gov.

Thank you for your interest in our water quality and willingness to assist in this process.

Sincerely,

Tom Fitzsimmons
Director

Attachment

cc: Ron Shultz, Governor's Executive Policy Office

Attachment

List of issues:

(a) Types of discharges being regulated under the National Pollutant Discharge Elimination System municipal stormwater permits;

(b) Areas being regulated by these permits under ~~Phase I and~~ Phase II of the federal National Pollutant Discharge Elimination System municipal stormwater permit program as they relate to municipal borders;

(c) Issuance of these permits on a watershed basis;

(d) ~~Integration of permits and permit requirements for Phase I and Phase II of the federal National Pollutant Discharge Elimination System municipal stormwater permit program;~~ (not applicable to eastern Washington)

(e) Application of these permits to ground water discharges;

(f) Level of effort required of municipalities to satisfy permit requirements regarding:

- (i) Public education and outreach;
- (ii) Public participation and public involvement;
- (iii) Illicit discharge detection and elimination;
- (iv) Construction site runoff control;
- (v) Post construction runoff control;
- (vi) Pollution prevention and good housekeeping;
- (vii) Implementation of applicable total maximum daily loads; and
- (viii) Program evaluation and reporting;

(g) ~~Protection for shellfish areas;~~ (not applicable to eastern Washington)

(h) Costs and benefits associated with each permit element not required under federal law;

(i) The use of land use planning and existing land use plans and rules as a best management practice for storm water management; and

(j) Potential funding sources for implementation of permit requirements.

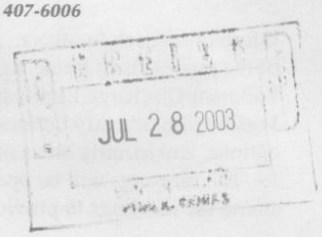
Attachment B – July 22, 2003 Letter to Ross Dunfee from Megan White

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

July 22, 2003



Mr. Ross Dunfee, Director, County Engineer
Benton County
PO Box 1001
Prosser, WA 99350-0954

Dear Mr. Dunfee:

During this past legislative session, implementation of the new federal stormwater regulations was a subject of extended discussions in the Washington State Legislature. The new rules call for addressing pollution caused by urban stormwater, yet we are becoming increasingly aware of the financial pressures that implementing effective stormwater management programs will place on many local governments and businesses across Washington. The challenge we face is crafting an approach to urban stormwater that addresses new and existing federal stormwater requirements, protects our state's interest in clean water, recognizes the need for our businesses to remain competitive, and addresses the fiscal constraints faced by many of our local governments.

The Legislature's discussions resulted in passage of bills by both the House and Senate. Both bills request input on a list of issues (see Enclosure 1). Although a final bill was not passed, Ecology has elected to use the common elements of the two bills to initiate a process that will advise and assist Ecology in developing permits for municipal separate storm sewer systems.

Last month, Ecology requested the continued assistance of the Eastern Washington Stormwater Steering Committee in addressing stormwater management issues on the eastern side of the state. A parallel process is being initiated for western Washington. The Eastern Washington Stormwater Steering Committee is composed of representatives from eastern Washington cities and counties, development interests, and the departments of Transportation and Ecology. This committee has been working since June 2001 to develop stormwater management tools and guidance for eastern Washington jurisdictions (see Enclosure 2 for the list of committee members and alternates). Additional jurisdictions and other interested parties may be interested in participating.

Tasks
The Eastern Washington Stormwater Steering Committee and other participants will work within a facilitated process. Many members of the Eastern Washington Stormwater Steering Committee are representing a broader constituent group or caucus and those members will need to communicate with their constituents, both to represent those interests fairly and to relay

Mr. Ross Dunfee
Page 2
July 22, 2003

information back to others. All participants will be invited to share their perspectives. The goal of the process is to frame significant policy issues related to the development of a National Pollutant Discharge Elimination System permit for municipal stormwater discharges in eastern Washington, identify options to address these issues, clarify different positions related to these options, and identify areas of consensus. The issues under consideration are listed in Enclosure 1. The meetings will be open to the public and you do not have to serve on the committee or attend the meetings to provide input.

After receiving input from both this committee and the Western Washington Municipal Stormwater Advisory Group and no later than December 15, 2003, Ecology will submit a progress report to the Legislature and the Governor. The report will include the views of all parties that participate in the process and Ecology's recommendations on each of the policy issues.

Timetable and Workload
The first meeting of the committee will be held on **August 21, 2003,** at the Moses Lake Convention Center located at 1475 Nelson Road NE in Moses Lake. We anticipate that the committee will meet four to five times, or about once a month, from August through November 2003. Proposed meeting dates are September 4, September 18, October 16, and November 6; these dates have not yet been confirmed with the committee.

It is our intention to give serious consideration to the diverse views on stormwater and produce a report for the Legislature by December 15, 2003. If you have any questions about this process, please contact Karen Dinicola at (360) 407-6550 or kdin461@ecy.wa.gov. Please also contact Karen if you wish to be added to an email distribution list to receive meeting minutes and other updates on the progress of developing this report to the Legislature.

Thank you for your interest in addressing the complex challenge we face in managing urban stormwater to protect our water quality.

Sincerely,

Megan White

Megan White, P.E., Manager
Water Quality Program

MW:kh
Enclosures

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Attachment 1

List of issues:

(a) Types of discharges being regulated under the National Pollutant Discharge Elimination System municipal stormwater permits;

(b) Areas being regulated by these permits under ~~Phase I and~~ Phase II of the federal National Pollutant Discharge Elimination System municipal stormwater permit program as they relate to municipal borders;

(c) Issuance of these permits on a watershed basis;

(d) ~~Integration of permits and permit requirements for Phase I and Phase II of the federal National Pollutant Discharge Elimination System municipal stormwater permit program;~~ (not applicable to eastern Washington)

(e) Application of these permits to ground water discharges;

(f) Level of effort required of municipalities to satisfy permit requirements regarding:

- (i) Public education and outreach;
- (ii) Public participation and public involvement;
- (iii) Illicit discharge detection and elimination;
- (iv) Construction site runoff control;
- (v) Post construction runoff control;
- (vi) Pollution prevention and good housekeeping;
- (vii) Implementation of applicable total maximum daily loads; and
- (viii) Program evaluation and reporting;

(g) ~~Protection for shellfish areas;~~ (not applicable to eastern Washington)

(h) Costs and benefits associated with each permit element not required under federal law;

(i) The use of land use planning and existing land use plans and rules as a best management practice for storm water management; and

(j) Potential funding sources for implementation of permit requirements.

Attachment 2

EASTERN WASHINGTON STORMWATER STEERING COMMITTEE

Representing	Name	Organization	E-mail	Phone
Phase 2 City (Ten Cities)	**Nancy Aldrich**, *Manual Subcommittee Vice-Chair*	City of Richland	naldrich@ci.richland.wa.us	509.942.7508
WSDOT	**Gary Beeman**, *Steering Committee Vice-Chair*	WSDOT	beemang@wsdot.wa.gov	509.577.1750
City of Spokane	**Lloyd Brewer**, *Model Program Subcommittee Vice-*	City of Spokane	lbrewer@spokanecity.org	509.625.6968
Development	**Michele Brich** (Jack Lynch, *Alternate*)	Home Builders Association of Tri-Cities	hba@3-cities.com	509.735.2745
Non-Phase 2 County	**Ross Dunfee**, *Steering Committee Chair*	Benton County	Ross.dunfee@co.benton.wa.us	509.786.5611
Phase 2 County	**John Knutson**, *Model Program Subcommittee Chair*	Yakima County	john.knutson@co.yakima.wa.us	509.574.2311
Phase 2 City (Ten Cities)	**Don McGahuey**	City of Wenatchee	dmcgahuey@cityofwenatchee.com	509-664.3368
WSDOT *Alternate*	Ed Molash	WSDOT	molashe@wsdot.wa.gov	360.705.7507
Non-Phase 2 County *Alternate*	Walt Olsen	County Road Administration Board	walt@crab.wa.gov	360.753.5989
Non-Phase 2 City *Alternate*	Jim Seitz	Association of Washington Cities	jims@awcnet.org	360.753.4137
Ecology	**Thomas Tebb**	Ecology	gteb461@ecy.wa.gov	509.457.7107
Non-Phase 2 City	**Dwane Van Epps**	City of Chelan	dvanepps@cityofchelan.com	509.682.8014
Phase 2 City *Alternate*	Chris Waarvick	City of Yakima	cwaarvic@ci.yakima.wa.us	509.575.6005
Spokane County	**Steve Worley**, *Manual Subcommittee Chair*	Spokane County	sworley@spokanecounty.org	509.477.7657
Ecology *Project Manager*	Karen Dinicola	Ecology	kdin461@ecy.wa.gov	360.407.6550

Eastern Washington Stormwater Steering Committee Members and Alternates

Last Revision Date: June 1, 2003

Attachment C – Background on Stormwater

What is stormwater runoff? - Stormwater runoff is water that drains off the land after rainstorms and snowmelts. In urban areas it flows over surfaces such as rooftops, paved streets, highways, parking lots, graveled roads, and lawns. Stormwater runoff eventually infiltrates into the ground or is collected in storm drains or ditches and discharged to surface waters (wetlands, creeks, rivers, lakes).

Even though eastern Washington has an arid climate, urban stormwater may still pose problems for human health, public infrastructure, and the environment. After stormwater flows across the land, it can pick up pollutants such as oil and other fluids from automobiles, toxic metals, organic chemicals, and harmful pathogens. Creation of impervious surfaces, buildings, parking lots and roads, and erosion caused by clearing away grasses, trees and shrubs, are the leading causes of stormwater pollution. Sediment eroded from construction sites can clog drainage facilities and/or muddy streams and damage fish spawning areas. Untreated stormwater:

- is not safe for people to drink, and sometimes not safe for swimming,
- can infiltrate to groundwater and may degrade the quality of local drinking water supplies,
- can pollute streams and impact fish and other aquatic organisms, and
- can cause erosion and damage drainage facilities, public roads, and sidewalks.

In addition, the discharge of illicit materials into public storm drains during dry or wet weather may contaminate waters and present health hazards.

How is stormwater runoff regulated? - The U.S. Environmental Protection Agency established Phase I National Pollutant Discharge Elimination System (NPDES) stormwater regulations in 1990 as part of the Clean Water Act. They required stormwater permits for discharges from certain industries, construction sites disturbing five or more acres, and municipalities with more than 100,000 people. Phase II stormwater regulations, passed in 1999, expand the requirement for stormwater permits to all municipalities located in "urbanized" areas. Urbanized areas are defined by the Bureau of the Census. A stormwater permit is also required for construction sites disturbing one acre or more. The regulations also require an evaluation of cities outside urbanized areas that are more than 10,000 in population to determine if a permit is necessary for some or all of these cities.

Under the new Phase II rule, as many as 90 municipalities in Washington (including as many as 30 in eastern Washington) will need municipal stormwater permits. The Washington State Department of Ecology will be issuing the permits, since they have been delegated NPDES regulatory authority from EPA.

What do the stormwater regulations mean for eastern Washington? - Many local jurisdictions in eastern Washington have not identified stormwater management as a high priority and have not developed or implemented local stormwater programs. However, a few eastern Washington jurisdictions and many western Washington jurisdictions have developed

sophisticated stormwater programs that have been in place for years. This wide range of stormwater management capacity and experience among municipalities in eastern and western Washington poses a significant challenge to 1) the state, and to the Department of Ecology (Ecology), which is responsible for writing, issuing, and enforcing stormwater permits, and 2) local jurisdictions who will be responsible for developing and paying for new stormwater programs and complying with new stormwater regulations.

What is the Model Municipal Stormwater Program for Eastern Washington? - The Department of Ecology recognized that most eastern Washington communities do not currently have stormwater management programs in place. Ecology also recognized that the needs and characteristics of eastern Washington communities may result in stormwater programs that are different than those in western Washington.

In response, a model municipal program was developed to help eastern Washington communities comply with the NPDES Phase II stormwater permit requirements. The Eastern Washington Stormwater Steering Committee and the Model Program Subcommittee worked with Ecology staff and a consultant team from 2001 to 2003 to develop the program. It provides a framework, options, costs, and resources that municipal governments can use to guide the development of their local stormwater programs.

What are the elements of a stormwater program? - The Phase II regulations require the development of stormwater programs that include the following six measures. The eastern Washington model program provides options and guidance for complying with stormwater permit requirements and developing the required stormwater program elements. Stormwater programs are required to include the following six minimum measures, in addition to complying with TMDL requirements, evaluating their program compliance, and establishing a mechanism to pay for programs (six plus three):

- **Public Education and Outreach** - distribute educational materials, conduct outreach activities, sponsor stormwater program activities
- **Public Participation/Involvement** - provide opportunities for public participation
- **Illicit Discharge Detection and Elimination** - develop a storm drain map of all outfalls and receiving waters and prohibit non-stormwater discharges
- **Construction Site Runoff Control** - develop a program to reduce pollutants from construction activities on sites $\geq$ 1 acre
- **Post-construction Stormwater Management in New Development and Redevelopment –** develop program to address runoff from new development and redevelopment projects that disturb $\geq$ 1 acre
- **Pollution Prevention and Good Housekeeping of Municipal Operations –** develop pollution prevention program for municipal operations, train government employees to prevent and reduce stormwater pollution from maintenance activities

Attachment D – Eastern Washington Stormwater Group Composition and Process Overview

Who participated in the review of legislative issues? - On June 25, 2003, Tom Fitzsimmons (Director, Department of Ecology) sent a letter to Ross Dunfee (Chair, Eastern Washington Stormwater Management Steering Committee) requesting that the Steering Committee continue in an advisory role to support Ecology's report to the Legislature for stormwater management. The request was to provide feedback to help frame significant policy issues related to development of an NPDES permit for municipal separate stormwater systems in eastern Washington. On behalf of the Steering Committee, Mr. Dunfee accepted Ecology's request.

To enhance the Eastern Washington Steering Committee meetings, several hundred persons on the program's mailing list were re-contacted to invite their participation and support. As a result, several more people attended the Steering Committee meetings; that expanded group is called the eastern Washington stormwater group throughout this document. The group met five times, about once per month from August 21 to November 20, 2003 and primarily focused their discussions on a list of issues contained in the proposed legislation. The following individuals participated in the project:

Eastern Washington Stormwater Management Steering Committee Members:

Ross Dunfee, Benton County, *Steering Committee Chair*
Michelle Anderson, Washington State Department of Transportation
Steve Worley, City of Spokane Valley, *Manual Subcommittee Chair*
Nancy Aldrich, City of Richland, *Manual Subcommittee Co-Chair*
John Knutson, Yakima County, *Model Program Subcommittee Chair*
Lloyd Brewer, City of Spokane, *Model Program Subcommittee Co-Chair*
Michele Brich, Home Builders Association of Tri-Cities
Don McGahuey, City of Wenatchee
Tom Tebb, Department of Ecology Central Region
Dwane Van Epps, City of Chelan
Matt Zarecor, Spokane County
Chris Waarvick, City of Yakima *(alternate)*

Additional Participants:

Paula Cox – Chelan County
Steve King – City of Wenatchee
Lars Hendron – City of Spokane
Erin Johnson – City of Walla Walla
Gary Allgood – City of Walla Walla
George Bell – City of Walla Walla
Karen Terwilleger – House of Reps
Caroleen Dineen – House of Reps
Ken Hirst – House of Reps

Steve Plummer – City of Kennewick
Greg Lahti – WSDOT
Dick Thiel – City of Spokane Valley
Colin Hastings – HBA of Tri-Cities
Heather Ostenson – RH2 Engineers
Brett Sheffield – City of Yakima
Clarence Barnett – Yakima City Council
Bennett Osborne – Yakima County
Jocelyne Gray – JUB Engineers
Colleen Little – Spokane County

Department of Ecology Representatives:

Bill Moore, Ecology Water Quality Program
Karen Dinicola, Ecology Water Quality Program
Melodie Selby, Ecology Water Quality Program
Polly Zehm, Ecology

Consultant Facilitators and Report Writers:

Sarah Hubbard-Gray, Hubbard Gray Consulting
David Moss, TetraTech/KCM, Inc.

What process was used during the review of legislative issues? - All meetings were held in Moses Lake, a central location for eastern Washington, except for the last meeting which was held in Ellensburg. The meetings were organized with an agenda sent to all interested parties at least a week beforehand. During the first meeting on August 21, 2003, the group generally prioritized which topics were felt to be most important. Those priority issues were discussed earlier in the process and typically at greater length.

Several tools and techniques were used to introduce issues, obtain input, and facilitate discussion. Most of the work was done with the full group's participation. On a few occasions, two smaller groups were used to concurrently address multiple issues, with one group's work shared with the other. Since the overall group attendance was only about 20 people, the participants preferred to work as a single group.

Though there was not a requirement for the group to reach consensus on any issue, some options were identified to have a majority preference. Others had a minority preference. When such was the case, a corresponding preference was noted and is captured in this report.

Not all of the issues were discussed in the order they appear in this report. Even the subcategory topics were sometimes discussed in a different order for each issue. Also, many issues were discussed over two or even three meetings. In the end, however, all key issues were discussed, and are organized as described in the next sections of this report.

Why was the Eastern Washington Stormwater Management Steering Committee Originally Formed? - The Department of Ecology published the Stormwater Management Manual for Western Washington in August 2001 as an update to a predecessor manual prepared in 1992. Ecology initially proposed that the Manual could be updated to cover the entire state of Washington. Eastern Washington representatives requested that Ecology instead create a separate manual for the eastern portion of the state. Based upon these requests and upon recognition of the significantly different hydrology and geology of eastern Washington, Ecology agreed to create a separate manual.

Discussions continued at various conferences, meetings and forums to determine the best method to accomplish this effort. A chartering meeting was held in June 2001 in Moses Lake to formalize the structure and process for preparing the Manual for eastern Washington. The meeting was attended by more than 70 representatives of 17 cities, 11 counties and five Federal and State agencies with interests in stormwater management in eastern Washington. The chartering meeting established a ten-person Steering Committee with several alternate members to lead the overall effort. It also created two Subcommittees: one for leading the preparation of the Technical Stormwater Manual, and another for leading the preparation of a Model Municipal Stormwater Program. Additional stakeholders were invited to participate and opportunities for comment on the draft documents were provided throughout the process.

Attachment E – Proposed Revisions to RCW 90.48 Water Pollution Control

RCW 90.48 WATER POLLUTION CONTROL

Proposed revisions are shown in bold.

RCW 90.48.010 Policy enunciated.

Modify the lead paragraph as follows:

It is declared to be the public policy of the state of Washington to maintain the highest possible standards to insure the purity of all waters of the state consistent with public health and public enjoyment thereof, the propagation and protection of wild life, birds, game, fish and other aquatic life, and the industrial development of the state, and to that end require the use of all known available and reasonable methods by industries and others, **except urban stormwater runoff**, to prevent and control the pollution of the waters of the state of Washington. **Urban stormwater runoff, point source or non-point source, shall be required to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques, and system design and engineering methods, and such other provisions as the Administrator of the Environmental Protection Agency, under the guidance of the EPA Storm Water regulations, shall determine appropriate for the control of such pollutants.** Consistent with this policy, the state of Washington will exercise its powers, as fully and as effectively as possible, to retain and secure high quality for all waters of the state. The state of Washington in recognition of the federal government's interest in the quality of the navigable waters of the United States, of which certain portions thereof are within the jurisdictional limits of this state, proclaims a public policy of working cooperatively with the federal government in a joint effort to extinguish the sources of water quality degradation, while at the same time preserving and vigorously exercising state powers to insure that present and future standards of water quality within the state shall be determined by the citizenry, through and by the efforts of state government, of the state of Washington.

RCW 90.48.080 Discharge of polluting matters in waters prohibited.

Add **(1)** *to the existing lead paragraph.*
Add the following paragraph **(2)**:

(2) For the purposes of urban stormwater runoff, point source or non-point source, it shall be unlawful for any person to throw, drain, run, or otherwise discharge into any of the waters of this state, or to cause, permit or suffer to be thrown, run, drained, allowed to seep or otherwise discharged into such waters any organic or inorganic matter that shall cause or tend to cause pollution of such waters according to the provisions of the EPA Storm Water regulations, and the determination of the Administrator of the Environmental Protection Agency under the guidance of the EPA Storm Water regulations.

Appendix C

Westside Stormwater Group Report to Department of Ecology

Report to the Washington Department of Ecology

Westside Stormwater Group

December 1, 2003

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Executive Summary

Rain or snow that falls on undeveloped land is largely absorbed by that ecosystem. However, precipitation that falls on impervious surfaces created by human development (hard surfaces such as roads, parking lots, and roofs) quickly runs off into nearby water bodies—rivers, lakes, streams, wetlands, estuaries, and marine waters. This runoff, also called stormwater runoff, can adversely impact the quality of these water bodies by transporting pollutants to these water bodies. Stormwater discharges are different from other wastewater discharges for several reasons: they are composed of different pollutants; are intermittent; vary in flow volume and pollutant loading; and are discharged into receiving waters that are similarly dynamic.

The Puget Sound has been designated as an estuary of national significance under the federal Clean Water Act (CWA). Furthermore, Western Washington is home to several species of salmonids that have been listed under the Endangered Species Act (ESA). The loss of habitat due to stormwater runoff is often cited as a contributing factor to these species' decline and the need for their protection under the ESA. Awareness of stormwater's unique characteristics and its impact on water quality (and ways to minimize its impacts) has been growing since 1987, when amendments to the CWA first required National Pollutant Discharge Elimination System (NPDES) permits for municipal stormwater discharges.

Stormwater Permitting Framework

There is a wide range of stormwater management capacity and experience among municipalities in Western Washington. This wide range of experience and capacity poses a significant challenge to the state, and to the Department of Ecology (Ecology), which is responsible for writing, issuing, and enforcing federal stormwater permits.

Municipal stormwater permits were first required for municipal separate storm sewer systems (MS4s) in Phase I jurisdictions—those areas with a population of 100,000 or greater, based on the 1980 or 1990 census. In Washington, Phase I permits were issued in 1995 to Snohomish, King, and Pierce Counties; the Cities of Seattle and Tacoma; and that portion of Washington State Department of Transportation's MS4 in those jurisdictions. These permits expired in 2000, and are being administratively extended by Ecology. In 1999, a Phase I permit was also issued to Clark County. That permit expired in 2000 and is also being administratively extended.

Phase II municipal stormwater permit requirements apply to smaller MS4s that did not meet the Phase I population criteria. Under current federal rules, no Phase II jurisdiction will ever fall under the Phase I Rule, due to the 1990 cut-off date for the Phase I Rule population threshold. Furthermore, if a MS4 is not located in an area that meets the population triggers for a Phase II permit, then the municipality is not required to obtain a permit under the CWA. While Phase II permits were required as of March 2003, no Phase II permit has yet been written for any of the approximately 100 Phase II municipalities in Washington.

The specific task facing Ecology is to issue Phase II permits and to reissue Phase I permits for municipal stormwater discharges. In issuing or reissuing these permits, Ecology must interpret federal requirements (which are not always definitive) and the applicability of state law in determining the appropriate scope of the permits, as well as the range and specificity of permit requirements.

The Westside Stormwater Group

In spring 2003, the Washington State Legislature considered legislation that would have required Ecology to establish a Western Washington permit development advisory group. While the legislation did not pass, Ecology nonetheless decided to convene such a group, known as the Westside Stormwater Group (WSG).

The WSG, comprised of twenty people and their alternates representing local and state government agencies, the environmental community, and business and agriculture interests, including the shellfish industry, met seven times from August to November 2003. The WSG was charged to:

> *By December 1, produce a report that summarizes the range of perspectives on a set of issues relating to stormwater permitting and management. Identify alternative course of action and their implications. Delineate areas of agreement and disagreement.*

As part of their discussions, WSG representatives from Phase I and Phase II communities described steps they have taken to successfully manage stormwater in their communities. The WSG was also briefed on the elements of the Puget Sound Water Quality Management Plan, a state- and federally-recognized comprehensive approach to stormwater management for the Puget Sound region. The shellfish industry and environmental community also briefed the WSG on topics of specific concern to them. For many issues, Ecology presented a variety of options on the scope and implementation of stormwater permitting.

The WSG did not seek to reach consensus on any specific issue. Instead, WSG members and attendees articulated a variety of administrative, legal, financial, and environmental considerations associated with alternative approaches to permitting. While most of the discussions and comments focused on Phase II permits, the discussions also included perspectives related to Phase I permits. WSG members were all committed to protecting the waters of the state by reducing pollutants associated with stormwater runoff, but differed significantly in their thinking on how to do this using state-issued municipal stormwater permits.

Areas of Strong Interest

The CWA establishes municipal stormwater permitting expectations for the entire country. In Washington State, the state Water Pollution Control Act (RCW 90.48) and the Puget Sound Water Quality Protection Act (RCW 90.71) provide additional context for permitting decisions. A significant number of the disagreements within the WSG arose over how closely Ecology should hew to the federal rules and to what extent Ecology should act beyond the federal mandate to implement state statutes.

Citizen suits

Local government and Washington State Department of Transportation (WSDOT) representatives on the WSG, and particularly potential Phase II permittees, are concerned that going beyond the program components required in the federal rules may create new legal liabilities for them and Ecology. The CWA allows for citizen lawsuits, enabling people other than regulators to enforce permits. State law, however, does not authorize such citizen suits, but allows any stakeholder to appeal the issuance of a permit. To the extent that the Phase II permit conditions go beyond the minimum federal requirements, local government representatives believe that the terms of federal law may create additional liability for the permit holder and potentially result in a citizen lawsuit.

Other committee members perceive that the federal rules alone do not fulfill the environmental values and requirements embedded in state statutes or the Puget Sound Management Plan and see a permit with

measurable goals as a means of assuring accountability in the permitting system to protect important environmental and economic values. These members believe that the trigger for a citizen lawsuit is the failure to comply with permit requirements, not a permit that exceeds the minimum federal rules. These members note that the Puget Sound is a unique and sensitive marine body, one that the Legislature has taken special care to protect. The state's bivalve shellfish industry is the largest in the West and a major employer in several rural Western Washington counties. Economic impacts of stormwater runoff can include property damage due to flooding, damaged or destroyed wildlife habitat, and contaminated sediments.

Compliance with requirements

WSG members recognized that time did not allow for discussion of exactly what municipal stormwater management program elements or activities would be sufficient to meet the federal compliance standard, "maximum extent practicable," and whether some permit elements might fit under a state (versus federal) permit. Some members view the requirements narrowly; others view them as being sufficiently broad enough to cover almost any permit condition Ecology could establish to protect the waters of the state. The WSG observed that such details are likely to be addressed during the permit development process.

Members expressed concern about duplicate and incongruous regulatory requirements (federal, state, and local) as well as carrying an equitable burden between local governments and others who already have stormwater permits (industrial and construction). The WSG also discussed the merits of using permit requirements versus incentive programs to achieve water quality goals.

Costs/Funding Options

As is currently the case, the cost of stormwater management will be largely borne by local governments and their ratepayers rather than the state or federal government (although WSDOT will continue to incur significant costs). Some local government WSG representatives perceive the permit requirements to be a federal unfunded mandate and consider anything that goes beyond the program components described in the federal rules to be a state unfunded mandate. Others emphasize that any program components beyond those described in the federal rules must be fully funded by the state. Still other WSG members regard these as normal and expected costs of implementing the law.

The WSG also discussed what resources municipalities and Ecology will have to implement their permit programs and expressed a particular concern that the MS4 permit fees may be established before the permit conditions are finalized.

Questions Addressed by This Report

This report presents a set of questions for Ecology to consider as it prepares the next set of municipal stormwater permits:

- *What areas should Phase II stormwater permits cover?* [Should the Phase II stormwater permits cover only the "urbanized areas" defined in the federal rule or cover additional areas that reflect municipal boundaries, state law-defined urban growth areas, or other concerns?]
- *Should Ecology regulate direct discharges to surface waters under MS4 permits?*
- *How should stormwater discharges to groundwater be regulated through the MS4 permit?*
- *Should special purpose districts be regulated separately from the municipalities in which they lie?*
- *How should compliance standards for municipal stormwater permits be structured?*

- *What constitutes "maximum extent practicable,"(the CWA permitting standard?*
- *Should the permitting standard be uniformly determined across Western Washington?* [Or, instead, should the permitting standard reflect the differences in the situation and resources among the municipalities?]
- *What types of program evaluation/monitoring should Ecology require in NPDES municipal stormwater permits to document permit compliance?*
- *Should Ecology add program elements beyond those required under the federal Phase II Final Rule?*
- *How should municipal stormwater permits be structured?*
- *Should Ecology integrate Phase I and Phase II municipal stormwater permits, and if so, how?*
- *Should construction stormwater permittees have the option of complying with a "qualifying" local program instead of obtaining an NPDES stormwater permit?*
- *How can beneficial uses of Washington state water bodies (for example, shellfish harvesting) be protected through a municipal stormwater permit?*
- *Should the state provide funding to local governments for establishing/maintaining local programs to meet stormwater permit requirements?*
- *How should Ecology structure its Phase II stormwater fee(s)?*

I. Background

Rain or snow that falls on undeveloped land is largely absorbed by that ecosystem. However, precipitation that falls on the impervious surfaces created by human development (hard surfaces such as roads, parking lots, and roofs) quickly runs off into nearby water bodies—rivers, lakes, streams, wetlands, estuaries, and marine waters. This runoff, also called stormwater runoff, can impact the quality of these water bodies by changing their hydrology (e.g., through streambed scouring and stream bank erosion) and introducing pollutants such as oil, grease, fecal coliform, heavy metals, and pesticides. The Washington Department of Ecology (Ecology) estimates that roughly one-third of the Clean Water Act 303(d)-listed impaired water bodies in the state are contaminated as a result of stormwater. Stormwater discharges are different from other wastewater discharges because they are primarily composed of nonpoint source pollutants, are intermittent, vary in flow volume and pollutant loading, and are discharged into receiving waters which are similarly dynamic with changing flow and pollutant loading.

In 1987, Congress amended the federal Clean Water Act (CWA) to address stormwater discharge. Then, in 1990, the U.S. Environmental Protection Agency (EPA) promulgated Phase I National Pollutant Discharge Elimination System (NPDES) stormwater regulations. Under these regulations, stormwater permits are required for discharges from certain industries, construction sites disturbing five or more acres, and municipalities with more than 100,000 people (as defined by the 1980 or 1990 federal census). Phase II stormwater regulations, promulgated by EPA in 1999, expand the requirement for stormwater permits to generally cover certain "small" municipalities located in "urbanized areas," as defined by the Bureau of the Census. Under the Phase II Rule, a stormwater permit is also required for construction sites disturbing one acre or more. The Phase II regulations allow NPDES permitting authorities (such as Ecology) to waive certain municipalities from coverage and require the NPDES permitting authority to evaluate cities outside urbanized areas that have populations greater than 10,000 people to determine if some or all of them need stormwater permit coverage.

There is a wide range of stormwater management capacity and experience among municipalities in Western Washington, from cities, counties, and Washington State Department of Transportation (WSDOT) that have operated extensive programs for years, to those that have done little more than issuing construction related permits. This wide range of experience and capacity poses a significant challenge to the state, and to Ecology, the agency responsible for writing, issuing, and enforcing stormwater permits.

II. Advisory Group Composition and Process Overview

Ecology convened the Westside Stormwater Group (WSG) in the summer of 2003 in acknowledgment of the Washington State Legislature's interest in municipal stormwater discharges in Western Washington. In early June 2003, the Director of Ecology sent letters of invitation to interested organizations and associations, and other state and federal agencies, asking them to name representatives to the WSG. In all, 20 individuals representing municipalities (cities and counties), businesses, the shellfish industry, environmental interests, agriculture, ports and state agencies (the Washington State Department of Transportation and the Puget Sound Action Team, along with Ecology) were identified. Each member/organization was also allowed to designate one primary representative and one alternate. A list of WSG members and alternates is included in Appendix A at the end of this report. A smaller Executive Committee was named at the same time to provide direction and leadership to the effort. Concurrently, Ecology also provided a grant to the Washington State Association of Counties, working in concert with the Association of Washington Cities, to retain facilitation support for the WSG.

The Westside Stormwater Group met seven times between August and December 2003, working within a facilitated process to frame significant policy issues related to the development of NPDES permits for municipal separate stormwater discharges in Western Washington. A list of issues explored by the WSG is attached as Appendix B to this report. All meetings of the group were open to the public.

III. Chapter Organization

This chapter highlights discussions held by the WSG related to the issues described in the House and Senate legislation, as well as other topics identified by members at their first meeting. For purposes of flow and logic, the individual issues have been reorganized into four issue areas: 1) Permit Scope, 2) Implementation, 3) Municipal NPDES Stormwater Permit Integration and Coordination, and 4) Issues Specific to the State or Region.

The format of the report is to provide for each subject area a **Background** section describing the backdrop and legal overview. Following this introduction is a **Discussion** section with a short recitation of the WSG's discourse on the issue. Alternatives are presented from the most modest (default) option to more expansive options. Some of these alternatives were not posed during the discussion but arose in the course of the report preparation. Finally, the **Considerations** present a wide range of opinions and perspectives that were expressed by WSG members on the administrative, legal, cost, and environmental characteristics of the alternatives.

IV. Issues of Scope

A. Areas Being Regulated Under Municipal Stormwater Permits

Background

This discussion pertains to the issue of areas being regulated under the NPDES permits under Phases I and II of the federal NPDES permit program, as they relate to municipal borders. The CWA regulations describe the specific situations under which Municipal Separate Storm Sewer Systems (MS4s) are required to obtain coverage under an NPDES permit for stormwater discharges. The Phase I permit requirements apply to large and medium-sized MS4s that meet either of the following two requirements:

- When the MS4 is located in an incorporated place with a population over 100,000 (as recorded in the 1980 or 1990 census), the permit applies to the entire city; or
- When the MS4 serves unincorporated areas in a county that had a population of at least 100,000 residents at the time of the 1980 or 1990 census, only the unincorporated portion of the county must have permit coverage.

The Phase I municipalities in Washington State have been under permit coverage since 1995. There are seven Phase I jurisdictions: four counties, two cities, and the Washington State Department of Transportation (WSDOT). No new "Phase I" municipalities will be identified in the future, regardless of their size or population density.

Phase II requirements apply to smaller MS4s that discharge to surface waters, and are either:

- Located in census-defined urbanized areas; or
- Designated by the permitting authority (Ecology) as having the potential to exceed water quality standards or other significant water quality impacts, including habitat and biological impacts.

Under the NPDES Phase II regulations governing smaller municipalities, only the portion of a MS4 that is located within a census-defined urbanized area (i.e., population density greater than 1,000 individuals per square mile) and discharges to surface waters is regulated. Ecology is required to "develop a process, as well as criteria" which may be used to designate additional MS4s for inclusion in the Phase II permit, based on explicit state-defined criteria, possibly to include discharges to sensitive waters, high growth or growth potential, high population density, or contiguity to urbanized areas[1]. Ecology is also required to evaluate municipalities with density of at least 1,000 people per square mile and a population greater than 10,000. Ecology has limited authority to designate municipalities outside urbanized areas or waive the permit requirement for municipalities within the urbanized areas if certain criteria are met.

Depending on the choices that Ecology makes, up to 100 cities and counties across the state will become subject to the Phase II permit. A list of potential Phase II cities is included as Appendix C.

The State Water Pollution Control Act states a policy to maintain the highest possible standards to insure the purity of state waters, consistent with multiple purposes under RCW 90.48. The statute provides, "Consistent with this policy, the state…will exercise its powers, as fully and as effectively as possible, to

[1] These criteria are mentioned as guidance in the NPDES regulations at CFR 123.35(b)(1)(ii). Washington has not yet developed its criteria.

retain and secure high quality for all waters of the state…"[2] The statute has greater scope than the federal stormwater regulations. Ecology is subject to the provisions of both the state and the federal statutes.

Discussion

The federal regulations do not require permit coverage for several portions of Washington State, including and perhaps most notably, portions of urban growth area (UGAs) that are slated for further development under the state's Growth Management Act. According to maps prepared by Ecology, large portions of the UGAs in Western Washington fall outside (but adjacent to) the census-defined areas that are subject to permit coverage under the federal rules. As growth occurs, these areas may be subject to Phase II requirements in the future. Addressing these areas now may curb future water quality impacts of stormwater and facilitate broader compliance with water quality standards.

It is also notable that Phase II permits are not required in small incorporated areas located in counties that are not covered under Phase I or II permits, areas of commercial and light industrial development without resident populations, and some areas draining to sensitive water bodies. Therefore, coverage is not federally mandated in:

- Non-urbanized areas in Phase II counties;
- Non-urbanized areas within Phase II cities; or
- Some commercial/industrial developed areas having total resident populations less than 1,000 people per square mile.

Phase II communities may have greater populations (and greater stormwater impacts) than do Phase I communities.

It is appropriate to keep in mind the provisions of the state Administrative Procedures Act (RCW 34.05) for legislative intent on how to handle the scope of federal and state regulations.

What areas should Phase II stormwater permits cover? [Should the Phase II stormwater permits cover only the "urbanized areas" defined in the federal rule or cover additional areas that reflect municipal boundaries, state law-defined urban growth areas, or other concerns?]

Alternative 1	Apply the Phase II permit only to the census-defined urbanized area described in the federal rules.
Alternative 2	Apply Phase II permit to the census-defined urbanized areas, plus: a) Unincorporated Urban Growth Areas and urbanized commercial/industrial areas. b) All areas in Phase II cities.
Alternative 3	Apply Phase II permit to the census-defined urbanized areas, plus: a) Unincorporated UGAs, urbanized commercial/industrial areas, and MS4-served areas draining to sensitive water bodies located in or outside of Phase II counties. b) All areas in Phase II cities.
Alternative 4	Apply the Phase II permit to all areas in Phase II counties and cities, including small incorporated cities that are not yet defined as "census urban areas."
Alternative 5	Apply the permit to sensitive water bodies that are located within and outside of Phase II counties.
Alternative 6	Apply the permit to all MS4s across Western Washington (except those already covered in Phase I).
Alternative 7	Apply the Phase II permit statewide.

[2] RCW 90.48.010

Considerations

Administrative

- Covering entire counties/municipalities with the permit might be administratively easier for the governing body, if the county/municipality has one standard throughout its boundaries.
- If the state chooses to include areas in Phase II jurisdictions that drain to sensitive water bodies, it will need to determine which areas will need to be included under which permits.
- Managing larger geographic areas will require greater flexibility for all parties and may necessitate development of a more complex permit. Compliance with regulations may vary.
- Uniform coverage reduces state administrative complications.
- It is likely that the number of variance requests would increase with a single standard throughout a county.

Legal

- Although Ecology can require coverage of additional MS4s under NPDES Phase II, it can only do so if those MS4s meet Ecology's criteria (as yet undetermined). Ecology lacks stormwater data for some MS4s found in UGAs needed to make these determinations and thus may be challenged to make a case to include additional locations. State-based growth management UGA designation may not be proper criteria for federal stormwater Phase II designation.
- The state Administrative Procedures Act requires an agency, prior to adopting a significant rule, to determine if the probable benefits of the rule are greater than its probable cost.
- Sufficient data exist to show that stormwater runoff contributes to water quality problems and can readily be drawn upon to support permit coverage of additional areas.
- Municipalities have no authority to regulate areas outside their city limits. As a result, there may still be inconsistency across jurisdictions.
- The expanded options beyond the federal requirements (Alternatives 2–7 above) increase local government exposure to third party lawsuit liability.
- Local governments should be accountable for their actions related to stormwater discharges and liable if they do not meet reasonable permit requirements.
- It is the failure to comply with permit requirements that opens up a jurisdiction to third party lawsuits, not the area that is covered or the complexity of the permit.
- Failure to regulate stormwater on an extended basis could create liability for the state under the Endangered Species Act.

Cost and Equity

- Costs associated with extended permit coverage are an unfunded state mandate.
- The entire stormwater program is an unfunded mandate.
- Ecology should be required to justify that the benefits of exceeding federal requirements are greater than the costs to implement those requirements.
- It is more efficient and cost-effective to implement stormwater control measures proactively during new development than to retrofit existing systems to address ongoing problems. Including smaller municipalities that do not yet meet population thresholds helps those jurisdictions avoid expenses that could arise once they cross the population threshold, if retrofit requirements are included as a permit condition or established TMDL.

- Economies of scale in managing stormwater can be realized through greater permit area coverage. Increased stormwater utility fees or impact fees can be used to offset downstream impacts from new development.
- Economic costs due to stormwater runoff include property damage due to flooding, damaged or destroyed wildlife habitat, closed shellfish growing areas, and contaminated sediments.
- The Phase I Rule defined an unchanging set of permittees—those with a population greater than 100,000 as of the 1990 census. Municipalities that did not meet this criterion in 1990 will never fall under the Phase I Rule, regardless of their population at any later date. In contrast, the Phase II Rule applies to any non-Phase I municipality that meets the Phase II population criteria in any given federal census, beginning in 1990. Fundamentally, this is a critical point of equity if Phase I and Phase II permits are written with substantially different requirements.
- Disparity in applying stormwater rules can have the unintended consequences of promoting sprawl and leapfrog development, since development fees/other costs are likely to be higher in jurisdictions subject to stormwater regulation. To avoid these fees, development pressures may intensify in areas not covered under Phase I or II permits, such as UGAs. Over time, the UGAs will meet census-defined "urbanized area" criteria and be subject to Phase II requirements. Including UGAs in the Phase II designation may foster urban renewal and infill, thereby helping to moderate development pressures on UGAs and other undeveloped areas.
- The narrower the geographic coverage, the more equity and cost concerns will arise between jurisdictions, affecting those who are required to invest in stormwater controls and those upstream who may not be required to do so to the same extent.

Environmental Benefit and Impact

- Preventing water quality degradation is preferable from an environmental standpoint rather than restoring or enhancing water quality by retrofitting developed areas. Thus, it makes sense to proactively address less developed areas, such as UGAs, as they are developed.
- Applying strict stormwater controls to new development within urbanized areas may simply drive development into less urbanized areas, which are currently providing better fish and wildlife habitat than urbanized areas.
- Sensitive water bodies have special ecological importance and deserve attention and protection under regulatory programs. Taking a proactive approach in their protection helps municipalities avoid the costs of restoring (or trying to restore) these natural areas.
- Municipalities that provide consistent coverage throughout their jurisdictions may be more likely to positively impact water quality.

B. Direct Discharges

Background

The federal stormwater rules state that regulated MS4 operators must obtain an NPDES permit for discharges from municipal separate storm sewers to surface waters (except under certain defined circumstances). A "municipal separate storm sewer" is defined as "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned or operated by the municipal entity."[3] Streams, lakes, overland flow, and other natural waterways are not generally part of the MS4 system. The federal

[3] 40 CFR 122.26(b)(8)

rules do not require NPDES municipal stormwater permittees to address direct discharges[4] to surface waters from private properties.

The state Water Pollution Control Act requires counties, municipalities, industries, and commercial operations to obtain a state waste discharge permit to dispose of wastes into state waters. A state permit could, therefore, cover some discharges of wastes directly to surface waters. At this time, the state does not have a permit program regulating direct discharges to surface waters, except for entities currently subject to NPDES permits.

Discussion

Some facilities discharge directly to surface waters (e.g., from commercial and residential properties into the Puget Sound). Some industrial discharges are already covered by the state-issued Industrial General Stormwater Permit. Although direct discharges from commercial and residential properties do not dominate the total runoff volume from areas under municipal stormwater permits in Washington State, in certain areas these discharges may constitute a significant portion of the flow and stormwater pollutant loading. Stormwater and non-stormwater runoff can mix in streams and creeks that discharge into larger water bodies. WSG members expressed concerns about direct discharges and their impact on water quality, but were not in agreement that municipalities should be responsible for regulation of these direct discharges. There may be opportunities to streamline the permitting system.

Should Ecology regulate direct discharges to surface waters under MS4 permits?

Alternative 1	Hold municipalities accountable only for discharges from their MS4 system and not for others' direct discharges to water bodies. Municipalities may help identify/locate direct dischargers, but will look to Ecology to regulate direct discharges to water bodies.
Alternative 2	Apply the MS4 permit to all discharges within their jurisdiction, including direct discharges.

Considerations

Administrative

- Under Alternative 2, municipalities responsible for direct discharges to surface waters become responsible for assuring multiple points of compliance. The resulting regulatory and enforcement matrix would be quite complex.
- Ecology and local governments currently do not have adequate staff to identify and take enforcement actions against direct dischargers.

Legal

- Ecology does not believe it has the legal authority under the CWA to compel municipalities to regulate direct discharges.
- Municipal stormwater NPDES permits should not be used to fill gaps in federal or state regulation; that is beyond the scope of the CWA.
- Direct-discharged stormwater runoff from commercial and residential properties can only be regulated via municipal permits. Direct-discharged stormwater runoff from industrial and construction activities is already regulated under separate NPDES permits.

[4] In this context, "direct discharges" are those stormwater discharges that do not flow through the MS4 itself but come from properties within the municipality's jurisdiction.

- To limit their own legal liability, municipalities may be compelled to require landowners to apply directly for permit coverage.
- MS4 may not have legal authority to regulate direct discharges. They should not be held accountable for discharges over which they have little or no control.
- Too much uncertainty as to what constitutes a "discharge" if "all discharges" are covered increases the potential for compliance litigation.
- Industrial and construction dischargers are already permitted to discharge and subject to requirements of state-issued General Stormwater NPDES Permits. Municipal permittees should not be required to regulate, or to enforce Ecology regulation of, such discharges.

Cost and Equity

- Monitoring to determine which direct dischargers are responsible for stormwater pollution is expensive and for all practical purposes may not even be technically possible.
- Water quality violations may occur more frequently as unregulated sources (possibly including direct stormwater discharges) cause greater pollutant loading. Ultimately, this may cause an impairment of the receiving water. If a water quality standard violation occurs and a TMDL is required to bring a water body back into compliance with water quality standards, the municipality may be asked to take significant, costly steps to come back into compliance without any mechanism in place to correct pollution generated from direct discharges.
- Ecology would incur greater costs if more TMDLs are required.
- General permits for municipal stormwater should not place inequitable burdens on industrial and construction stormwater permittees who discharge to the municipal collection systems or to the shared receiving water bodies.

Environmental Benefit and Impacts

- Managing the full range of stormwater discharges helps minimize the cumulative water quality impact of stormwater and improves the likelihood of maintaining a receiving water's compliance with applicable water quality standards.
- Direct discharges can transport significant levels of contamination. Because they drain to the same water bodies as do the MS4 system, the source of the pollutants cannot be practically distinguished from those generated from MS4 discharges. Therefore, they should be regulated by those MS4 jurisdictions.
- Resources used to address small areas (individual direct dischargers) may reduce resources available to address other, possibly more significant problems.

C. Coverage of Discharges to Groundwater

Background

The Phase I permittees followed language of a guidance document (*NPDES Municipal Permit—Clarification of Permit Conditions)* that stated, "The requirements for groundwater protection are the same as those already included for stormwater management."[5] Discharges to surface water are regulated under the NPDES and state permit authorities; discharges to groundwater are regulated only under state

[5] Memorandum prepared by the Department of Ecology, Phase I Western Washington permittees, and the City of Bellevue; *NPDES Municipal Permit—Clarification of Permit Conditions;* March 1995.

authorities. An issue before the state is whether or not to regulate Phase II stormwater discharges to groundwater.

The federal rules call for the regulation of applicable municipal stormwater discharges to surface waters. The EPA has also stated that discharges of pollutants to groundwater via a direct hydrologic connection provided by groundwater recharge of surface waters are subject to NPDES permitting requirements. Under the federal regulations, direct discharges to groundwater with no direct hydrologic connection to surface water are not subject to NPDES regulation.

The Underground Injection Control (UIC) program established under the federal Safe Drinking Water Act also provides regulatory coverage for many (but not all) stormwater discharges to groundwater. The UIC program requires that injection wells[6] be registered and meet "a non-endangerment standard" to protect underground sources of drinking water. (Note: unlike the federal NPDES requirements, the Safe Drinking Water Act does not contain provisions for enforcement by third party lawsuits.)

The state Water Pollution Control Act defines waters of Washington State to include lakes, rivers, ponds, streams, *underground waters*, salt waters, and all surface waters and watercourses within the state's boundaries (emphasis added).

Discussion

WSG members acknowledged the dynamic tension between the NPDES requirements (focus on surface water) and the policies supporting the state Water Pollution Control Act (protect all waters, including groundwater) and appreciated the impact of groundwater-borne pollutants on the state's waters, including sensitive drinking water aquifers. One concern about including discharges to groundwater in the NPDES permit is that it is difficult to locate and manage these discharges. A second concern is that it raises the specter of enforcement of the permit by Ecology or a third party lawsuit under the CWA.

Some WSG members perceive that compliance with groundwater standards is required in the existing Phase I permits.

How should stormwater discharges to groundwater be regulated through the MS4 permit?

Alternative 1	Issue an NPDES Phase II municipal stormwater permit that applies only to discharges to surface waters.
Alternative 2	Issue separate groundwater (state waste discharge) and surface water (NPDES) stormwater permits.
Alternative 3	Issue a combined NPDES/State Waste Discharge permit for Phase II municipal stormwater, except for those discharges to ground that are covered by the UIC program.
Alternative 4	Issue a combined NPDES/State Waste Discharge permit for Phase II municipal stormwater and require that municipalities confirm qualitatively that discharges to groundwater meet the non-endangerment standard. Municipal UIC owners would not be required to implement all of the programmatic activities described in the federal Phase II regulations.
Alternative 5	Issue a combined NPDES/State Waste Discharge permit for municipal stormwater and require the same programmatic activities for discharges to groundwater and surface water.

[6] Injection wells include man-made or improved holes in the ground that are deeper than they are wide at the ground surface, improved sinkholes, or subsurface fluid distribution systems.

Considerations

Administrative

- Administering a combined surface water-groundwater permit is less burdensome for the state and local jurisdictions than administering two separate permits.
- Requiring the development and maintenance of two separate permits may increase the municipalities' administrative burden.
- The Washington Department of Health (DOH), not Ecology, has primary responsibility for implementing and assuring compliance with the Safe Drinking Water Act. Ecology will have to coordinate closely with DOH to implement requirements for discharges to groundwater if included in the Phase II permits.
- Not regulating discharges to groundwater under Phase II permits may create a loophole in the regulatory structure of stormwater management and a greater (unanticipated and uncontrolled) workload for the UIC program.

Legal

- Issuing an NPDES stormwater permit that covers only discharges to surface water limits local liability to that which is created by federal law. A combined groundwater and surface water federal permit could increase the potential of Ecology enforcement and third party lawsuits, depending on the actual wording of the permit. Third party enforcement is allowed under the CWA but not by state law.
- A permit may be appealed to the Pollution Control Hearings Board if some parties do not believe it complies with state law.
- Although inclusion of discharges to groundwater in an NPDES permit may subject parties to additional third party litigation, the permit can also shield the permit holder from prosecution if it clarifies that discharges to groundwater are subject only to state requirements.
- Ecology lacks authority to regulate groundwater through an NPDES permit. The municipal stormwater permit should not be called upon to fix legal/statutory problems that arise from differences between UIC, state, and federal water quality protection requirements.
- It is not clear whether Ecology must regulate discharges to groundwater through a permit to satisfy state law or whether state law can be satisfied by regulating these discharges under the state UIC rules, or otherwise. Clarification from the Attorney General's office is needed.
- Not all discharges to groundwater are collected/transported via UIC facilities. Under the combined permit option, discharges to groundwater via non-UIC conduits (e.g., infiltration through ponds or basins) may lack permit coverage/oversight.
- Imposing responsibility for discharges to groundwater may increase the potential liability of the municipality for sediment and other upland cleanup.

Cost and Equity

- Coverage of groundwater discharges may be an unfunded mandate and clearly a state, rather than federal, requirement.
- Some participants note that the entire Phase I and Phase II municipal stormwater program is an unfunded mandate.
- Most Phase II municipalities currently lack resources to incorporate discharges to groundwater in their stormwater management programs.
- Municipal infiltration facilities already regulated under the UIC program may be subject to duplicative requirements if also made subject to NPDES regulations.

- Most Phase II municipalities do not currently monitor or maintain private infiltration facilities.
- Disparity would exist if only Phase I municipalities were to have groundwater discharges regulated under their permit.

Environmental Benefit and Impact

- Ground and surface waters are often hydrologically connected.
- Managing stormwater discharges to groundwater may provide for the development of a more comprehensive stormwater management program and the control of all stormwater sources, not just discharges to surface waters. Alternatives 2–5 provide for control of all groundwater discharges (not just those regulated under the UIC program).

D. Special Purpose Districts

Background

As part of its deliberations, the WSG considered the unique challenge posed by special purpose districts. "Special purpose districts" are described in the federal stormwater regulations as "Owned or operated by a State, city, borough, county parish, district, association, or other public body created by or pursuant to State law having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district, or drainage district or similar entity…"[7] Stormwater discharges from a large or medium MS4 require a Phase I NPDES permit. Operators of stormwater discharges from small MS4s require an NPDES permit if located in the Phase II census-defined urbanized area or otherwise designated by Ecology according to federal regulation.[8]

Various laws address the establishment and operation of special purpose districts, including drainage districts, flood control districts, ports, universities, and school districts. Some of these may qualify as special purpose districts in the context of stormwater management; however, their authorizing statutes contain different provisions regarding the authorities of the special purpose districts to control the quality of their stormwater discharges.

Discussion

The WSG discussed that although special purpose districts are covered under the municipal stormwater permitting requirements, they generally lack enforcement authorities (and resources) to implement a stormwater management program. Some WSG members stated that many existing special purpose districts in Washington State are already subject to local stormwater and/or related building design ordinances, pay stormwater utility fees, and/or are partially regulated (at those facilities subject to the industrial permit) under an industrial stormwater permit. The WSG also acknowledged that stormwater (and other runoff) from outside the special purpose district can co-mingle in the special purpose district's MS4, posing a special challenge for stormwater management.

Should special purpose districts be regulated separately from the municipalities in which they lie?

Alternative 1	Special purpose districts are not explicitly permitted. They are directly regulated via the municipality's local ordinances and the municipal permit acknowledges this.

[7] 40 CFR 122.26(b)(8)(i)-(b)(16)(i)
[8] 40 CFR 122.32

Alternative 2	Regulate special purpose districts in conjunction with municipalities. Municipalities and special purpose districts could enter into an inter-local agreement that defines their "co-permittee" relationship.
Alternative 3	Regulate special purpose districts separately from municipalities by allowing special purpose districts to apply for coverage under the General Municipal Stormwater permit. Permit requirements specific to special purpose districts would be included in the general permit.
Alternative 4	Regulate special purpose districts separately from municipalities by allowing special purpose districts to apply for an individual NPDES permit. Special purpose districts that do not meet certain more explicit criteria would be excused from applying for the individual permit.
Alternative 5	Regulate special purpose districts separately from municipalities via their own general permit.

Considerations

Administrative

- Regulating special purpose districts via municipalities would be less resource-intensive for Ecology but more resource-intensive for the municipalities. Ecology lacks sufficient staff resources to issue NPDES permits to each special purpose district or to assure compliance with permit requirements.
- Ecology should not require municipalities and special purpose districts to be co-permitted as a means of addressing its own administrative challenge of overseeing multiple permits.
- Municipalities already have complete ability to carry out their permit obligations for special purpose districts that discharge into their MS4 system.
- Ecology will need to define criteria for which special purpose districts are going to be covered under the MS4 permit. For example, one criterion in the federal rule seems to distinguish between special purpose districts that cover large geographic areas (hospitals, military bases, and correctional facilities) and those that do not. An alternative criterion might be the degree of stormwater interconnectedness with the surrounding municipality.
- Under Alternative 3, Ecology will need to develop secondary criteria for determining which special purpose districts need to apply for individual permits. Ecology would then need to evaluate each special purpose district stormwater permit application against these criteria.
- Establishing and administering a co-permittee system may be highly complex, especially in jurisdictions having multiple special purpose districts (with co-mingled flows). Tracking individual flows back to their sources and allocating liability among all the parties poses a specific significant challenge.

Legal

- It is inappropriate to hold municipalities or special purpose districts accountable through an enforceable permit for each other's activities and actions.
- The federal regulations do not provide explicit authority to require municipalities to assume "co-permittee" status or to be responsible for the discharges of other municipal permittees. Instead, communities may voluntarily be "co-applicants" and become, in effect, "co-permittees," each of which is responsible only for permit conditions relating to the discharge for which it is the operator.
- Special purpose districts are governed by the state and cannot necessarily be compelled by the municipality to take specific action. Ecology should maintain a direct connection to these districts and assert its authority where the district does not conform to CWA requirements.

- Addressing special purpose districts apart from municipalities may help clarify the boundaries of different parties' liability under specific permits. However, to the extent stormwater flows are physically interconnected, the permitting system likely has little impact on allocation of liability.
- "Contracts" and "agreements" entered into as a mandatory condition of a permit are not technically contracts or agreements, since there is no option not to enter into them. Significant compliance problems for the willing party might arise if the other party refuses to enter into the agreement.
- Ecology should not (and may not have legal authority to) require entities to enter into inter-local agreements. Parties will choose to enter into them voluntarily if they provide benefits, meet specific needs, and are consistent with local authority.

Cost and Equity

- Some special purpose districts already contribute significant funds to existing stormwater utilities to help cover the costs of stormwater management programs. This may not be true for some categories of special purpose district (e.g., school districts).
- Coordinated management may offer economies of scale.
- There is an equity concern if special purpose districts in Phase II communities are not treated the same as those located in Phase I communities.

Environmental Benefit and Impact

- Requiring direct permit coverage for special purpose districts that are already covered under other NPDES permits, such as the Industrial General Permit, may not provide additional environmental benefits.
- Shared management of the water resource and discharge of pollutants may produce better environmental results.

V. Issues of Implementation

A. Compliance Requirements

Background

A basic element of all permits is the standard of performance employed to determine whether a permittee is in compliance with the permit. In a traditional wastewater discharge (NPDES) permit, a permit must include technology-based effluent limitations for the discharge; if a discharge is found to cause, have reasonable potential to cause, or contribute to an in-stream excursion above water quality standards, the permit is also to include certain water quality-based (chemical or biological parameters) effluent limits. Federal regulations provide, further, that Best Management Practices (BMPs) may be imposed in NPDES permits when "[n]umeric effluent limitations are infeasible."[9]

In its 1996 policy guidance, EPA determined that numerical water quality-based effluent limits would not be required in the Phase I stormwater permits that it prepared.[10, 11] EPA also noted that a narrative BMP approach would be a preferred approach to measure permit compliance.[12]

In *Defenders of Wildlife* v. *Browner*, the 9th Circuit Court in 1999 determined that in a municipal stormwater NPDES permit, EPA must require controls to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) but does not need to require that discharges meet water quality standards. The court went on to observe that the regulator could choose to include "such other provisions" as it determined were appropriate, including, possibly, water quality-based conditions.[13]

Discussion

The WSG discussed two basic approaches to compliance requirements: 1) the applicant should be required to meet numeric water quality-based standards (either chemical parameters or biological indicators), and 2) the applicant should be required to implement narrative BMPs identified for each permit element.

The discussion of these choices was truncated, because Ecology was clear in its presentation that at this point it considers narrative BMPs a clearly superior means of assessing whether a permittee is compliant with permit conditions. Most of the discussion agreed with this perspective, although several scenarios were noted, posing an alternate view.

How should compliance standards for municipal stormwater permits be structured?

Alternative 1	Meet BMPs identified for each permit requirement.
Alternative 2	Subject to narrative water quality standards: required to develop set of strategies, including both structural and non-structural BMPs, which are calculated to achieve water quality standards.

[9] 40 CFR 122.44(k)(2)
[10] Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits, (EPA-833-D-96-00), 9/01/96.
[11] EPA encouraged states and tribes to adopt similar policies for permits they were preparing.
[12] "Memorandum from Robert Wayland, Director of OWOW and James Hanlon, Director of OWM to Regional Water Division Directors: Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations," 11/22/02.
[13] Defenders of Wildlife v. Browner (191 F.3d 1159, *opin. amd. on denial of rehrg, 197 F.3d 1035 (9th Cir. 1999).*

Alternative 3	For sensitive shellfish areas, only meet state-defined numeric water quality criteria in receiving waters or meet effluent standards.
Alternative 4	Meet water quality standards.

Considerations

Administrative

- Actions needed to achieve a specific numeric water quality outcome are uncertain at best and in many instances may be unknowable.
- Permittees do not control all of the variables (pollutants and flow) affecting the quality of the end-of-pipe discharge. Numerous point and nonpoint sources may be present throughout areas tributary to MS4s. These should not be counted toward an MS4 operator's compliance with the requirements of a stormwater permit.
- Due to the number and variable quality of stormwater runoff and the need to monitor water quality at numerous discharge points, it would be much more challenging and expensive for local jurisdictions (and Ecology) to administer a permit based on compliance with numeric water quality standards than a permit based on BMPs.
- BMPs laid out in the 2001 Stormwater Management Manual for Western Washington may be a useful starting point for defining applicable compliance approaches under Alternative 1.

Legal

- Both EPA guidance and federal court decisions are explicit that narrative BMPs can be designed to meet the intent of the CWA.
- Compliance with state water quality standards is not required by federal regulations for municipal stormwater permits.
- The CWA authorized permit provisions other than BMPs where the state determines they are appropriate for the control of pollutants. One interpretation of this provision is that Ecology could be required to conduct a Reasonable Potential Analysis to determine the likelihood of exceedance of water quality standards before such additional provisions are imposed as a permit requirement.
- Imposing water quality standards as a permit compliance measure could increase the potential for a municipality to be the guarantor of outcomes it cannot control.
- Failure to design compliance measures equivalent to water quality standards may result in many programs being "reinvented" at great cost during implementation of TMDL cleanups.
- A narrative requirement to comply with water quality standards could be unreasonably vague and may not give the permittee adequate notice of what actions are needed to ensure compliance with the requirement.
- Narrative water quality standards are subject to interpretation (and may open up permittees to third party lawsuits based on an interpretation of those water quality standards).

Cost and Equity

- In many cases, there are no technologies available to treat stormwater so as to comply with water quality standards.
- To base permit compliance upon specific water quality outcomes over a permit term would be to set policy based on bad science and ignore the complexity of municipal stormwater management, the number of variables, and the long timeline over which improvements in water quality *may* become objectively measurable or directly attributable to a municipal stormwater management program.

- Compliance with water quality standards may mean imposing retrofits on existing facilities. This process can be very expensive and may, at times, run contrary to other protections (e.g., vesting of private development projects) granted elsewhere under state law.
- Even with significant investments, it is unlikely that a permittee could demonstrate compliance with water quality standards either at the point of discharge or in the receiving waters.
- Industrial stormwater individual permit holders are compelled to meet numeric water quality standards. However, these sites typically have greater control over inputs to the system than MS4s.

Environmental Benefit and Impact

- Operators of shellfish beds must meet a fecal coliform standard in order to be able to harvest the shellfish. Commercial and recreational shellfish beds should receive special consideration when determining compliance. Water quality needs for salmon or other natural resources dependent on clean water should also be considered when setting the compliance standard.
- Failure to meet water quality standards in receiving waters can lead to degraded fish and wildlife habitat.
- Allowing flexibility in meeting permit conditions may allow a permittee to pursue a potentially more successful course of action for stormwater management, thereby resulting in cleaner waters.

B. Level of Effort Required of Phase II Municipalities to Satisfy Permit Requirements

Background

The CWA requires that municipal stormwater discharges obtain permit coverage for discharges to surface waters. It states that permits for discharges from municipal storm sewers:

- Shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and
- Shall require controls to reduce the discharge of pollutants to the *maximum extent practicable*, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.[14] (emphasis added)

For Phase I, EPA regulations required that the regulated MS4s describe their stormwater management program in their applications. The federal Phase I regulations did not specify permit requirements, only application requirements for the large and medium MS4 dischargers.

Under the Phase II federal rules, permits will require regulated MS4s to "develop, implement, and enforce a stormwater management program designed to:

- Reduce the discharge of pollutants to the *maximum extent practicable* (MEP);
- Protect water quality; and
- Satisfy the appropriate water quality requirements of the Clean Water Act."[15](emphasis added)

[14] Section 402(p)
[15] Section 402(p)(3)(A)

The Phase II regulations state further that such stormwater management programs must include "six minimum control measures" to meet the conditions of the NPDES permit. The six minimum control measures include: 1) public education and outreach, 2) public involvement/participation, 3) illicit discharge detection and elimination, 4) construction site stormwater runoff control, 5) post construction stormwater management in new and redevelopment, and 6) pollution prevention/good housekeeping for municipal operations.

The regulations also direct MS4 operators to comply with "any more stringent effluent limitations in [the] permit, including permit requirements that modify, or are in addition to, the minimum control measures based on an approved total maximum daily load (TMDL) or equivalent analysis. The permitting authorities may include such more stringent limitations based on a TMDL or equivalent analysis that determines such limitations are needed to protect water quality."[16] Phase II MS4 operators are also required to evaluate program compliance, the appropriateness of identified BMPs, and progress toward identified measurable goals. The WSG referred to this full set of requirements as the "six-plus-two" minimum requirements.[17]

The Phase II Rule also provided that each permittee would describe its individualized pollution control program in a Notice of Intent (NOI) to seek coverage under a general Phase II permit. However, the 9th Circuit Court invalidated and remanded this portion of the Phase II Rule because the NOIs are not subject to any mandatory review by the permitting authority to determine whether the MEP standard is met. The level of review by Ecology that is adequate remains an open question. The 9th Circuit stated that its ruling "should not preclude regulated parties from designing aspects of their own stormwater management programs, as contemplated under the Phase II Rule."[18] It is unclear whether the decision will be appealed or what path EPA will take for Phase II permits.

Discussion

The discussion revolving around these issues included 1) how compliance should be defined, 2) what standard of compliance should be set in the permit, and 3) what types of program evaluation and monitoring should be required. The WSG's discussion of these different subjects often ran together, because they all involve analytic assessment and because different notions of MEP, or the permitting standard, are at the heart of the compliance and monitoring issues. The concept of MEP directly informs decisions about what actions constitute the six-plus-two minimum measures. WSG members expressed starkly different notions of what constitutes MEP and how MEP fits within the permitting context. Participants also offered a range of different interpretations as to how MEP has been dealt with in the regulations.

MEP, or the permitting standard, is likely to change over time as new cost-effective technologies become available. Related issues discussed by the WSG include 1) is MEP set uniformly across Western Washington, and 2) can it be defined according to the size of a jurisdiction and/or the maturity of its stormwater management program?

While the WSG felt that "level of effort" is a key issue area, members remain unsatisfied with how the topic area was addressed and believe that this issue requires more diligent attention. As a result, the differing views are difficult to summarize neatly. This difficulty is reflected in the number of alternatives presented below.

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[16] 40 CFR 122.34(e)(1)

[17] There were differences in perspective within the WSG as to whether it was more appropriate to count six measures or eight.

[18] Texas Cities Coalition on Stormwater et al. v. EPA, No. 00-70822, 13767, 13802 (9th Cir. Sep. 15, 2003)

What constitutes "maximum extent practicable" (or, MEP), the CWA permitting standard? (Note: these are not mutually exclusive alternatives)

Alternative 1	MEP should be set as a BMP standard. Appropriate BMPs may be considered those for which the costs and benefits are in direct relationship, that is, where the probable benefits are greater than their probable costs.
Alternative 2	MEP should be defined using the National Association of Flood and Stormwater Management Agencies (NAFSMA) proposal, King County's proposal, or some other variation, to provide better benchmarks with other states.
Alternative 3	MEP should be equivalent to AKART ("all known available and reasonable technologies").
Alternative 4	MEP should be the minimum requirements in the Stormwater Management Manual for Western Washington, including those relating to flow control and treatment standards.
Alternative 5	MEP should include a narrative requirement and evaluation of the local program so that it is designed to achieve water quality standards.
Alternative 6	MEP should be defined as numeric water quality standards.

Considerations

Administrative

- Because MEP is not defined in the federal Phase I or II rules, Ecology and others will need to focus early attention on developing a clear understanding of the concept. Depending on which of the above alternatives is selected, this effort could require a determination of what constitutes "all known available and reasonable technologies" or "technically sound," "financially responsible," and "environmentally beneficial."
- Determination of what actions within the framework of six-plus-two minimum measures will be needed to achieve the permitting standard will require considerable time and energy by Ecology. The crucial consideration is not the number of requirements; it is the level of effort within each component needed to be in compliance with those requirements.
- NAFSMA has developed a detailed definition of MEP that could be used: "the technically sound and financially responsible, non-numeric criteria applicable to all municipal stormwater discharges through the implementation of 'best management practices.'"[19]

Legal

- Federal Phase II regulations state "[i]mplementation of best management practices consistent with the provisions of the [required] storm water management program…constitutes compliance with the standard of reducing pollutants to the 'maximum extent practicable.'"[20] Elsewhere, the regulations state that MEP generally means implementation of BMPs. EPA guidance promulgated in November 2002 also states that MEP is a BMP standard. No firm benchmark was articulated in federal law and guidance.
- The federal courts recently affirmed that federal law does not require municipal stormwater permits to comply with water quality standards. However, this does not preclude permitting authorities from setting water quality-based standards as the MEP standard. Other federal requirements (e.g., governing establishment of TMDLs) require that receiving waters attain all applicable water quality standards. Therefore, even if municipal stormwater permit regulations

[19] National Association of Flood and Stormwater Management Agencies, "Position on Municipal Stormwater Management Program," Approved January 18, 2002

[20] 40 CFR 122.34(a)

do not call for compliance with water quality standards, stormwater discharges may ultimately be expected to meet applicable water quality standards in the water body through implementation of a TMDL or other water quality management plan. State law prohibits the discharge of pollutants into state waters.

- If compliance with water quality standards is established as the permitting standard and Ecology is unable to enforce this standard, the agency may find itself in danger of losing program delegation for failing to assure implementation of NPDES requirements.
- Tying MEP to AKART may strengthen the connection between the federal and state requirements.
- Equating MEP to AKART or to water quality standards may increase third party lawsuit liability.
- State law references maintaining the highest purity of all waters of the state. This is often interpreted to call for compliance with applicable water quality standards through permits (and other mechanisms).
- State law authorizes BMPs as an appropriate mechanism for meeting water quality standards when numeric limits are not feasible.
- The state's vesting laws protect private development rights. Development projects are vested to the construction standards in place at the time of the application. Therefore, if the state requires the local jurisdiction to raise the standard, the jurisdiction cannot retroactively change the private development standard. The local jurisdiction would need to make up any gaps in the standard; however, that may be technically unachievable. Because it takes years before the development BMPs to take effect and be widely implemented, it may be hard to determine whether a certain set of BMPs would constitute a permitting standard at any given time.
- Compliance with water quality standards (which is a water quality-based effluent limitation issue under NPDES) should not be confused with MEP (which under the NPDES program is first a technology-based concept).
- Under the CWA, MEP is such a dominant concept for municipal stormwater that practicability must influence the regulator's choice to include any water quality-based requirements that the law might allow. Requirements that are not practicable should not be included, but what constitutes "practicable" is subject to varying interpretations.

Cost and Equity

- Retrofitting existing facilities to meet new design standards or water quality standards can be very expensive and may, at times, run contrary to other protections (e.g., vesting) granted elsewhere under state law. It may not be technically possible in urbanized areas.
- To cover the cost of retrofitting (at the time of transfer or new construction of a site), a fee related to stormwater impacts from existing sites with inadequate BMPs could be charged.
- Other stormwater permits (e.g., industrial) require permittees to comply with applicable water quality standards. For these discharges, cause-effect relationships can be more readily determined; however, source control and compliance is sometimes impossible due to offsite influences.
- The permitting standard must be defined carefully to refrain from holding municipalities liable as a matter of permit compliance for any non-stormwater discharges (e.g., septic leakages) that travel through the MS4 systems.
- In order to conform to the requirements of the state Administrative Procedures Act, Ecology must determine that the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs.

- Municipalities are concerned about being asked to implement specific measures that might cause them to divert resources from local priorities or mandates.
- Failure to adequately manage stormwater runoff could cause the closure of local businesses, such as shellfish companies.
- Failure to adequately manage stormwater runoff could, if required under a permit or TMDL, lead to costly retrofit and restoration projects, such as sediment remediation, fish habitat restoration, and flood damage restoration.
- Costs will be borne by ratepayers, including business and construction activities that are already regulated, and pay permit fees under existing state authorities. Thus, business would bear duplicative requirements and costs.

Environmental Benefit and Impact

- Water crosses jurisdictional boundaries. Obligations not met upstream merely become downstream liabilities.
- Placing strong emphasis on new development, redevelopment, and retrofitting existing facilities may bring about more comprehensive and faster water quality improvements.
- Working proactively to meet water quality standards will provide maximal water quality benefit and help avoid stormwater-induced water quality violations.
- Phase II stormwater regulations require MS4s to protect water quality. This requirement should be paramount in considering what constitutes MEP, the permitting standard.
- Monies should be targeted to provide the greatest benefit. Over-regulating may divert resources from solving worse problems to issues that present minimal risk.

Should the permitting standard be uniformly determined across Western Washington? [Or, instead, should the permitting standard reflect the differences in the situation and resources among the municipalities?]

Alternative 1	Ecology should define a single permitting standard for all MS4 permittees across Western Washington. Options include defining it via guidance or regulatory code or through reference to the Stormwater Management Manual for Western Washington.
Alternative 2	The permitting standard should vary by jurisdiction, thereby allowing each permittee's program to be evaluated on the basis of its situation and resources.
Alternative 3	Ecology should develop a set of clear standards for MEP which allow for limited case-by-case reviews in given areas.

Members discussed whether Ecology can or should determine uniformly, for all or some municipal permittees, what substantive permit requirements constitute MEP. The discussion of MEP, or the permitting standard, also included some mention of whether controls on new and existing development should be included as permit requirements for controlling stormwater discharges to the MS4.

Considerations

Administrative

- Determining what constitutes MEP for individual Western Washington jurisdictions can require considerable agency resources and will be challenging to accomplish. It may be more timely and efficient for Ecology to establish a single permitting standard across Western Washington than attempting to establish site-specific criteria.
- The state could provide a very detailed permitting standard that allows for review of individual programs.

- MS4 operators are often in the best position to determine what actions/activities will most successfully manage stormwater pollution in their jurisdictions.
- Establishing MEP at the jurisdictional level provides a clear avenue for local input into the development of a municipal stormwater management program.
- Greater public involvement introduces the need for additional staff resources to manage and respond to public suggestions and queries.
- A public involvement component may reduce the burden of review on Ecology by providing information independent of the permittee on what is practicable in a given jurisdiction.
- Conforming to a uniform MEP or permit standard might require a particular jurisdiction to re-codify or redesign its development or enforcement controls.
- A prescriptive approach to a permitting standard provides clearer guidance and therefore increases the likelihood of success.
- Some municipal stormwater managers prefer a permit that gives the flexibility to establish unique stormwater management programs tailored to local needs and are willing to contribute to Ecology's increased costs in order to accomplish this goal.

Legal

- The courts have not defined MEP. Over time, the courts may clarify what constitutes MEP. If the state defines MEP in statute or rule, later judicial interpretation of the requirement could cause a problem in terms of the state's delegated authority under the Clean Water Act.
- The concept of "practicability" is inherently dependent upon, and must incorporate, the circumstances and resources of the permittee.
- It is not clear what level of review is required by the permitting authority as to what constitutes MEP. The 9th Circuit Court invalidated and remanded the portion of the Phase II Rule that enabled the permitting authority to rely upon a NOI prepared by the permittee that describes the permittee's individualized stormwater program. The Court has also indicated that it is nonetheless appropriate for permittees to design aspects of their own stormwater management programs, as contemplated under the Phase II Rule.

Cost and Equity

- Local officials may be more likely to support measures/program activities that are explicitly prescribed by Ecology.
- Allowing the permitting standard determination to factor in a jurisdiction's present size, ability to perform, ability to pay, and the natural resources affected may help ensure that MS4 operators will be able to successfully and quickly implement a municipal stormwater management program.
- If the permitting standard varies by jurisdiction, there may be inconsistency in programs across the state that might also result in lower costs, creating competitive advantages for certain businesses.
- Municipalities that have already expended considerable resources to develop stormwater management programs do not want to be penalized for working proactively to manage stormwater pollution. Such a penalty would arise if these jurisdictions were held to a higher standard or shorter compliance schedule than those jurisdictions that have done little or no preparation.
- Jurisdictions have different financial abilities to implement stormwater program activities. A jurisdiction's current ability to implement stormwater program activities does not determine that jurisdiction's ultimate programmatic capabilities. The permitting standard, therefore, can be set to encourage maximum stormwater protection, whether on a site-specific or regional basis.

- Jurisdictions also have different scales of obligation. While more residents/businesses may provide additional funding, they also create the need for more stormwater management.
- While economies of scale can help to reduce costs, merely being a small jurisdiction does not prevent the pooling of resources with others to generate economies of scale.

Environmental Benefit and Impact

- Waters of the state belong to all citizens, not just residents of a particular jurisdiction. The definition of MEP and selection of appropriate stormwater management program actions should consider this and not be unduly influenced by a jurisdiction's particular economic or political climate.
- The ability to implement a comprehensive program does not necessarily relate to environmental problems or benefit. Some of the biggest problems or sensitive water bodies may be within a jurisdiction with no existing program or few resources.

C. Program Evaluation/Monitoring Requirements

Background

The Phase I federal rule calls for regulated MS4s to submit annual reports that include the following: the status of the municipality's implementation of its stormwater management program; proposed changes to the stormwater management program; necessary revisions to the assessment of controls; summary of data, including monitoring data accumulated over the past year; a description of the number and nature of enforcement actions, inspections, and public education programs implemented; and identification of water quality improvements or degradation.[21] The current Washington State Phase I Municipal General Stormwater Permit requires that the annual report in the fourth year of implementation include "a detailed evaluation of the effectiveness of the stormwater management program, the information requested (in the other annual reports), and a proposed stormwater management program for the term of the next permit."[22]

The Phase II federal rules require MS4 operators to evaluate program compliance, the appropriateness of identified BMPs, and progress toward achieving identified measurable goals as one of the six-plus-two minimum measures. Regulated entities are required to submit annual reports to Ecology during their first permit terms and in subsequent permit terms, to submit reports in years two and four of each cycle. These reports must include the results of the evaluations described above, as well results of information collected and analyzed during the reporting period, a summary of stormwater activities planned for the next reporting period, and any changes in identified BMPs.[23]

Discussion

Monitoring is a key issue for both Phase I and Phase II permittees. The WSG focused primarily on the evaluation, and not the reporting, requirements laid out in the regulations, giving special consideration to what kinds of monitoring should be required. Members considered different types of evaluation that may be useful: 1) BMP effectiveness, 2) individual MS4 stormwater program element effectiveness, and 3) the effectiveness of Ecology's program, either at a statewide or regional (Western Washington) scale.

[21] 40 CFR 122.42(c)

[22] E.g., National Pollutant Discharge Elimination System and State Waste Discharge General Permit(s) for discharges from municipal separate storm sewers for the Island/Snohomish Water Quality Management Area, July 5, 1995.

[23] 40 CFR 122.34(g)

The WSG also considered which kinds of information provided the greatest value for managing local and statewide stormwater efforts and for judging program compliance.

The WSG reviewed types of monitoring that were possible, including action-oriented monitoring (i.e., implementation of BMPs and other program elements) and environmental monitoring (i.e., chemical/biological monitoring to assess effect on receiving waters).

Members observed that the evaluation does not need to be tied to a compliance determination. Some members noted that the evaluation can, but does not need to, rely on water quality monitoring information, and considered whether Phase I and Phase II requirements should be handled differently and whether or how Phase I and Phase II efforts can be coordinated or combined.

What types of program evaluation/monitoring should Ecology require in NPDES municipal stormwater permits to document permit compliance? (Note: these are not mutually exclusive alternatives)

Alternative 1	Require permittees to evaluate the effectiveness of their overall programs using the performance measures listed in their permit and the NOI.
Alternative 2	Require MS4 operators to evaluate the effectiveness of the specific BMPs they employ as part of an evaluation of the effectiveness of their programs.
Alternative 3	Require MS4 operators to do baseline environmental monitoring. This monitoring should focus on establishing priority areas (using a risk-based model).
Alternative 4	Establish a fund into which municipalities can contribute to have an independent entity, or perhaps Ecology, conduct baseline environmental and/or BMP effectiveness monitoring.
Alternative 5	Leave water quality monitoring of the waters of the state as a separate state responsibility.
Alternative 6	Require MS4 operators to conduct a wide spectrum of monitoring: action-oriented, environmental, and chemical/biological.
Alternative 7	Require measurement of impervious surface and vegetated cover. Conduct a baseline survey, project build-out scenarios, and monitor on a yearly basis.

Considerations

Administrative

- Requiring MS4s to conduct extensive evaluations will cause those municipalities to divert more resources into program evaluation, leaving fewer resources for "on-the-ground" program implementation.
- It is not the responsibility of local stormwater management programs to assess or evaluate the effectiveness of individual BMPs. That is primarily an EPA and Ecology responsibility that should not be thrust upon municipalities.
- Municipal stormwater management programs generally lack the resources to conduct effectiveness evaluations or to establish baseline or environmental trends datasets. Most often, such activities are conducted by the state or private entities (such as permitted industrial facilities).
- Many jurisdictions already conduct biological and other monitoring, so this is a normal program feature.
- Pooling resources to fund independent baseline or BMP research could be cost-effective and provide for data collection, while acknowledging the complexity (and perhaps the infeasibility) of evaluating their collective effects on the receiving waters.
- It requires extensive time to establish environmental trends, well beyond permit timelines.

- With a statewide evaluation, Centennial Clean Water Fund monies could be targeted to monitoring of stormwater discharge, both the actual constituents in stormwater runoff and the long-term affects of stormwater discharge on the receiving surface water body. Monitoring would be structured to evaluate a particular stormwater treatment system and the range in the hydrology of the receiving water's responses to the taking of stormwater discharge to better improve performance measures and management practices across the state.

Legal

- Alternative 1 does not meet the federal Phase II requirement of evaluating the appropriateness of identified BMPs.
- Neither the Phase I nor the Phase II regulations specifically require effectiveness monitoring (at either the BMP or programmatic level). Instead, the regulations require MS4s to report on their compliance with (and progress toward) program requirements.
- Effectiveness monitoring may only be appropriate in cases where stormwater is being discharged to water bodies that do not meet water quality standards.
- If the local entity has implemented a stormwater management program based on the Stormwater Management Manual for Western Washington, the BMP treatment effectiveness is the responsibility of Ecology's WSG in development of this manual.
- There is uncertainty about the legal context for monitoring. The Phase II regulations are unsettled as to whether and how a regulator should or can judge the adequacy of any regulated municipal stormwater management program. A recent court case requires the permitting agency to evaluate local programs. EPA may appeal this case or it may address the issue through a regulatory revision.
- EPA recommends that no additional requirements beyond the minimum control measures be imposed on Phase II permittees until after December 10, 2012. Since environmental monitoring is not one of the six minimum measures, EPA's recommendation is an argument in favor of not requiring Phase II permittees to conduct environmental monitoring.

Cost and Equity

- Other programs and agencies may already conduct baseline environmental monitoring. Asking MS4 operators to do so may force duplication or the diversion of resources from other program activities. This would be an unfunded mandate.
- Mandatory program compliance evaluation/monitoring provides less aggressive municipalities a stronger impetus to fully implement program requirements.
- Monitoring to determine cause-effect relationships that would be required to implement a water quality standards-based MEP is not technically feasible, irrespective of the amount of money spent. Municipalities might be required to sample hundreds of outfalls for multiple parameters, yet still would still not be able to make those cause-effect determinations.
- It would be advisable to require a feedback loop in the permit to be able to identify and respond to program elements that are not working effectively.
- Due to the variability of stormwater, associating water quality outcomes with specific administrative/programmatic actions or a BMP may be expensive and time-consuming, or technically impossible.
- It may be useful to have an independent party evaluate a representative sample of BMPs in Western Washington.
- Municipalities may be able to benefit from leveraging their resources by contributing toward a pooled fund to conduct a coordinated evaluation/monitoring program, but generally lack the

resources to effectively conduct such evaluations on their own. Coordination in this area would avoid costly duplication of efforts, standardize the data collection and evaluation protocols, and reduce the individual burden to assimilate the information necessary to make valuable and better informed decisions.

- Municipalities may be more willing to implement a voluntary monitoring program (either related to BMP effectiveness or environmental quality).
- The monitoring choice is not necessarily between "super expensive and possibly inconclusive ambient water quality monitoring" and "vague program evaluation." While extensive water quality monitoring is not always possible, it is reasonable to require a focused effort (key location, key times, end-of-the-pipe, sediments or biota by outfalls, etc.)
- MS4s cannot measure program effectiveness without looking at the effectiveness of individual program measures.
- Costs of monitoring would be passed to ratepayers, including business and construction, who already conduct monitoring of their discharges.

Environmental Benefit and Impact

- Evaluation results that are linked to environmental results provide the most meaningful assessment of environmental impact and program effectiveness. Given that one aim of stormwater management programs is to control the movement of pollutants into water bodies, effectiveness monitoring may be relevant. BMP effectiveness monitoring provides the most direct link from action to environmental outcome.
- Baseline environmental monitoring can help municipalities understand and prioritize their stormwater problems and select the most appropriate BMPs.
- Water quality monitoring in the last decade suggests that water quality is improving. However, it is not clear if this improvement is attributable to BMPs that have been implemented or simply natural phenomenon, such as changing meteorological or hydrological conditions.
- Federal rules state that permits must protect water quality. Water quality monitoring can help us understand if we are protecting water quality or further degrading impaired waters.
- The positive effects of stormwater management practices may not be detectable in the environment for a decade or more.
- Monitoring may guide future environmental priorities.

D. Additional Program Elements

Background

The federal requirements identify minimum measures for inclusion in an NPDES Phase II stormwater management program (the six-plus-two described above). The stormwater management program required by Ecology in the existing Phase I permit contains sixteen elements. The WSG considered whether the Phase II permit should include other measures in addition to the requirements in the federal Phase II Rule, and whether these additional requirements should also be added to future Phase I permits.

Discussion

A focus of the discussion was the Puget Sound Water Quality Management Plan, prepared by the Puget Sound Action Team (PSAT) and enacted in 1987.[24] The PSAT articulated a comprehensive approach to stormwater management in this plan, which was subsequently recognized by the Legislature and EPA as a Comprehensive Conservation Management Plan for the protection of Puget Sound. This comprehensive approach advises the adoption of the Stormwater Management Manual for Western Washington, or an alternative manual that is technically equivalent.[25] . A basic point of departure within the WSG was whether the six-plus-two suffices[26], or whether the uniqueness and sensitivity of the Puget Sound requires a greater effort. Washington State is the nation's leading producer of bivalve shellfish (oysters, clams and mussels). The Puget Sound is also subject to numerous listings of threatened and endangered salmonids under the Endangered Species Act.

Should Ecology add program elements beyond those required under the federal Phase II Final Rule?

Alternative 1	The permit should be based solely on the required federal program elements.
Alternative 2	The permit should include other useful measures, in addition to the required program elements, in the applicable rule or permit. Such additional measures may include basin planning, identification and ranking of all problems, low-impact development, retrofit, and programmatic and environmental monitoring.

Considerations

Administrative

- Focusing on additional measures encourages innovation.
- Mandatory requirements are great drivers of progress.
- By requiring additional measures, Ecology would be creating a more complex permit (or set of permits) to manage, thereby raising program implementation costs.
- Not all advances in stormwater management need to be driven by a permit. Some local governments have already implemented many innovative stormwater measures in Washington, without the constrictions or prescriptions of a permit.
- When local governments have flexibility to make their own decisions about additional measures, they may make better choices than those imposed by the state.
- In terms of exploring innovative approaches to manage stormwater, greater results are likely to result under state-sponsored incentive programs that encourage additional actions (rather than by Ecology incorporating additional requirements into the municipal stormwater permit).
- The minimum elements of the Phase II regulations are already very broadly stated. Depending upon how much flexibility a permittee is allowed to design its own program, items that might be considered additional measures could be included in an individual permittee's program.

Legal

- Participation in a group monitoring program is encouraged by the federal regulations.

[24] The Puget Sound Action Team includes a Chair appointed by the Governor, directors from ten state agencies and representatives from tribal, federal, and local governments.

[25] The comprehensive approach called for in the Puget Sound Water Quality Management Plan would go beyond the federal requirements to include: identification and ranking of existing problems that degrade water quality, aquatic species and habitat, and hydrologic process; adoption of ordinances to allow for low-impact development; participation in watershed or basin planning; and creation of stable funding capacity.

[26] There is also an argument that the Plan can fit within the six-plus-two.

- The state Growth Management Act and Critical Area Ordinances are far better suited to deal with overall land use planning issues than is an NPDES municipal stormwater permit.
- The Puget Sound Water Quality Protection Act, state Water Pollution Control Act, and federal Endangered Species Act all contemplate a stormwater permit program that is more robust than the minimal measures outlined by EPA.
- Additional measures that are not required under federal law may be vulnerable to legal challenges by local governments unable to meet federal and state mandates with limited resources.
- Legal issues arise in Phase I permits, where measures beyond the accepted, basic components of a stormwater program have been proposed in the past by Ecology. Expansions of permit scope may be vulnerable to legal challenge.
- A useful approach may be to tie violation of water quality standards to a triggering of additional measures.

Cost and Equity

- Some low-impact development measures make sense, but local governments may struggle to fund even the basic program elements.
- Alternative approaches could actually reduce the cost to local governments to operate their program; for example, WSDOT is heavily investigating low-impact development infiltration and dispersion techniques that it can utilize within its right-of-ways as a means of reducing capital, as well as operational and maintenance costs associated with stormwater management.
- Some comparative cost data suggest that low-impact development is less expensive to construct than conventional development. As these options are refined (and become even more cost-effective), the market system will gravitate to low-impact development because it saves money.
- The cost data on low-impact development is sparse and speculative, and may not be reliable for making decisions.
- It is often less expensive to focus on preventive measures, such as low-impact development, than it is to continue developing in a conventional manner. Restoration/remediation is often many times more expensive.
- A number of jurisdictions in the Puget Sound are using low-impact development practices as a cost-effective stormwater management tool.
- Imposing additional requirements on communities with more advanced programs can seem punitive. Forward-thinking jurisdictions should not be penalized for having undertaken significant voluntary actions.
- Stable funding can help support a healthy environment.

Environmental Benefit and Impact

- The required measures do not fully address the existing problems caused by stormwater.
- Additional measures can target sensitive areas, such as shellfish beds and salmon habitat, better than the basic measures.
- Low-impact development ordinances can minimize and disconnect impervious surfaces and minimize disturbance of soils and vegetation.
- If the permit only applies to activities related to new development and redevelopment, environmental degradation due to existing stormwater runoff problems will continue.
- Failure to implement the measures identified by the Puget Sound Action Team could have a negative impact on the water quality of Puget Sound.

- Failure to implement land use controls may lead to water quality degradation and imposition of measures under the Endangered Species Act and/or via TMDLs.

E. Structuring the Permit

Background

One of the basic issues confronting Ecology in constructing new stormwater permits is how to deal with the wide range of experience and capacity among the qualifying municipal permittees. Phase I jurisdictions have been operating under a permit since 1995. Some of them have programs that long-preceded this permit, so they have accumulated substantial experience in stormwater management from which Phase II jurisdictions and others can benefit.

In a kindred fashion, there are a number of Phase II jurisdictions that have never been regulated under a state-issued stormwater permit, yet have operated advanced stormwater management programs for years. Similarly, some Phase I special purpose districts have never been formally regulated under a state-issued municipal stormwater permit, but have worked with tenants to implement stormwater management programs.

Most of the communities to be permitted as Phase II jurisdictions, however, do not currently have programs that have all the components required by the federal regulations (the six-plus-two). The Association of Washington Cities and Washington State Association of Counties conducted a study in 2001-02 to gain a better understanding of the range of programs currently operating in the state.[27] Half of the candidate Phase II cities responding to the survey indicated that their stormwater management programs included at least the six components identified in the Phase II Rule. The others varied significantly in how many program elements they addressed. None of the counties responding to the survey answered yes to all questions pertaining to the basic Phase II requirements (although a few appear to have activities in six of the components).

In terms of current capacity, then, the municipalities fall into three groups—Phase I and Phase II communities that 1) meet all requirements, (2) meet some requirements, or (3) meet few or no requirements.

Discussion

The WSG explored different approaches for dealing with these differences in capacity and experience. Some members proposed a "tiered" permit with different levels of required activity among the permittees. Others favored writing the permit without "tiers" and in a manner that defines, for each stormwater management program element, a single level or measures of compliance applicable to both Phase I and Phase II permittees. Under a tiered permit structure, Ecology could articulate different minimum actions within each tier to accommodate the different sizes among communities and variation among the existing programs (as well as whether they were a Phase I or Phase II jurisdiction). The tiers might also reflect differences in resource protection or restoration needs, depending on the extent of development or impervious surface within that community, or its proximity to sensitive resources, such as shellfish beds.

A variation of the tiered permit idea is that in future permit cycles, the tiers would be adjusted to move communities from lower tiers to more advanced tiers, to reflect increased experience level. Over time,

[27] "Needs Assessment for NPDES Phase II Permit Process," 2002.

this would create a continual improvement in all programs and would also account for jurisdictional variation in the concept of MEP.

Under the 'no tiers' alternative, each stormwater management program element requirement would be written so that minimum performance for compliance is defined in terms of measurable operational or field conditions, uniformly applicable to all permittees. Each permittee can adjust the specific actions or BMPs used to ensure that these conditions are met. Compliance schedules would be allowable under this alternative, provided they are approved by Ecology and provide reasonable assurances that the permittee will meet the compliance goal by the end of the permit term (five years) or another deadline set by Ecology.

Another element to consider when structuring the permit is whether or not there is an end point to the permit. One perspective is that, over time (several cycles), all permittees are working toward a common, or static, end point (e.g., full compliance with water quality standards). Another perspective is that what constitutes MEP may vary due to the inherent variation in communities' programmatic capacity—some communities are already performing at a greater level than six-plus-two—and as a way to prevent backsliding and encourage adaptive improvements.

An additional complexity in terms of the structure of the permit is that Ecology may choose to outline or prescribe the minimum or basic actions in the permit and require all communities to meet them, or it may offer communities the option of proposing their own programs to reflect differences in existing programs and community needs and interests.

How should municipal stormwater permits be structured? (Note: these are not mutually exclusive alternatives)

Alternative 1	The permit establishes one compliance schedule that assumes all jurisdictions will be fully compliant with all permit requirements by the end of the first permit term.
Alternative 2	The permit defines a single level or measure of compliance for each stormwater management program element, applicable to all permittees. Compliance schedules would be allowed (if approved by Ecology), but would not extend past the term of the permit.
Alternative 3	The permit is structured in tiers to reflect differences in the size of communities, resources, the status of their existing programs, and variability in resource protection and restoration needs.
Alternative 4	The permit prescribes the basic requirements for all programs to meet (within the structure of Alternatives 1, 2, or 3).
Alternative 5	Jurisdictions are given the option to propose alternative programmatic approaches to meeting permit requirements, with the benefit of Ecology review/approval.
Alternative 6	Model the permit after small MS4 permits developed by EPA.

Considerations

Administrative

- Use of a tiering system could cause confusion and misunderstanding about what is needed for compliance. Additional debate may be expected to determine which tier specific jurisdictions fall within, necessitating that Ecology establish clear and defensible criteria/qualifications for each tier.
- Ecology would require significant resources to adequately review jurisdictions' alternative stormwater management approaches and/or consider their compliance schedule proposals.

However, municipalities may be willing to pay for a focused Ecology review of their proposed stormwater management program.

- Defining a single level or measure of compliance for each stormwater program element will require considerable time and effort on Ecology's (and others') part.
- It would be useful to figure out incentives for jurisdictions to move to a more advanced tier; otherwise the tiering system does not make sense.
- It is undesirable to establish a permit system that would allow private negotiations between Ecology and an applicant. All applicants need to meet a common set of standards that have been subject to public review.

Legal

- The 'no tiering' alternative may be easier for Ecology to defend, as it would contain measures of compliance that are tied to operational or field conditions and are applied uniformly to all permittees.
- The legal limit on the length of time allowed as a compliance schedule is uncertain in light of recent Pollution Control Hearing Board decisions related to the Industrial General Stormwater NPDES permit and other possible federal requirements.
- A tiered structure could be vulnerable to legal challenges, especially related to establishing and applying criteria against which individual jurisdictions would be judged.
- It is unclear to what extent Ecology review of individual stormwater management programs may be required in the wake of the 9th Circuit Court decision summarized above.
- Using EPA's Phase II permit as a model helps ensure that Washington State's permit meets minimum federal requirements.

Cost and Equity

- MS4 operators who have acted proactively and who operate more advanced programs are concerned that they not be penalized for having gone beyond the basic requirements. Likewise, they do not want to remove incentives to act proactively for other municipalities who will be entering the program. The 'tiering' approach is most likely to set up such a permit equity dilemma.
- Municipal stormwater managers who prefer a permit that gives flexibility to establish unique stormwater program options tailored to local needs (and who are willing to contribute to Ecology's increased costs to accomplish this goal) would not be penalized if the state sets a goal of uniformity across jurisdictions.
- Municipalities that cannot afford to pay for an Ecology review of their tailored program should not be penalized for lacking the necessary resources to pursue this option.
- Smaller communities will likely have a higher per household cost than larger communities when uniform minimum actions are required.
- The 'no tiering' alternative can be designed to require a level of effort for each permittee that is commensurate with the size and extent of its storm sewer system. Smaller permittees would have less costly programs than larger permittees.
- Local residents and businesses ultimately bear the cost for a community's stormwater program. The more restrictive the requirements, the more expensive and difficult it is for those local residents and businesses.
- Disparities among different municipalities' programs may cause businesses (and homeowners) to relocate to those jurisdictions with less restrictive (and therefore, less costly) requirements.

Environmental Benefit and Impact

- The permit must be structured so that the maturity of a program does not equate to stagnation and delay environmental improvement.
- Many jurisdictions have created stormwater management programs that voluntarily go beyond the federal Phase II guidelines. It is likely that these jurisdictions will continue to strive to maintain water quality with or without a permit.

VI. Issues of Municipal NPDES Stormwater Permit Integration and Coordination

A. Integration of Phase I and Phase II Permits

Background

The CWA established a two-part system for implementing municipal stormwater permits. Larger and medium-sized municipalities were covered in Phase I; smaller jurisdictions were addressed later under Phase II. The Phase I determination took place only twice; no other jurisdictions can now become Phase I permittees (regardless of their size). New municipalities can become Phase II jurisdictions, however, once they trigger the specific population density requirements laid out in the regulations.

The Phase I regulations set explicit application requirements for qualifying municipalities but also allow applicants to "submit a jurisdiction-wide or system-wide permit application" and to co-apply when more than one public entity owns or operates a municipal separate storm sewer within a geographic area.[28] Similarly, the Phase II regulations allow a variety of permit coverage options, including by general permit, by (voluntary) joint Phase I/Phase II NOI to be covered by a general permit, by individual permit, by joint application as Phase II co-permittees if allowed, or as a limited co-permittee via a permit modification if a Phase I municipality is "willing to have you participate in its stormwater program."[29]

Discussion

WSG members discussed the challenges municipalities face when required through an NPDES permit to coordinate with neighboring jurisdictions, even as some acknowledged the value of inter-jurisdictional coordination. Challenges include reconciling different local building and land development codes and/or governmental priorities/resources. Benefits of inter-jurisdictional coordination can include leveraging resources and sharing knowledge, responsibilities, and opportunities to implement permit requirements; and to integrate stormwater program activities with related efforts, such as TMDL implementation. Members observed that Western Washington jurisdictions demonstrate varying degrees of readiness and interest to implement a strong stormwater management permit. Permit options that attempt to mandate inter-jurisdictional coordination/integration can cause friction, either by causing municipalities with mature programs to feel "dragged down" by their neighbors or by making less mature program "look bad" when compared to their neighbors' more developed programs. Elected government officials who find themselves in either situation may be reluctant to maximize integration opportunities.

Some members observed that coordination might be mandated or encouraged in a variety of ways, either through or outside the permit itself. Similarly, watershed-based or site-specific provisions (e.g., coordination on illicit discharge identification) might be incorporated into a general NPDES permit. Voluntary inter-local agreements can also effect integration without tying an action to a specific, enforceable permit. Ultimately, members acknowledged the importance of permit content (somewhat independent of the degree of integration required by the permit).

[28] 40 CFR 122.26(d)
[29] 40 CFR 122.33(b)

Should Ecology integrate Phase I and Phase II municipal NPDES stormwater permits and if so, how? [Should the municipal stormwater permits be structured to allow differing levels of effort by permittees?]

Alternative 1	Issue separate Phase I and Phase II MS4 permits for Western Washington.
Alternative 2	Issue a combined Phase I/Phase II MS4 permit for Western Washington. Under this option, Ecology would prepare a single permit that lays out separate requirements for Phase I and Phase II jurisdictions.
Alternative 3	Issue an integrated Phase I/Phase II MS4 permit for Western Washington. Under this option, Ecology issues a single permit that fully integrates (and makes consistent) specific permit requirements for Phase I and Phase II communities.
Alternative 4	Issue MS4 permits in Western Washington on a watershed basis. Under this option, Ecology could build on any of the watershed-based constructs to organize geographically distinct MS4 permits. A sub-alternative is to offer watershed-based permits as an alternative construct for interested Western Washington jurisdictions.
Alternative 5	Issue a Puget Sound-wide permit. Handle the remainder of Western Washington jurisdictions under a separate permit.

Considerations

Administrative

- Cities and counties often have different water quality (and development) objectives and standards. Local political pressures may overwhelm jurisdictions' ability to coordinate development and maintenance standards. Standardizing to the "lowest common denominator" will not serve environmental objectives.
- Coordinating/integrating activities across jurisdictions can be time-consuming and resource-intensive.
- Coordination may offer administrative efficiencies (e.g., related to public notice and meeting requirements) that ultimately save taxpayer dollars.
- Ecology will likely need to expend significant resources to reconcile different regulatory requirements contemplated by integrated or highly coordinated permit options.
- Local government officials may resist being required to coordinate activities with neighboring jurisdictions.
- Depending on how geographic areas are delineated, jurisdictions may find themselves applying for several permits in the watershed-based approach. If these permits are on different cycles or contain different requirements, this approach may pose additional workload concerns for some jurisdictions.
- The manners in which jurisdictions are organized to be covered under the permit are ultimately of lesser interest than what is contained within the permit and whether Ecology intends to require permittees to be jointly responsible to fulfill permit conditions. Ecology should make its intentions clear in any proposal.

Legal

- Phase II regulations explicitly allow for regulated entities to jointly apply for permit coverage.
- No authority has been cited that would allow Ecology to impose joint obligations upon permittees to a multi-party or general permit.
- No explicit authority in the regulations has been cited for Ecology to require a single permit that covers both Phase I and Phase II jurisdictions.

- Jurisdictions have no authority to police other jurisdictions and should not be held accountable for others' actions through Ecology enforcement of permit requirements, third party lawsuits, or other mechanisms. This is possibly of special concern as it relates to Alternative 3.
- Making Phase I and Phase II permits as similar as possible can help mitigate impacts associated with growth without placing an undue burden on Phase II permit applicants.

Cost/Equity

- Administering separate permits may pose additional costs for Ecology, but not for the permit applicants.
- Compliance with Phase I or Phase II permit requirements may create less favorable business climates in those jurisdictions compared to nearby jurisdictions that are not regulated as municipal NPDES permittees.
- Adding Phase I requirements to Phase II communities may add substantial unfunded costs to these communities. This is of particular concern to counties that do not have Phase I entities within them or for Phase II cities that are not contained in Phase I counties.
- Combined or integrated permit requirements may enhance the predictability of the local regulatory climate for businesses.
- Even under an integrated permit, jurisdictions will establish their own building/development codes. Therefore, developers will still be subject to different codes in different jurisdictions. Consistency may not improve.
- Model programs (such as the option to test watershed-level permitting in Puget Sound—Alternative 5) allow the state to explore advantages and limitations of a watershed-level permit without investing in a state or regional strategy.
- Development of a TMDL or basin plan, financed by the state, is a reasonable way to convert a basic permit to more focused requirements.

Environmental Benefit and Impact

- Coordinated/integrated permits are more likely to compel jurisdictions to coordinate efforts to address stormwater contamination from municipal sources. Watershed-level solutions are encouraged across water quality programs in Washington.
- Development of a Puget Sound-wide permit allows Ecology and permittees to tailor permit requirements to address specific Puget Sound considerations (e.g., threatened salmonid habitat needs).
- Developing permits at the watershed level allows participants to tailor the permit to meet the specific needs and concerns of the watershed.
- Because drainage systems are interconnected, it is likely that their management would benefit from some level of coordinated management/protection.
- TMDLs will ultimately require watershed-level coordination in Washington State. Options that promote watershed-level coordination help establish a stormwater management system or approach that is consistent with TMDL requirements.

B. Relation of Municipal Stormwater Permits to Other Stormwater Permits

Discussion

The WSG also discussed how and under what circumstances the MS4 permit(s) should be related to other stormwater permits, including the industrial, construction, and WSDOT statewide municipal stormwater

permits. Members acknowledged that each of these permits represents a unique situation and offered the following comments related to each one.

Construction Permits

EPA's Phase I storm water program requires operators of construction sites that disturb five or more acres to obtain an NPDES construction stormwater permit. MS4 operators regulated under a Phase II permit are required to develop, implement, and enforce a program to control stormwater runoff to the MS4 from construction sites greater than or equal to one acre.[30] Under the Phase II regulations, operators of construction sites that disturb one-to-five acres in size, including smaller sites that are part of a larger common plan of development or sale, are also to obtain a permit directly from authorized state agencies (e.g., Ecology) or EPA. The final Phase II Rule also allowed authorized agencies to include permit conditions (in the construction stormwater permit) that incorporate "qualifying State, Tribal, or local erosion and sediment control program requirements by reference."[31] Even under this option, construction site operators are still required to submit a NOI to be covered under the construction stormwater general permit.

WSG members noted that NPDES municipal stormwater permits (Phases I and II) will require each permittee to adopt the equivalent of the Stormwater Management Manual for Western Washington into its land development codes and will apply these regulations to at least the same set of construction sites that will be required to obtain a construction stormwater permit from Ecology. Some members suggested that sites located in a permitted jurisdiction with a "qualifying" local program might only be required to obtain one permit, thereby eliminating some redundancies.

Industrial Permits

Unlike construction sites, local governments do not typically regulate existing industrial sites. In general, MS4 permitted stormwater programs only address industrial facilities through illicit discharge identification activities. Furthermore, because there is no parallel permitting process at the local level for already-constructed properties, local governments have little authority to regulate industrial facilities otherwise subject to NPDES requirements. The WSG concluded there was no need to strengthen the connection between MS4 and industrial stormwater general permit.

WSDOT

Some WSG members acknowledged the special challenge (and opportunities) WSDOT faces in implementing a (yet-to-be-issued) statewide permit covering all MS4 systems serving state highways and related facilities. WSG members noted the value in coordinating the WSDOT permit with the MS4 permit, but also recognized that requiring WSDOT projects to comply with a second set of permit requirements may set up redundancies or, in some cases, alternative standards for WSDOT.

Should construction stormwater permittees have the option of complying with a "qualifying" local program instead of obtaining an NPDES stormwater permit?

Alternative 1	Maintain status quo; require construction site operators to seek separate local and state permits.
Alternative 2	Determine whether smaller disturbed sites (one-to-five acres) located in Phase I and Phase II jurisdictions can use the "qualifying local program" alternative to NPDES permit

[30] 40 CFR 122.34(b)(4)
[31] 40 CFR 122.44(s)

> coverage. Smaller disturbed construction sites may not need to obtain an Ecology permit if they are located in a jurisdiction with a "qualifying program."

Considerations

Administrative

- Currently, the state and local governments both have the responsibility to monitor construction sites, including smaller sites. This may set up some unnecessary programmatic redundancies, both in permitting and in inspection/compliance responsibilities. Identifying ways to streamline permitting practices and/or inspection activities benefits many parties, including the construction site operator.
- Ecology has not yet determined what constitutes a "qualifying program" in the context of this issue. For Alternative 2 to work, Ecology will need to provide such clarification.
- Allowing construction sites to exercise the "qualifying program" alternative may reduce administrative costs and potential regulatory overlaps/redundancies for the regulating entities and the regulated community.
- Municipalities may be able to utilize existing regulatory structures (e.g., building code enforcement) in a cost-effective manner to fulfill the requirement for a "construction site runoff control measure."
- This issue may be better addressed in the construction stormwater permit arena.

Legal

- State and local agencies do not share liability for failure to enforce requirements under the current two-permit system. It is unclear who would be held legally accountable for stormwater runoff problems found at construction sites covered under "qualifying" MS4 programs.
- The state, not local, government is responsible for issuing and enforcing NPDES permits. Municipal permittees should not be required to regulate, or to enforce Ecology regulation of, discharges already covered by stormwater permits for industrial or construction activities.
- It is unclear whether local jurisdictions would be required either to monitor construction site discharges directly or review operators' monitoring reports to validate contractor compliance with runoff requirements under Alternative 2.
- Phase II MS4s must establish construction site runoff controls as part of compliance with the minimum control measures.

Cost and Equity

- It is inefficient and oftentimes impractical for state agency staff to visit ongoing construction sites to assess operators' compliance with applicable runoff control requirements. In practice, therefore, local entities handle most, if not all, inspection responsibilities. At this time, however, the state does not compensate the local agency staff for undertaking these inspections.
- The state may be able to restrict construction site activities more heavily than local governments can (due to political or regulatory constraints).
- Municipalities are generally unwilling to take on the state's obligations (in this case, to monitor construction site operators' compliance with applicable permit requirements).
- Stormwater construction permit fees currently collected by Ecology may be lost if the state adopts Alternative 2. (This may not be the case if the permit becomes a state permit.)
- Under Alternative 2, development may gravitate to municipalities with qualifying programs (as businesses seek to minimize administrative efforts and fees associated with permit applications).

- Businesses currently operating under a Phase I stormwater general permit are concerned that they could be required to comply with a different set of requirements under a Phase II municipal stormwater program.

Environmental Benefit and Impact

- Local inspectors are more likely to be able to visit site and identify runoff problems during or soon after storm events. Identifying and correcting such problems is key to protecting water quality.

VII. Issues Specific to the State or Region

A. Protection of Beneficial Uses Case Study: Shellfish Areas

Background

Washington State dominates commercial bivalve shellfish production (oysters, clams, and mussels) in the western United States; in fact, commercial bivalve shellfish production represents a $73.5 million industry for the state. Commercial shellfish producers are significant employers in several of Washington's rural counties. Recreational shellfish harvesting is also an important facet of Washington state living. Many shellfish actively contribute to improved water quality by filtering impurities out of the water column.

Healthy shellfish production demands clean water and several shellfish species (e.g., the native Olympic oyster) are highly sensitive to water quality pollution (e.g., excessive nutrients). The decline of water quality and associated shellfish bed contamination/closures in Washington State has been linked to the effects of urbanization, including fecal coliform loadings from failed on-site sewage systems and pet waste; and fertilizer, pesticide, and other chemical constituents transported via stormwater runoff. While the specific contribution of urban stormwater runoff to shellfish bed degradation in Washington State is unknown, state Department of Health sanitary surveys for shellfish growing areas have identified stormwater runoff as a contributing factor to degraded water quality in those areas.

Shellfish harvesting is protected under the CWA in many Western Washington water bodies as a beneficial use. Other important beneficial uses include recreational swimming and boating; recreational and commercial fishing, including tribal fisheries on urban waterways like the Duwamish River; protection of state or federally listed threatened or endangered species; and in some cases, protection of drinking water.

Discussion

The WSG looked at shellfish bed health and contamination as a case study for examining the impacts of urban stormwater pollution on beneficial uses of water bodies in Western Washington. The WSG considered both how municipal stormwater can contribute to shellfish bed contamination (e.g., by transporting pet, feral, and wild animal wastes) and the ways in which municipal stormwater permits could help protect shellfish and other important natural resources from stormwater contamination (e.g., by implementing strong illicit discharge or pet-owner education programs). The WSG observed that several important Western Washington shellfish-growing communities are not included in Phase I or Phase II designations. The WSG also noted that MS4s are likely not the only important contributors of waterborne pollution to shellfish beds and that local health districts and the DOH also play a major role in regulating the other sources of fecal coliform contamination—on-site sewage systems.

Several members asserted that there is currently no demonstrated stormwater water quality treatment device to remove fecal coliform bacteria (e.g., released by failed on-site sewage systems or waterfowl). In contrast, Puget Sound Action Team research on the link between urbanization and water quality in shellfish growing areas has identified several projects on the east coast where stormwater technologies were used to reduce bacterial loadings to shellfish growing waters. Innovative low impact development technologies that use vegetation and soil to treat stormwater also offer potential techniques to remove bacteria from stormwater runoff.

How can beneficial uses of Washington state water bodies (for example, shellfish harvesting) be protected through a municipal stormwater permit?

Alternative 1	Only issue Phase II permits to municipalities for which they are required under federal rules; do not add extra conditions to either Phase I or Phase II permits as a means to protect specific water bodies or beneficial uses, unless otherwise required under a TMDL or similar process.
Alternative 2	Expand the set of Phase II permittees to include jurisdictions with water bodies in which the beneficial uses need special protection. Do not add extra conditions to either Phase I or Phase II permits as a means to protect specific water bodies or beneficial uses, unless otherwise required under a TMDL or similar process.
Alternative 3	Issue Phase II permits only to municipalities required under federal rules, but add extra conditions to Phase I and Phase II permits as a means to protect specific water bodies or beneficial uses, even if not required under a TMDL or similar process.
Alternative 4	Expand the set of Phase II permittees to include jurisdictions with water bodies in which the beneficial uses need special protection. Add extra conditions to Phase I and Phase II permits as a means to protect specific water bodies or beneficial uses, even if not required under a TMDL or similar process.

Considerations

Administrative

- The DOH's "threatened growing areas" list can help identify sensitive water bodies that may warrant protection/attention under a municipal stormwater permit.
- The DOH also has an important role in protecting shellfish beds from contamination (e.g., through their regulation of septic tanks). Ecology may be able to partner with DOH to educate citizens and take other steps to limit their impact on shellfish-growing areas.

Legal

- Propagation of fish and wildlife and recreation are two designated uses identified for protection under the CWA.
- Ecology does not regulate many major sources of shellfish bed contamination; the DOH and local health districts do.

Cost and Equity

- MS4s are the only conduits for fecal coliform bacteria found in failing on-site sewage systems or sewer lines to reach receiving waters. Adding fecal coliform limits to the NPDES municipal stormwater permit would be to hold MS4s accountable for a water quality concern governed by the actions of health districts/departments.

Environmental Benefit and Impact

- Shellfish growing beds are important natural resources in Washington State.

VIII. Issues Related to Funding

A. Potential Funding Sources for Implementation of Permit Requirements

Background

State law does not require local jurisdictions to fund their stormwater management programs in any particular manner, but does allow municipalities to fix rates and charge customers for services and/or benefits provided from any stormwater control facility. Options for starting and continuing to operate a municipal stormwater management program include grants, loans, bonds, as well as fees collected through a stormwater utility. These funding approaches are not mutually exclusive: a local government can pursue one, the other, or several sources of funding at any given time.

In contrast, Washington State law (RCW 90.48.465) requires Ecology to establish annual fees to fully recover expenses related to issuing and administering the waste discharge permit program. The fees shall be based on factors relating to the complexity of permit issuance and compliance and may be based on other factors as well (e.g., pollutant loading, toxicity). The Phase I permit fee is a flat fee—all seven permittees pay the same annual fee to Ecology. The FY2004 Phase I permit fee is set at $31,272. The initial fee schedule for Phase II will be established by rule and can be adjusted no more than once every two years.

Discussion

The WSG's discussion of this topic focused on two types of funding needs: 1) the permit holder's (to implement a local stormwater management program) and 2) Ecology's (to administer the NPDES program).

Municipal Program Funding Options

The WSG acknowledged, from the outset, that designing and implementing an NPDES municipal stormwater management program requires the efforts of many departments—from pollution prevention efforts at all municipal facilities, to administration of private construction, to storm sewer maintenance, to the efforts of attorneys writing municipal codes and enforcing them as necessary, to administrative work in all the affected departments. Consequently, while municipalities vary widely in their administrative structures, two considerations must be kept in mind. First, many revenue sources are available to fund NPDES programmatic work. Second, many different revenue sources may be needed to support a municipal stormwater program, due to the limited availability of funds and potential legal constraints placed on individual revenue sources. The WSG highlighted that the startup funding needs of smaller Phase II communities are especially acute.

Stormwater utilities can be divided into two basic models: in one model, the utility applies a uniform formula across the entire jurisdiction (and then expends the monies where they are needed), in the other model, utility rates can vary by basin and all monies collected from ratepayers go to provide services in the ratepayer's basin. The WSG acknowledged that how and where stormwater utility monies are spent is a local decision (determined in part by how and why the utility is established). As a result, some jurisdictions' stormwater utility fees can fund a variety of activities, including watershed planning that encompasses areas beyond the municipal boundaries. For others, the monies can only be spent in limited ways or areas. The WSG noted that Washington State law now allows for the establishment of a

comprehensive local stormwater utility.[32] Members also discussed opportunities for cost-sharing (e.g., to support basin planning) but cautioned that cost-sharing arrangements need to clearly lay out how monies will be spent.

WSG members observed that a range of local, state, and federal grant and loan programs are available to help municipalities establish or maintain stormwater management programs, but also recognized that these grants and loans are limited, competitive, and are not a reliable funding source to meet ongoing program needs. Other fees (e.g., solid waste tipping fees, Clean Water district fees, Lake Management District fees, Road Fund, and Real Estate Excise taxes) may also be available to fund local stormwater management program activities. Members expressed specific hope that CWA 319 funds would be made available to states to use for stormwater program support activities, especially since Ecology has opted to link state Centennial Clean Water Fund priorities to 319 grant priorities (primarily for administrative ease and because Centennial Clean Water Fund dollars can be used for the required state match on 319 grant awards).

Funding Ecology's Stormwater Program

Next, the WSG discussed funding options for the Ecology Stormwater program, including the merits of combining or keeping separate Ecology's Phase I and Phase II fee structures. Members generally expressed concerns that the municipal stormwater permit fee structure will need to be set before a final draft permit is written, but recognized that Ecology has no control over the rulemaking schedule. The WSG also debated three Phase II fee structure options put forth by Ecology: 1) establish the fee structure based on flow (the default option), 2) assess a flat fee across all Phase II jurisdictions, or 3) base a jurisdiction's fee on the number of housing units (possibly adjusted for economically disadvantaged communities). While discussion was primarily focused on the Phase II fee, members also considered whether Ecology would want to raise the Phase I permit fee cap.

Several municipal representatives commented that they would be willing to pay a higher permit fee in return for greater, high-quality Ecology program support (e.g., on permit review/issuance and compliance/technical assistance) and encouraged Ecology to estimate a reasonable and realistic program revenue target. Others expressed a willingness to pay a higher individual fee to Ecology to receive individualized permit review support. Finally, members acknowledged that Ecology also faces funding challenges to fully implement and enforce the Phase I and Phase II permits. These important activities are not necessarily covered in any given year by the permit fees Ecology collects.

Should the state provide funding to local governments for establishing/maintaining local programs to meet stormwater permit requirements?

Alternative 1	The state should not make specific direct financial support (e.g., grants) or incentives available to local jurisdictions. Public Works trust fund loans are available for interested jurisdictions.
Alternative 2	Allow state Centennial Clean Water Fund monies to be used for establishing and maintaining stormwater programs used to meet NPDES stormwater permit requirements.
Alternative 3	Create a new state funding source for grants designed to assist local governments establish and maintain stormwater management programs used to meet NPDES stormwater permit requirements.

[32] This option is not available to WSDOT, however.

Considerations

Administrative

- Local governments prefer grants to loans. Because Ecology must be named first lien status on any loan it makes to a local government, a municipality will have to pay a higher interest on any bonds it sells to pay off the loan.

Cost and Equity

- Smaller communities (especially) need grants and loans as seed money to establish stormwater management programs.

Environmental Benefit and Impact

- Well-funded programs (at the local level) are able to leverage greater resources to protect water quality.

How should Ecology structure its Phase II stormwater fee(s)? (Note: these are not mutually exclusive alternatives)

Alternative 1	Base Phase II stormwater permit fees on flow.
Alternative 2	Assess all Phase II jurisdictions a flat fee.
Alternative 3	The Phase II permit fee should vary based on criteria, such as economic hardship.
Alternative 4	The Phase II permit fee should vary based on the size of a jurisdiction (e.g., as indicated by the number of housing units).
Alternative 5	The Phase II fee structure should be set independent of the Phase I fee structure.

Considerations

Administrative

- Ecology will need significant resources to effectively administer (from issuing permits to assuring compliance) the Phase I and Phase II stormwater management program.
- The more tailored services Ecology is asked to provide, the higher permit fees it will need to collect to cover administrative costs.
- Establishing a flat fee will be easiest for Ecology to administer.

Legal

- By state law, the fee schedule can only be adjusted every two years.
- Ecology has the authority to adjust permit fees within the limits of state law.

Cost and Equity

- Enabling jurisdictions to pay for higher levels of service from Ecology may impact smaller local programs disproportionately.
- Permits based on a flat-fee structure require smaller municipalities to collect a higher fee per-residential/business equivalent. However, it is likely that residents in those communities would not realize higher levels of service.
- According to one national study, some Puget Sound communities already have among the highest stormwater utility rates in the country. Depending on the permit fee, some communities may need to raise their fees higher.

- Adjusting permit fees for economically disadvantaged communities acknowledges that those communities have more limited abilities to pay for the permit.
- Phase I and Phase II per residential equivalent fee caps should be set in proportion to the level of service provided by Ecology.

Environmental Benefit and Impact

- Ecology can only protect water quality through the municipal stormwater program if it has sufficient resources to implement its own mandate.

IX. Appendix A

Westside Stormwater Group Membership

Members List

Denise Andrews, Seattle Public Utilities
Jennifer Aylor, City of Mount Vernon
Alison Bennett, City of Bellevue
Paul Bucich, City of Federal Way
*Robert Chandler, Seattle Public Utilities
*Margo Easton, Ferguson Construction, Inc., representing Associated General Contractors of Washington
Nathan Graves, Kennedy/Jenks Consultants, representing Association of Washington Business
Annette Griffy, City of Vancouver
Sue Joerger, Puget Soundkeeper Alliance
Bill Leif, Snohomish County
Hertha Lund, Washington State Farm Bureau
Dan Mathias, City of Everett
Jeff Monsen, Whatcom County
Bill Moore, Department of Ecology
Willy O'Neil, Associated General Contractors of Washington
Susan Ridgley, Port of Seattle
Larry Schaffner, Washington State Department of Transportation
Larry Stout, Washington, Association of Realtors
Bill Taylor, Taylor Shellfish
Dave Tucker, Kitsap County
Bruce Wishart, People for Puget Sound
Bruce T. Wulkan, Puget Sound Action Team

** Only able to participate for part of the process; replaced by other representatives in subsequent meetings.*

Alternates List

Anita Ashton, City of Vancouver
Wade Bennett, Washington State Farm Bureau
Chris Brueske, Whatcom County
Luanne Coachman, King County
Dave Dickson, Kitsap County
Mary Mitchener, Washington Public Ports Association
Grant Nelson, Association of Washington Business
Scott Redman, Puget Sound Action Team
Dan Smith, City of Federal Way
Anne Spangler, City of Tacoma
Mike Stephens, Washington State Department of Transportation
Jessica Trenholme, Puget Soundkeeper Alliance
Phyllis Varner, City of Bellevue
Jane Zimmerman, City of Everett

X. Appendix B

Westside Stormwater Group—Issues for Discussion

Note: This list of issues includes the original set of issues described in HB 1689, as well as other issues explored by the Westside Stormwater Group.

PERMIT SCOPE: Who and what is Covered by the Permit—What Kinds of Discharges and Where they are Located?

- Types of discharges being regulated under these permits
- Areas being regulated by these permits under Phases I and II of the federal NPDES permit program as they relate to municipal borders
- Application of these permits to ground water discharges [moved—8/20/03]
- Integration of permits and permit requirements for Phases I and II of the federal NPDES permit program [moved—8/20/03]

IMPLEMENTATION: Municipality Implementation Considerations—Actions, Requirements, Level of Effort

- Level of effort required of municipalities to satisfy permit requirements regarding:
  (i.) public education and outreach
  (ii.) public participation and public involvement
  (iii.) illicit discharge detection and elimination
  (iv.) construction site runoff control
  (v.) post-construction runoff control
  (vi.) pollution prevention and good housekeeping
  (viii.) program evaluation and reporting

- What "Maximum Extent Practicable" means [new—8/20/03]
- Additional measures needed/recommended (e.g., to address existing problems) [new—8/20/03]
- Phase II compliance schedule expectations (i.e., over what period of time will municipalities be expected to come into compliance with permit requirements) [new—8/20/03]
- Mechanisms for tailoring permits/programs to address site-specific considerations [new—8/20/03]
- Costs and benefits associated with each permit element not required under federal law [moved—8/20/03]
- Potential funding sources for implementation of permit requirements

COORDINATION/INTEGRATION: Other mechanisms, tools, plans that can be leveraged/integrated with the NPDES permit

- The use of land use planning and existing land use plans and rules as a best management practice for storm water management
- Implementation of applicable Total Maximum Daily Loads

- Issuance of these permits on a watershed basis [moved—8/20/03]
- Integration of permits and permit requirements for Phases I and II of the federal NPDES permit program, continued [moved—8/20/03]
- Integration/coordination with non-MS4 discharges/permits (e.g., construction general permits) [new—8/20/03]

STATE-SPECIFIC or REGIONAL: Special Western Washington Considerations/ Opportunities

- Protection for shellfish areas
- Integration with Endangered Species Act/Shared Strategy, Puget Sound Water Quality Management Plan, and other legislation/programs [new—9/08/03]

XI. Appendix C

Who is regulated under NPDES Phase II For Municipal Stormwater?

Who's In?

Under federal rules, operators of small Municipal Separate Storm Sewer Systems (MS4s) are required to obtain coverage under a NPDES permit for stormwater discharges if they:

- Are located within a census-defined urban area; or
- Discharge to surface waters

The rules outline that a small MS4 may be designated for coverage in a couple of ways:

1. **Automatic Designation**—all MS4s located in a census-defined urban area
2. **Required Evaluation**—Ecology must evaluate certain MS4s located outside of the census-defined urban areas if their discharges may degrade water quality.

What is this list?

Tentative Phase II Jurisdictions

Ecology assembled a list of jurisdictions tentatively covered under the Phase II program. The list of "tentative" jurisdictions includes those jurisdictions that are located within a census-defined urban area.

Tentative "Waiver Cities"

Cities within urban areas serving less than 1,000 people are identified on this sheet as tentative "waiver cities".

Ecology can issue waivers to operators of a MS4 located in an urban area whose system serves a population of less than 1000 if:

- They are not contributing significantly to the pollutant loadings of an interconnected regulated MS4, and
- A Total Maximum Daily Load (TMDL) has not been completed for pollutant(s) in its stormwater discharges.

Cities Requiring Evaluation (The Bubble Cities)

The federal rules require that Ecology develop a process and a set of designation criteria to determine which MS4s (located outside of census-defined Urban Areas) must be covered by a NPDES Phase II permit. At a minimum, Ecology must apply these criteria to any city with a population greater than 10,000. These cities have been identified as the "cities requiring evaluation" on the following page.

Who's out?

- Small MS4s that do not discharge to surface waters.
- Small MS4s located outside of a census-defined urban area unless designated as regulated MS4s by the NPDES permitting authority (Ecology). Note: Any person can petition Ecology to evaluate any city. Ecology must respond within 180 days to petition requests.
- Small MS4s located within an urban area that are waived by Ecology.

Tentative Phase II jurisdictions

Cities and Towns

Algona
Arlington
Asotin
Auburn
Bainbridge Island
Battle Ground
Bellevue
Bellingham
Black Diamond
Bonney Lake
Bothell
Bremerton
Brier
Buckley
Burien
Burlington
Camas
Clarkston
Clyde Hill
Covington
Des Moines
DuPont
Duvall
E. Wenatchee
Edgewood
Edmonds
Enumclaw
Everett
Federal Way
Fife
Fircrest
Gig Harbor
Granite Falls
Issaquah
Kelso
Kenmore
Kennewick
Kent
Kirkland
Lacey
Lake Forest Park
Lake Stevens
Lakewood
Liberty Lake
Longview
Lynnwood
Maple Valley
Marysville
Medina
Mercer Island
Mill Creek
Millwood
Milton
Monroe
Mount Vernon
Mountlake Terrace
Mukilteo
Newcastle
Normandy Park
Olympia
Orting
Pacific
Pasco
Port Orchard
Poulsbo
Puyallup
Redmond
Renton
Richland
Sammamish
SeaTac
Sedro-Woolley
Selah
Shoreline
Snohomish
Spokane
Spokane Valley
Steilacoom
Sumner
Tukwila
Tumwater
Union Gap
University Place
Vancouver
Washougal
Wenatchee
West Richland
Woodinville
Yakima
Yarrow Point

Counties

Asotin County
Benton County
Chelan County
Cowlitz County
Douglas County
Franklin County
Kitsap County
Skagit County
Spokane County
Thurston County
Walla Walla County
Whatcom County
Yakima County

Tentative "Waiver Cities"

Cities located in an urbanized area, tentatively exempt from Phase II jurisdiction because of populations of 1,000 and less, located within census defined urban areas.

Beaux Arts Village
Ferndale
Hunts Point
Moxee
Rock Island
Ruston
South Prairie
Wilkeson
Woodway

Cities Requiring Evaluation

Cities outside the census urbanized areas, but need Phase II jurisdiction review because of populations.

Aberdeen
Anacortes
Centralia
Ellensburg
Moses Lake
Oak Harbor
Port Angeles
Pullman
Sunnyside
Walla Walla