July 5, 1995

FINAL

FACT SHEET

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

FACT SHEET FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) AND STATE WASTE DISCHARGE GENERAL PERMITS FOR STORMWATER DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWERS LOCATED IN:

1. **THE CEDAR-GREEN WATER QUALITY MANAGEMENT AREA AND THE PORTION OF THE KITSAP WATER QUALITY MANAGEMENT AREA LOCATED IN KING COUNTY**

2. **THE SOUTH PUGET SOUND WATER QUALITY MANAGEMENT AREA AND THE PORTION OF THE KITSAP WATER QUALITY MANAGEMENT AREA LOCATED IN PIERCE COUNTY**

3. **THE SNOHOMISH WATER QUALITY MANAGEMENT AREA AND THE PORTION OF THE SKAGIT WATER QUALITY MANAGEMENT AREA LOCATED IN SNOHOMISH COUNTY**

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I. PUBLIC INVOLVEMENT OPPORTUNITIES

The Department of Ecology (Ecology) held the following public workshop and public hearing for the proposed permits:

Public Workshop		Public Hearing	
Date:	April 20, 1995	Date:	April 27, 1995
Time:	7 p.m.	Time:	7 p.m.
Location:	Ecology Northwest Regional Office 3190 160th Ave. S.E. Bellevue, WA	Location:	Ecology Northwest Regional Office 3190 160th Ave. S.E. Bellevue, WA

At the workshop, Ecology explained the need for and requirements of the proposed permits. The workshop participants had the opportunity to ask questions of and converse with Ecology staff members concerning the proposed permits. This was an informal process.

At the public hearing, Ecology staff summarily explained the need for and requirements of the permits. Then an opportunity for formal public comment commenced. Comments were recorded and transcribed into an official public record. Written comments were accepted through May 5, 1995. All oral comments made during the hearing, and written comments provided by the May 5, 1995 deadline, were considered by Ecology. A written summary of all comments and Ecology's responses was prepared and distributed to those who commented and others indicating interest. Copies of the summary, the public hearing record and comment letters are available by writing to:

Department of Ecology
P.O. Box 47696
Olympia, WA 98504-7696

After issuance of the permits, and after submission of proposed stormwater management programs by each permittee, Ecology will conduct workshops, a public hearing, and provide an opportunity for public comment prior to making a decision on approval or disapproval of each permittee's stormwater management program. The hearings on the proposed programs are not scheduled to occur until early 1996 for the King Co. and Seattle programs, and in mid-1996 for the Snohomish Co., Pierce Co., Tacoma, and Washington State Department of Transportation programs. An opportunity for public comment will also be provided prior to making a decision on any significant modifications to an approved stormwater management program.

II. PURPOSE OF THE PERMIT

These permits authorize the discharge of stormwater from municipal separate storm sewers owned or operated by the permittees, to surface and ground waters of the State of Washington. As required by §402(p)(3) of the Clean Water Act, discharges covered under these permits must effectively prohibit non-stormwater discharges into storm sewers, and must apply controls to reduce the discharge of pollutants to Waters of the U.S. to the maximum extent practicable. As authorized by RCW 90.48.030 and .162, Ecology is also taking action through issuance of these permits to control impacts of stormwater discharges to waters of the state, which include ground waters.

Discharges from agricultural runoff, irrigation return flows, process and non-process wastewaters from industrial activities, and stormwater runoff from areas served by combined sewer systems are not regulated directly by these permits. These types of discharges may be regulated by local or other state requirements if they discharge to municipal separate storm sewers. These municipal stormwater permits authorize the municipal separate storm sewer to discharge stormwater which comes from industrial facilities. However, many industrial activities need an industrial stormwater NPDES permit issued by Ecology to discharge stormwater into municipal storm sewers.

III. BACKGROUND

The Stormwater Problem

Stormwater runoff is acknowledged as a source of pollution that can damage important water resources, including streams, lakes, estuaries and wetlands, and ground water. Many recent studies have shown that runoff from urban areas typically contains significant quantities of the same general types of pollutants that are found in wastewater and industrial discharges and often causes similar water quality problems, such as fish and benthos disease and mortality, swimming beach and shellfish bed closures, and contamination of wells. These pollutants include heavy metals (e.g., chromium, cadmium, copper, lead, mercury, nickel, zinc), pesticides, herbicides, nutrients, bacteria, and synthetic organic compounds such as fuels, waste oils, solvents, lubricants, and grease. Appendix A presents data reported in the nationwide study of urban stormwater conducted by U.S. EPA in the early 1980s. These data are still generally representative of the quality of stormwater discharged by the permittees.

In addition, the large impervious surfaces in urban areas increase the quantity and peak flows of runoff, which in turn cause hydrologic impacts such as scoured streambed channels, in-stream sedimentation and loss of habitat. Furthermore, because of the enormous volume of runoff discharges, mass loads of pollutants in stormwater can be significant.

There are a multitude of pollution sources that contaminate stormwater, including land use activities, operation and maintenance activities, illicit discharges and spills, atmospheric deposition, and vehicular traffic conditions. Many of these sources are not under the direct control of the permittees that own or operate the storm sewers. Impacts from stormwater are highly site-specific and vary geographically due to differences in local land use conditions, hydrologic conditions, and the type of receiving water.

Controlling Stormwater Discharges

Stormwater quality is very difficult to manage because discharges are not continuous, highly predictable events. Rather, discharges are intermittent and weather-dependent in nature (i.e., rainfall and snowmelt). There are a wide range of pollutants in stormwater, and concentrations vary depending on storm events. Further difficulty in controlling municipal stormwater discharges comes from the large number of outfalls where stormwater is being discharged (hundreds or even thousands of outfalls within a city are typical). These features of stormwater runoff make application of conventional end-of-pipe treatment options to traditional wastewater discharges difficult, and often such options are not cost-effective to apply to stormwater.

Two basic control options exist for stormwater. One is to prevent pollutants from coming into contact with stormwater in the first place by using source control best management practices (BMPs). The second option is treatment BMPs. Source control BMPs include activities as diverse as changing vehicle and equipment maintenance activities to prevent the leaking of oil or other fluids; landscape design, installation, and maintenance to minimize stormwater runoff; product replacement or substitution (e.g., replace roofs that are sources of copper contamination with roofs that have no copper in them); land use zoning to reduce the intensity of urbanization in sensitive watersheds; covering up materials that are stored outside and exposed to rainfall and runoff; and prohibiting or restricting the use of certain chemicals that are causing a pollution problem (e.g., pesticides, or phosphorus in watersheds that drain to lakes). Where source control BMPs are feasible, they can be very effective in preventing stormwater contamination.

Treatment BMPs include detention or retention ponds, filtration, and infiltration devices that are designed to capture runoff and treat it using physical, biological, and/or chemical processes. The effectiveness and feasibility of treatment BMPs is variable, subject to some debate, and much remains to be learned. Treatment BMPs can be very costly to design, build, maintain, and operate.

In summary, the complexity inherent in stormwater discharges, and the difficulty of controlling such discharges means that it will take many years to fully implement a program which adequately mitigates or prevents their adverse environmental impacts.

Clean Water Act Amendments of 1987 and Subsequent Rulemaking by U.S. EPA

Amendments to the Clean Water Act in 1987 established new statutory requirements to control industrial and municipal stormwater discharges to waters of the United States. Waters of the United States include most surface water bodies and ground waters that are hydrologically connected to surface waters (See discussion in this Fact Sheet under Special Condition S2 - Authorized Discharges). Municipalities with separate storm sewers serving populations of 100,000 or greater are required to have a National Pollutant Discharge Elimination System (NPDES) permit to discharge stormwater. Municipalities with populations of 250,000 or more are defined as "large" while those with populations between 100,000 and 250,000 are defined as "medium" municipalities. The U.S. EPA proceeded to implement 402(p) of the Clean Water Act through a rulemaking process which culminated in finalization of the stormwater rule in November 1990. The rule went into effect on December 17, 1990.

U.S. EPA implementing regulations define the term "municipality" to mean incorporated cities and unincorporated counties that have sufficient population in a Census Bureau designated urbanized area to meet the population thresholds. In addition, other public entities (excluding incorporated cities) regardless of their size, that own and operate storm sewer systems located within the municipalities that meet the population thresholds are also required to be covered under the permit program. Examples of other publicly-owned storm sewer systems include state highway systems, drainage districts, and flood control districts located within named municipalities. Permit application requirements are identical for medium and large municipalities with the exception that the permitting process started six months earlier for large municipalities.

Recognizing the complexity of controlling stormwater, Congress and the U.S. EPA have established a regulatory framework for municipal stormwater discharges that is very different from traditional NPDES permit programs. Some of the key provisions of the stormwater rule that reflect these differences are:

- Permits are to require the implementation of stormwater management programs rather than establishing numeric effluent standards for stormwater discharges (40 CFR 122.26(d)(2)(iv)).
- Permits are to cover a large geographic area rather than individual "facilities." Within a permit coverage area there will be hundreds or even thousands of individual outfalls discharging stormwater (40 CFR 122.26(a)(3)).
- Flexibility that allows permittees to first focus their resources on the highest priority problems (40 CFR 122.26(d)(2)(iv)).
- A watershed approach is allowed, even encouraged, to comprehensively manage stormwater (40 CFR 122.26(a)(3) & (d)(2)(iv)).

- Pollution prevention is emphasized with some provisions requiring eliminating or controlling pollutants at their source and by requiring permittees to assess potential future impacts due to population growth and other factors (40 CFR 122.26(d)(2)(iv)(B) & (d)(1)(iii)).

Chapter 90.48 RCW - The Water Pollution Control Act

Along with requirements in federal law, there are state law requirements for the control of pollution. RCW 90.48.080 states that it is unlawful for any person to discharge anything which causes pollution of waters of the state. RCW 90.48.020 defines "waters of the state" to "include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington."
Ecology is granted authority to control pollution and protect all waters of the state in RCW 90.48.030.

In addition, RCW 90.48.162 requires that municipalities are to obtain permits from Ecology for discharges of pollutants or waste materials to waters of the state. The Waste Discharge General Permit Program regulation, Chapter 173-226 WAC, establishes a permit program applicable to the discharge of pollutants, wastes, and other materials to waters of the state. Prior to issuance of these permits the state has not regulated municipal stormwater as a point source discharge under the state waste discharge permit program. The federal government decision to control municipal stormwater through NPDES permits created incentive and a need for application of Ecology's authority under RCW 90.48.162 to municipal stormwater.

RCW 90.48.035 grants Ecology authority to adopt standards for the quality of waters of the state. Ecology has adopted the following standards: Ch. 173-200 WAC Ground Water Quality Standards; Ch. 173-201A WAC Water Quality Standards for Surface Waters; and Ch. 173-204 WAC Sediment Management Standards. These standards generally require that permits that are issued by Ecology are to ensure that standards are not violated or a compliance schedule is put in place to bring discharges into compliance.

Description of the Municipal Stormwater Permit Application Requirements and Procedures

The following is a summary of the permit application requirements and procedures from the federal rule, 40 CFR 122.26.

The issuance of a municipal stormwater NPDES permit is a multi-step procedure that occurs over a lengthy time period (typically three years) and is composed of a two-part application (Part 1 and Part 2) that forms the basis for the permit conditions. The following is a summary of the procedure:

1. Ecology or EPA notifies an applicant to submit a Part 1 application. At least one year is allowed for preparation of the Part 1 application.

2. Applicant submits a Part 1 application to Ecology. Part 1 applications for large municipalities were due November 18, 1991, medium municipalities on May 18, 1992.

3. Applicant submits a Part 2 application one year after submitting the Part 1 application. Part 2 applications for large municipalities were due November 16, 1992, medium municipalities on May 17, 1993.

4. Ecology reviews the Part 2 application and issues a draft permit within one year of receiving a complete Part 2 application.

5. Upon completion of a formal public review process the permit is issued.

The permittees named in Special Condition S3.A. of this permit submitted timely applications in accordance with the federal deadlines listed above. Ecology did not consider the applications complete.

The Part 1 application requires an assessment of the applicant's current stormwater management program and legal authority. It requires the applicant to submit the results of a field screening program intended to detect illicit (non-stormwater) discharges to municipal separate storm sewers. Mapping of outfalls from the municipal separate storm sewer system and sources of contamination to the system is required. In addition, a sampling program must be proposed that will be used to characterize the quality of stormwater discharges for a limited number of outfalls. Ecology has 90 days to approve or deny the proposed discharge characterization program.

In the Part 2 application, the applicant is required to submit a proposed stormwater management program, demonstrate adequate legal authority to support the management program and other regulatory requirements, conduct an assessment of controls, provide a fiscal analysis for the term of the permit (typically five years), and submit the characterization data resulting from the sampling proposed in Part 1. The stormwater management program required under these permits is based upon the program description required in the Part 2 application. A description of the differences between the application requirements and the program required under this permit is found in the discussion of Special Condition S7, below.

IV. NPDES AND STATE WASTE DISCHARGE PERMITS

Under agreement with U.S. EPA - Region X, Ecology has the authority to authorize discharges to waters of the U.S. by issuing NPDES permits for those discharges. Ecology also has authority under state law to issue State Waste Discharge permits for discharges to state surface waters and ground waters. These municipal stormwater permits are issued under both authorities.

This allows Ecology to not only regulate discharges to surface waters under the permits, but also to regulate discharges to the ground. Discharges to ground are covered under the permit because portions of the areas regulated under these permits may include discharges of stormwater to the ground from municipal separate storm sewers. It is appropriate that the stormwater management programs that are required under these permits should apply area-wide, regardless of where water is discharged, and that measures are taken to reduce the discharge of pollutants to ground as well as surface waters.

Along with discharges to surface water, the implementation of controls for discharges to ground will be subject to a set of identified priorities for the stormwater management program of each permittee. Where existing stormwater discharges to ground are not identified as a priority concern, it is likely that retrofitting of controls will be minimal in the initial stormwater management programs. However, stormwater discharges to the ground from new development should be in accordance with Ecology's *Stormwater Management Manual for the Puget Sound Basin,* also referred to as the Technical Manual. In addition, actions to minimize the potential for ground water quality impacts resulting from stormwater discharges should be part of a long-term stormwater management program.

V. ECOLOGY'S WATERSHED-BASED PERMITTING STRATEGY

Ecology has chosen to issue three watershed-based municipal stormwater NPDES general permits. A general permit is being used as the mechanism to cover a category of dischargers (and, therefore, multiple permittees) under a single permit for a discrete geographic area as allowed under WAC 173-226-050. The permit coverage area generally follows the boundaries of a single water quality management area, however, exceptions have been made to allow efficient coverage of the entire municipal separate storm sewer system. (See maps in appendices B and C)

These permits are being issued to cover entire watersheds, but they do not cover discharges from all the municipalities in the named watersheds. This initial municipal stormwater permitting action applies to municipalities named under the U.S. EPA stormwater regulations. As the need for coverage of more municipal stormwater discharges is identified through future U.S. EPA regulations or the Clean Water Act reauthorization, additional permittees will be added either during this five-year permit cycle or when the permits are reissued. However, federal laws give Ecology the option, should we choose to use it, of requiring more municipalities to apply for coverage because of the interrelationship between the municipal separate storm sewers, or where it is found that the discharge contributes to a violation of a water quality standard, or is a significant contributor of pollutants to waters of the U.S. In addition, an outside party may petition Ecology to designate a municipality located within a watershed that includes a named permittee. (ref. 40 CFR 122.26(b)(4) and (7)). Ecology does not intend to use these additional options in the foreseeable future.

There are two major reasons for issuing permits on a watershed basis. The first is that Ecology believes a watershed approach to stormwater management will, in the future, result in better water quality for waters of the state. The second is to integrate stormwater management into Ecology's watershed approach to water quality permitting, and more efficiently use state resources allocated to this program.

To control stormwater impacts on water bodies it will be necessary to eventually address activities in an entire watershed. Restricting permits to jurisdictional boundaries would not allow this to occur. Coordinating management activities throughout the watershed, and addressing the cumulative impact of municipal stormwater discharges from several jurisdictions to a large, downstream waterbody is a necessary part of reducing the discharge of pollutants.

Ecology recognizes that a truly regional program is not possible without including all jurisdictions in these watersheds under the permit. Therefore, these permits represent only the initial stage of watershed-wide coordination and are limited to activities that a subset of jurisdictions in the watershed can do. As more permittees are added in the future, coordination will become a more important part of the permits.

In addition to issuing watershed-based municipal stormwater permits, the Water Quality Program at the Department of Ecology has adopted a watershed approach to all water quality permit activities. Twenty three water quality management areas have been delineated to cover the entire state. A water quality management area is a large watershed or grouping of watersheds identified as a management unit. Each water quality management area is put onto a five-year cycle that starts with gathering available information, monitoring, modeling and analysis, and culminates with issuing permits for all dischargers in the watershed. After permit issuance, the cycle begins again.

With this approach, permits will reflect a broader understanding of water quality problems in the entire watershed. As knowledge about the watershed increases, over several permit cycles, changes in permit requirements can be made to ensure water quality goals are met. In addition, synchronizing the steps in the five-year cycle for a relatively large area will make more efficient use of state resources. Integrating municipal stormwater permitting into this "watershed approach" will improve the information base for the watershed by using the information collected under the stormwater permits, and allow Ecology to make decisions about water quality needs that take into account process wastewater and other discharges, as well as stormwater. Ecology will, in the future, integrate the municipal stormwater permits into the five-year cycle of the overall watershed approach.

VI. ECOLOGY'S APPROACH TO ISSUING MUNICIPAL STORMWATER NPDES PERMITS

The federal stormwater rules envisioned a process where municipal stormwater management programs are reviewed and approved by the permitting agency before permits are issued. Ecology has chosen to issue permits before approving stormwater management programs and provide a public involvement process during approval of the stormwater management programs. Ecology has chosen this approach to issue permits in as timely a manner as possible.

Section 402(p)(4)(B) of the federal Clean Water Act required the issuance or denial of NPDES permits for large municipalities by February 1991, and for medium-sized municipal separate storm sewer systems not later than February 1993. We have missed those deadlines. Federal rules extended the deadlines, stating that permits were to be issued within one year of receipt of a complete Part 2 application. The Part 2 deadline for large municipalities was November 16, 1992; for medium municipalities, it was May 17,1993. Due to limited resources and the fact that program requirements are in the developmental stage for this new initiative, review and approval of programs prior to issuance of the permits would further delay compliance with these deadlines.

The conditions of the permits establish a definition of a stormwater management program, and set deadlines and compliance schedules for stormwater management program approvals during the term of the permits. Ecology has taken this approach to comply with the statutory requirements in the Clean Water Act to issue permits.

The deadlines for Ecology's approval of the permittees' stormwater management programs are set for approximately one year after permit issuance for large municipalities, and 17 months after permit issuance for medium municipalities. These deadlines were intended to prevent the program approval process from extending too long during the term of the permits. Ecology's intention is to address program review and approval as quickly as possible. The program approval process will include an opportunity for public comment on each of the permittees' proposed stormwater management programs. Prior to making a final decision on a proposed stormwater management program, Ecology will hold workshops, a public hearing, and advertise a public comment period. Ecology's decision to approve or disapprove a stormwater management program is appealable under the provisions of RCW 43.21B.110.

As required under 40 CFR 122.26, other publicly-owned storm sewers located in the municipalities named as permittees must also obtain an NPDES permit to discharge stormwater. In addition to state highways, this requirement applies to special districts such as drainage districts and flood control districts that own or operate conveyances discharging into waters of the state. Ecology recognizes that there may be special districts which need a permit but did not submit application materials, or participate with another permittee as a co-applicant (see permit definitions). It will be necessary for these entities to obtain a permit. Ecology intends to work with these entities to identify those that require a permit, to assist with the application process, and to integrate them into a permit as necessary.

VII. DISCUSSION OF PERMIT CONDITIONS

Summary

These municipal stormwater NPDES permits require the development and implementation of stormwater management programs for municipal separate storm sewers owned or operated by the permittees. The stormwater management programs must be approved by Ecology. The permittees are to identify participation in watershed-wide coordination activities to the extent appropriate at this early stage of watershed permit implementation. Implementation of approved stormwater management programs constitutes reduction of pollutants to the maximum extent practicable (MEP) during the life of the permit, as required in section 402(p)(3)(B) of the federal Clean Water Act.

The conditions defining the stormwater management program requirements are based on U.S. EPA regulations for the municipal stormwater permit program (CFR title 40, §122.26), on the stormwater elements of the Puget Sound Water Quality Management Plan, and on the State Water Pollution Control Act, Chapter 90.48 RCW. The stormwater management program must include: program priorities that reflect an appropriate balance between prevention and correction; program components to control pollutants in accordance with approved priorities; adequate legal authority and fiscal resources; a monitoring program; and an implementation schedule.

S1 - Permit Coverage Area - **for Cedar/Green permit**

Ecology has chosen to issue the permit to cover a water quality management area as defined under Ecology's watershed approach to water quality management (see discussion of Ecology's watershed based permitting strategy above). Within this water quality management area, during this first round of municipal stormwater permits, the permit applies to municipalities named under the U.S. EPA stormwater regulations. Therefore, the permit initially applies to those areas served by or contributing to municipal separate storm sewers owned or operated by the permittees listed in Special Condition S3.

Application of permit requirements to discharges from municipal separate storm sewers owned by the Washington State Department of Transportation (WSDOT) is limited to those storm sewers located within the regulated area of the other named permittees. This is a result of the federal stormwater regulations requiring coverage of other publicly owned storm sewers where they are located in municipalities over 100,000 population.

A permit is required for discharges from all the municipal separate storm sewers owned or operated by the Cities and Counties named as permittees. For efficient coverage of all of King County, Vashon Island is included under this permit even though it is not in this water quality management area. This area is part of the Kitsap water quality management area, and the majority of the Kitsap peninsula is not required to have coverage under the municipal stormwater NPDES permit program. Other portions of unincorporated King County and Snohomish County that are not covered under this permit will be covered by another watershed-based municipal stormwater permit.

S1 - Permit Coverage Area - **for Island/Snohomish permit**

Ecology has chosen to issue the permit to cover a water quality management area as defined under Ecology's watershed approach to water quality management (see discussion of Ecology's watershed based permitting strategy above). Within this watershed, during this first round of municipal stormwater permits, the permit applies to municipalities named under the U.S. EPA stormwater regulations. Therefore, the permit initially applies to those areas served by or contributing to municipal separate storm sewers owned or operated by the permittees listed in Special Condition S3.

Application of permit requirements to discharges from municipal separate storm sewers owned by WSDOT is limited to those storm sewers located within the regulated area of the other named permittees. This is a result of the federal stormwater regulations requiring coverage of other publicly owned storm sewers where they are located in municipalities over 100,000 population.

A permit is required for discharges from all the municipal separate storm sewers owned or operated by the Cities and Counties named as permittees. For efficient coverage of unincorporated Snohomish County, the portions of the County draining to the Stillaguamish and Skagit rivers are included under this permit even though they are not in this water quality management area. These areas are part of the Skagit/Stillaguamish water quality management area, and the majority of the Skagit/Stillaguamish watershed is not required to have coverage under the municipal stormwater NPDES permit program. Other portions of unincorporated King County and Snohomish County that are not covered under this permit will be covered by another watershed-based municipal stormwater permit.

S1 - Permit Coverage Area - **for South Puget Sound permit**

Ecology has chosen to issue the permit to cover a water quality management area as defined under Ecology's watershed approach to water quality management (see discussion of Ecology's watershed based permitting strategy above). Within this watershed, during this first round of municipal stormwater permits, the permit applies to municipalities named under the U.S. EPA stormwater regulations. Therefore, the permit initially applies to those areas served by or contributing to municipal separate storm sewers owned or operated by the permittees listed in Special Condition S3.

Application of permit requirements to discharges from municipal separate storm sewers owned by WSDOT is limited to those storm sewers located within the regulated area of the other named permittees. This is a result of the federal stormwater regulations requiring coverage of other publicly owned storm sewers where they are located in municipalities over 100,000 population.

A permit is required for discharges from all the municipal separate storm sewers owned or operated by the Cities and Counties named as permittees. For efficient coverage of all of Pierce County, the portion of the County on the Kitsap peninsula is included under this permit even though it is not in this water quality management area. These areas are part of the Kitsap water quality management area, and the majority of the Kitsap peninsula is not required to have coverage under the municipal stormwater NPDES permit program. Other portions of unincorporated King County and Pierce County that are not covered under this permit will be covered by another watershed-based municipal stormwater permit.

S2 - Authorized Discharges

This section clarifies that these permits authorize the discharge of stormwater from municipal separate storm sewers, owned or operated by the permittees, to waters of the state. The permits authorize new and existing stormwater discharges from existing conveyances. They also authorize stormwater discharges from new stormwater conveyances constructed after the issuance date of the permits provided those conveyances have received all applicable state and local permits, including compliance with the State Environmental Policy Act (SEPA). The control measures required under the permits are area-wide and will apply to any future discharges from the municipal storm sewer systems.

Since municipal separate storm sewers carry stormwater and other flows, these permits authorize the discharge of stormwater commingled with other flows. Industrial process wastewater and non-process wastewater are non-stormwater discharges and cannot be authorized under these permits because of the requirement in section 402(p)(3)(B)(ii) of the federal Clean Water Act that municipal permits are to prohibit non-stormwater discharges to the municipal separate storm sewer system. However, such discharges to municipal separate storm sewers can be authorized if they receive an NPDES permit (other than these stormwater permits) from Ecology. All other non-stormwater discharges are to be addressed through the program to detect and remove illicit discharges and improper disposal as required under special condition S7.b.8.g.

The discharge of stormwater associated with industrial activities through municipal separate storm sewers is authorized by this permit, but is required to have a separate NPDES permit under U.S. EPA regulations. For further explanation of the reasons for the separate permit requirement, see the preamble to the amendments to 40 CFR parts 122, 123, and 124 published in the Federal Register, Friday, November 16, 1990.

In paragraph S2.C., Ecology states that it is not authorizing illicit discharges nor relieving entities responsible for those discharges from responsibilities and liabilities under state and federal laws. These laws include CERCLA (Superfund), and OPA (Oil Pollution Act).

In paragraph S2.D., applicable only to the South Puget Sound Water Quality Management Area permit, Ecology states that it is not authorizing stormwater discharges to waters on trust or restricted lands within the Puyallup Tribe of Indians Reservation. The tribe or U.S. EPA has responsibility to authorize such discharges. This is in accordance with a December 1988 Settlement Agreement among the Tribe, U.S. EPA, Ecology and others.

S3 - Permittees

Named permittees - Cedar/Green general permit:

The permittees listed in Special Condition S3.A. are the municipalities and public entities that are required to obtain a permit in accordance with 40 CFR 122.26(b)(4) and (b)(7). The named permittees for the Cedar/Green general permit are Seattle, King County, Snohomish County, and WSDOT. King County Department of Metropolitan Services (METRO) is a co-permittee with the City of Seattle.

Named permittees - Snohomish general permit:

The permittees listed in Special Condition S3.A. are the municipalities and public entities that are required to obtain a permit in accordance with 40 CFR 122.26(b)(4) and (b)(7). The named permittees for the Snohomish general permit are King County, Snohomish County, and WSDOT.

Named permittees - South Puget Sound general permit:

The permittees listed in Special Condition S3.A. are the municipalities and public entities that are required to obtain a permit in accordance with 40 CFR 122.26(b)(4) and (b)(7). The named permittees for the South Puget Sound general permit are Tacoma, Pierce County, King County, and WSDOT.

Other permittees - all permits:

In addition to the permittees named in Special Condition S3.A., there are other potential permittees which may be required by Ecology or U.S. EPA to obtain coverage under these municipal stormwater permits. These are addressed in special condition S3.B. There are three circumstances under which owners or operators of municipal separate storm sewers may be required to obtain coverage:

1. Ecology has authority under 40 CFR 122.26 (b)(4) and (b)(7) to designate other municipalities under the permit program because of interconnections, location in relation to the named permittees, the quality and nature of pollutants discharged, or the nature of the receiving waters. At this time, Ecology has not identified any other municipalities that should be designated for these reasons.

2. Permit coverage is required for discharges from all municipal separate storm sewers located in the municipalities that meet the population threshold for the permit requirement. Municipal separate storm sewers are defined at 40 CFR 122.26(b)(8) to include conveyances owned or operated by a public body having jurisdiction over disposal of stormwater. It is this definition that brings WSDOT and METRO into the permit program. There may be other owners or operators of municipal separate storm sewers located in the area covered by the permit that must be brought into the permit program in the future. As necessary, Ecology will notify and require application information from these public entities.

3. U.S. EPA is scheduled to issue additional stormwater regulations. These regulations are to address stormwater discharges not covered under the current regulations, including discharges from smaller municipalities. If new federal regulations require additional municipalities within any of the water quality management areas to have NPDES permits, those municipalities can obtain coverage under one of the subject municipal stormwater permits.

Special Condition S3.C. allows any other owners or operators of municipal separate storm sewers (within the named watershed) who desire coverage under the applicable permit, to apply to become permittees.

Ecology received a petition requesting that all smaller cities located in the Counties covered under the three watershed permitting areas be designated for inclusion in the permit program. Ecology denied this petition for the following reasons:

1) U.S. EPA currently requires that only municipalities of population > 100,000 be covered under permit;

2) Ecology has chosen not to pursue coverage of municipalities beyond existing federal requirements;

3) Due to Ecology and local government resource limits, this addition of new municipalities at this time would seriously delay our current efforts to implement the permit and be counterproductive.

Though the smaller local governments are not included in this permit, they are subject to the stormwater program requirements of the Puget Sound Water Quality Management Plan. Many of the requirements of that plan are the same as those required under the permit. The evidence supports that many smaller cities will implement stormwater management programs without being required to do so by an NPDES permit.

S4 - How to Obtain Coverage

To comply with the requirements of Ch. 173-226 WAC, the General Permit Rule, it is necessary for entities to submit an application that contains the information specified in WAC 173-226-200. The Notice of Intent (NOI) is the official permit application document required to request coverage under these general permits and is included in the permits. In addition, entities named in federal stormwater rules, 40 CFR 122.26, must submit permit applications in accordance with those rules. All permittees initially named in one of the subject permits have submitted the federal application materials in compliance with the deadlines specified in 40 CFR 122.26. Submitting the NOI and federal application requirements also constitutes application for the state waste discharge permit. Since these are general permits, it is necessary to provide procedures for other permittees to obtain coverage. These procedures are described in S4.B and C.

As discussed in the section on Special Condition S3 - Permittees, and other public entities may be required by Ecology or U.S. EPA to obtain permit coverage. Where federal rules do not specify application requirements for any entity required to obtain stormwater permit coverage, Ecology will identify those requirements as stated in S4.B.1.b. Some public entities may choose to pursue co-permittee status with one of the named permittees. Entities may elect to become a co-permittee to be able to jointly manage stormwater with others in the basin, or because the entity does not have adequate legal authority to control discharges into their storm sewers. Co-permittees must supplement the application information of the existing permittee.

Entities which are not required to obtain a stormwater permit, but which desire coverage under one of these general permits, are only required to submit an NOI. If granted coverage under the permit, these permit volunteers will be given a compliance schedule to develop a stormwater management program.

S5 - Responsibilities of Permittees

Since there are multiple permittees, this section is included to explain the responsibilities of each permittee. Co-permittees, in particular, are responsible only for discharges from municipal separate storm sewers which they own or operate, and together with the municipality they are located in, must be able to achieve full compliance with the requirements of the permit. Co-permittees are also required to have an agreement with the municipality they are located in, clarifying the responsibilities of each party for compliance with the terms of the permit.

S6 - Compliance with Standards

The municipal stormwater NPDES permit program involves the regulation of a large number of discharges under a single area-wide permit. This approach is different from the usual approach of individual NPDES permits for specific discharges and presents many challenges for state and local governments. The inherent difficulties in controlling stormwater discharges, as described earlier in the background section, means that it will take many years to fully implement a municipal stormwater permit program which achieves all the objectives of the U.S. EPA stormwater regulations, the federal Clean Water Act, and state law. Though some local governments and the state have had programs to reduce stormwater impacts, particularly in the Puget Sound Basin, this permit represents a commitment, and a significant step towards achieving these objectives.

To achieve the objectives of the Clean Water Act, Congress decided that discharges from municipal separate storm sewers must meet all applicable provisions of sections 402(p) and 301(b)(1)(c) of the Act. These provisions require a prohibition on non-stormwater discharges in municipal storm sewers, controls to reduce the discharge of pollutants to the maximum extent practicable (MEP), and any more stringent limitations necessary to meet water quality standards. Neither Congress nor EPA have defined what is meant by "maximum extent practicable" (MEP). Therefore, Ecology has determined what is expected of permittees to comply with these standards.

A. State law requires all dischargers, including stormwater dischargers, to apply all known, available, and reasonable (methods) of treatment (AKART) to prevent and control the pollution of waters of the state (RCW 90.48.010).

"MEP" (the federal requirement) and "AKART" (the state requirement) are technology-based statutory requirements. Traditionally, Ecology determines, or uses a U.S. EPA determined, specific effluent quality which it considers as achieving such technology-based statutory requirements.

Given the large number of municipal storm sewers covered by this permit, the wide variation in quantity and quality of these discharges, the lack of adequate data on stormwater quality, and the uncertainty and variability of the pollutant removal effectiveness of currently accepted BMPs, it is not feasible at this time to establish specific numeric effluent quality limitations that represent technology-based standards for municipal stormwater discharges. Therefore, the permit requires the development and implementation of stormwater management programs which include the implementation of BMPs and other program components. Ecology will consider compliance with these requirements as meeting the technology-based requirements of MEP and AKART. MEP is likely to be defined differently in future permits as the ability to control stormwater discharges improves, or if a federal definition of MEP is adopted.

As required by the Puget Sound Water Quality Management Plan, Ecology has adopted a manual which defines appropriate BMPs for addressing stormwater erosion and sediment control, runoff control, and control of pollution from urban land uses. Under the Puget Sound Water Quality Management Plan, local governments in the Puget Sound Basin are required, subject to the availability of local funding, to adopt this manual, or an equivalent manual for control of stormwater from new development, redevelopment, and construction sites. To date, Ecology has approved, or conditionally approved, four local government manuals as equivalent to Ecology's manual. Five other manuals, including manuals from Tacoma, Pierce County, Seattle, and King County are currently under review. The adoption and implementation of BMPs in these manuals by these entities is considered justification that the requirement is known, available, and reasonable.

B. Attaining compliance with water quality standards presents an even greater challenge than compliance with technology-based requirements. Federal and State laws require application of any more stringent limitations necessary to meet all applicable water quality standards, including surface water, ground water, and sediment management standards. In this state, U.S. EPA-approved water quality standards include surface water and sediment management standards. Compliance with ground water standards is a state requirement and not a federal requirement. The implementation of the existing, known, available and reasonable BMPs and other strategies will not likely be sufficient to attain compliance with the present surface and ground water quality and sediment quality standards at many discharge locations. Regulations implementing the standards allow compliance schedules to meet them. Ecology's permitting strategy and schedule to achieve compliance with standards is:

- To require permittees to adopt stormwater management programs consisting of identified priorities and an implementation schedule to address all components of special condition S7 selected for implementation during the first permit cycle.

- To assess the success of those programs through monitoring and other evaluation efforts.

- To require in subsequent programs, re-evaluations of the priorities of the stormwater management program and the level of effort in some program components in light of monitoring and evaluation results.

- To require in subsequent programs, implementation of more effective BMPs, if necessary, as they are developed.

- To evolve towards compliance with standards through successive permit cycles and program updates.

This strategy is to be implemented through this and subsequent permits.

Finally, it is fair to note that achieving compliance with standards for some pollutants may require source control strategies which extend beyond the authority of the permittees. Possible examples of this include pollutants generated by internal combustion engine exhaust, tire wear, and brake wear.

C. This condition delineates that the permittees' stormwater discharges to surface water are regulated by federal and state statutes and regulations. Compliance with ground water standards is regulated only by state authority. However, it is U.S. EPA policy that where hydrologic connectivity exists between surface water and ground water, discharges to ground water can be regulated under federal Clean Water Act authority to meet surface water quality and sediment management standards. (See e.q., Exxon Corp. v. Train, 554 F.2d 1310, 1312, n.1 (5th Cir. 1977); Mcclellan Ecological Seepage Situation v. Weinberger, 707 F.Supp. 1182, 1195-96 (E.D. Cal. 1988); and Washington Wilderness Coalition v. Hecla Mining, case # CS 94-233 FVS).

S7 - Stormwater Management Program

A. The federal stormwater rules require a description of a stormwater management program to cover the duration of these permits. This section requires each permittee to develop and implement a stormwater management program. The stormwater management program forms the core requirement of these permits. As part of the approval process for each stormwater management program, Ecology and each permittee will hold a public hearing as an opportunity for public comment on the content of the proposed program. Ecology follows the procedures for public hearings in the Administrative Procedures Act, Ch. 34.05 RCW.

B. This section defines a stormwater management program as a plan for the term of the permit, and spells out the components of a stormwater management program. Each permittee is to propose a plan which describes how and when it will implement priority program components. The planning period is the term of the permit, approximately from 1996 to 2000.

In many of the subsections, there are specific requirements for WSDOT. These were added to clarify how the subsection applies to WSDOT since it is a different type of public entity with different duties, responsibilities, and powers than the other permittees, and has jurisdiction over primarily one land use type - state highways.

Conditions S7.B.1 through 7 describe program components which are necessary administrative, legal, or evaluation measures. All of these components must be included in a stormwater management program. Special Conditions S7.B.8 a.-i. describe stormwater program control components which should directly effect pollutant reductions. The level of effort for these stormwater control components should be determined with regard to program priorities and in light of budget limitations as described in S7.B.5.

The permittees named in Special Condition S3.A. have existing stormwater programs. It is likely that the permittees will have to modify their programs to meet some of these permit requirements. Given the immense scale of stormwater problems, it is unrealistic to expect permittees to immediately have stormwater management programs that satisfy each of the required components.

Ecology anticipates that permittees will phase-in program implementation. As further explained later in this fact sheet, permittees will have 12 to 17 months after permit issuance to gain Ecology approval for their stormwater management program. The program should describe the permittee's proposed method for implementing program components which have been identified as priorities based on local water quality needs. The program should also identify steps necessary to phase in implementation, and a schedule for those steps. Depending on identified needs and budget restrictions (see explanation under S7.B.5., below), the plan may not include efforts in all the program components listed in this condition.

Although the stormwater management program requirements are specified in the permit, Ecology and the permittees have discussed in more detail what the expectations for the programs are. The mutual understandings from those discussions have been recorded in a document referred to as "Clarification of Permit Conditions." Ecology will use this document in reviewing stormwater management programs that will be submitted by permittees. The document acknowledges recognized problems and constraints affecting stormwater program development, describes long-term outcomes for the components of permittees' programs, and establishes short-term expectations for stormwater management programs during this first five-year permit. The permittees and Ecology recognize that the permits and stormwater management programs will be subject to public review. In addition, the permittees and Ecology may modify the "Clarification of Permit Conditions" as a result of comments received from the public or experience gained during the course of permit implementation. A copy of this document is available from Ann Wessel at the Department of Ecology (360) 407-6457.

WSDOT is a different type of public entity than the other permittees. It has different duties and powers, and has jurisdiction over only one type of land use (transportation corridor). Therefore Ecology and WSDOT are developing a separate Memorandum of Understanding (MOU). The purpose of the MOU is to provide additional specificity of permit requirements for WSDOT. A copy of the draft MOU will be available, upon request, when it is completed. Contact Ann Wessel at the above number to arrange to receive a copy.

Stormwater management program components S7.B.3, 8b, 8d, 8e, and 8f are drawn directly from federal regulations (40 CFR 122.26) or the Puget Sound Water Quality Management Plan. Explanation of the reasons for including these components in a stormwater management program is found in the preamble to the U.S. EPA stormwater regulations published in the Federal Register on November 16, 1990, and in the Puget Sound Water Quality Management Plan. The remaining program components are either a modification of a federal rule, or Puget Sound Plan provision, or drafted specifically for this permit. These warrant further explanation, and are discussed below.

S7.B.1. - Comprehensive Planning Process

The federal stormwater rules call for a description of the comprehensive planning process used to develop the stormwater management program. Ecology has included this requirement as part of the stormwater management program, and added a request for additional information about the relationship to other planning processes. Given the interconnection of stormwater issues with decisions regarding land use and transportation, it is reasonable to expect that other planning processes, including the Growth Management Act, will play a part in development of the local stormwater management program.

S7.B.2. - Stormwater Management Needs and Priorities

This condition requires permittees to assess their stormwater needs, to prioritize those needs, and to develop an implementation plan and schedule based on those prioritized needs. The needs analysis, priority system, and the resultant implementation plan and schedule are subject to Ecology review.

Though the permits establish a list of program components as requirements for stormwater management programs, local governments are given the flexibility to set priorities for their program. Program priorities should be based on what is known about water quality threats and impairments and sources of pollution to discharges from the permittees' municipal separate storm sewers. Program priorities can determine the level of effort and the implementation schedule for different parts of the stormwater management program requirements. They should help establish the basis for monitoring to evaluate the effectiveness of the local programs. To make progress toward achieving state and federal water quality objectives, stormwater management programs must include problem prevention and problem correction aspects.

The Department of Transportation has responsibility for stormwater runoff from highway systems throughout the state. WSDOT has prioritized stormwater quality projects state-wide and not all projects are located in watersheds covered by permits. Ecology has agreed that state-wide priorities are acceptable, and that may mean having higher priority projects outside of the area under permit.

The federal stormwater rules require an implementation schedule for the program to reduce pollutants from commercial and residential areas. However, the rules do not call for an implementation schedule for all components of the stormwater management program. Since the stormwater management program is the core requirement for these permits, Ecology considers it reasonable to require an implementation schedule for the proposed program for the term of the permit.

S7.B.4. - Monitoring

The federal stormwater rules require municipalities to propose a stormwater monitoring program for the term of the permit (40 CFR Part 122.26(d)(2)(iii)(D)). However, few specific requirements of such programs are listed. In the preamble to the federal rule (See pages 48049 - 48052 of the Federal Register, Volume 55, No. 222, November 16, 1990) U.S. EPA indicates that they favor ... " a permit scheme where the collection of representative data is primarily a task that will be accomplished through monitoring programs during the term of the permit." In the same text, they indicate that "an estimate of annual pollutant loading associated with discharges from municipal stormwater sewer systems is necessary to evaluate the magnitude and severity of the environmental impacts of such discharges and to evaluate the effectiveness of controls which are imposed at a later time."

Ecology concurs with these statements and has written this condition to establish broad monitoring objectives. Specifics concerning monitoring strategies for each discharger will be established in their respective stormwater management programs. This is appropriate because monitoring needs may vary among the permittees, and because the science of monitoring stormwater discharges and their impacts is new and still developing.

The development of cost-effective and meaningful strategies for monitoring stormwater and its impacts is the subject of much nationwide debate. Ecology wants permittees to make maximum use of evolving information and strategies in establishing their monitoring programs. The U.S. EPA rules imply, and U.S. EPA guidance assumes that some monitoring for chemical constituents in stormwater is necessary. Ecology concurs with this view. However, there also may be cost-effective and useful biological and visual monitoring methods that can be employed by the permittees. Also, there may be opportunities to complement and coordinate with Ecology ambient monitoring efforts.

Because Washington has adopted sediment management standards for marine waters, and is developing similar standards for fresh waters, the scope of monitoring programs must include assessing sediment impacts. Also, because this permit covers stormwater discharges to ground, the scope of monitoring programs should include impacts to ground water. A monitoring program to adequately cover all these needs in this permit cycle would be overwhelming. Ecology expects that in this first permit, permittees will establish monitoring programs which are focused on their identified priorities.

All the monitoring objectives listed in these permits remain applicable in the long run, regardless of those identified priorities. Knowledge of pollutant loads and of average event mean concentrations from representative areas drained by the municipal storm sewer system are necessary to gauge whether the stormwater management program is making progress towards the goal of reducing the amount of pollutants discharged. On a smaller scale, we also need to determine the effectiveness of specific BMPs in reducing pollutant discharges and receiving water impacts. The third objective, identification of significant pollution sources, is already a Puget Sound Water Quality Management Plan requirement.

Finally, there is a need to evaluate the effect of stormwater on receiving waters, and assess progress toward the ultimate goals of protecting the receiving waters, aquatic habitat, aquatic resources, and their beneficial uses. Receiving water monitoring can include surveys of streambed physical characteristics, chemical analyses of water and sediment quality, and various types of biological monitoring (e.g., bioassays and stream surveys). Modeling efforts may help predict likely impacts and aid development of strategies to avoid impacts. Results of monitoring will be used by the permittee to reassess stormwater management program priorities, and to evaluate and modify the stormwater management program.

The expenditure of large amounts of money on stormwater management programs makes it imperative that we allocate a reasonable amount of resources to determine program effectiveness. Although the scope of each permittee's monitoring program is yet to be established, Ecology anticipates that the sampling and analysis costs could be at least in the tens of thousands of dollars per year. Permittees may be able to realize some cost savings through cooperative monitoring agreements with other permittees and Ecology. Ecology sees potential cost savings in avoiding duplicative monitoring for BMP effectiveness (subparagraph b) and for impacts on shared waterbodies (subparagraph d). Also, permittees are encouraged to share field and laboratory staff expertise, time, and material resources. Coordination with Ecology monitoring efforts may also help with cost savings.

S7.B.5. - Fiscal Analysis

The federal stormwater regulations, at 40 CFR 122.26(d)(2)(vi), require that permittees provide a fiscal analysis, including yearly cost estimates, for the capital and operation and maintenance expenditures necessary to accomplish the activities of the program. A fiscal analysis is needed to evaluate the municipalities' ability to prepare and implement management programs, and is an appropriate measure to justify a proposed stormwater management program. Where adequate funds are not available to implement all aspects of a program to reduce the discharge of pollutants to the maximum extent practicable, it will be necessary for permittees to propose a strategy and a schedule for seeking additional funding, and to reschedule program activities accordingly.

In addition, at 40 CFR 122.26(d)(2)(iv), the federal stormwater regulations require a description of staff and equipment available to implement the stormwater management program. Ecology has chosen to combine this requirement with the fiscal analysis since they are logically linked, and added a request for information on support capability.

S7.B.6. - Adequate Information

This condition is a modification of, and a logical follow-up to a requirement of the federal rules regarding municipal stormwater permit applications. The permit application requirements in 40 CFR 122.26 specify a two-part application process. "The purpose of the two-part application process is to develop information, in a reasonable timeframe, that would build successful municipal stormwater management programs and allow the permit writer to make informed decisions with regard to developing permit conditions."[1] The Part 1 application information, together with the results of the discharge characterization, is used to prepare the proposed stormwater management program that is submitted in Part 2 of the permit application. The purpose of this component is to require permittees to continue the collection and maintenance of information used for program management and evaluation.

Maintenance of data bases regarding the physical characteristics and location of the separate storm sewer system and the areas it serves are necessary for proper management of the system. In addition, it is necessary to maintain an adequate information base concerning stormwater discharges and receiving waters to evaluate program effectiveness. This information base should include any available, pertinent information (including information not required to be collected by the permit) which may be used by the permittees in planning and evaluating their stormwater management programs. As conditions change, an accessible data base is necessary to display those changes. Managers can then make changes to the stormwater management program to maintain or increase its effectiveness.

[1]Federal Register, Vol. 55, No. 222, November 16, 1990. p. 48044.

S7.B.7. - Watershed-wide Coordination

This permit condition is intended to establish an initial framework for watershed-wide management of stormwater quality. For this permit the watershed-wide requirements are very basic. This section will be expanded in future permits.

Permittees are to identify intergovernmental coordination mechanisms. The type of coordination mechanisms are not specified and may be determined by the permittees. Acceptable mechanisms could include a management committee process, interlocal agreements, a regional stormwater management entity, or similar agreements among permittees.

Through intergovernmental coordination the permittees are to address shared waterbodies by developing coordinated stormwater management programs. What is intended here is that permittees' programs not be in conflict with respect to shared waterbodies. It is not necessary to have identical programs or priorities for shared waterbodies. Permittees are also to coordinate data management, mapping, monitoring, and modeling.

One of the objectives of issuing permits on a watershed basis is to ensure protection of waterbodies that are beyond the control of an individual permittee. While this cannot be accomplished without including all municipalities in the watershed under the permit program, efforts can be made by the current group of permittees to ensure compatibility among stormwater management programs. In addition, the comprehensive stormwater program (element SW-2) of the Puget Sound Water Quality Management Plan requires interlocal coordination among all jurisdictions in shared watersheds.

To allow a broader look at stormwater quality issues, permittees are to address coordinated data management and mapping efforts. To allow comparisons of data, permittees are directed to coordinate stormwater monitoring and modeling efforts.

In the next round of permits, permittees will be expected to begin implementing an inter-agency coordinated program of best management practices and other measures to control stormwater impacts from cumulative discharges to shared waterbodies.

S7.B.8.a. - New Development and Redevelopment

The federal stormwater rules require applicants to have programs "to reduce the discharge of pollutants ... from areas of new development and significant redevelopment." (40 CFR Part 122.26(d)(2)(iv)(A)(2)). The rules also require a program "to reduce pollutants in storm water runoff from construction sites." (40

CFR Part 122.26(d)(2)(iv)(D)). The Puget Sound Water Quality Management Plan has similar requirements for municipalities within the Puget Sound Basin.

As required by the Puget Sound Water Quality Management Plan, Ecology has developed a Technical Manual which establishes stormwater control requirements for new development, redevelopment, and construction sites. As required also by that plan, Ecology has included these requirements as permit conditions. Subject to available funding, the Puget Sound Water Quality Management Plan requires local governments to either adopt Ecology's manual or a local version that contains equivalent standards. Therefore, the substantial requirements of this special condition are already required of the permittees.

To these pre-established requirements, Ecology has made one addition. We are attempting to utilize existing local government permitting procedures to notify as many people as possible of a federal requirement for some construction sites and industries to obtain an NPDES permit. NPDES stormwater rules require that construction sites of five acres or more (including sites less than five acres which are part of a larger common plan of development, or sale of five or more acres) obtain an NPDES permit if stormwater runoff discharges to a surface water. Where those construction projects involve establishing a new industrial facility, that facility may also need an NPDES permit to discharge stormwater. In Washington, such construction sites and industries must obtain coverage under Ecology's "Baseline General Permit for the Discharge of Stormwater from Industrial Activities." Coverage is obtained by completing the Notice of Intent forms referenced in this special condition.

This condition does not make the municipality responsible for determining which sites need such coverage, nor does it give them responsibility to assure that these sites obtain coverage under the Baseline General Permit. However, Ecology does consider it reasonable to expect the permittees to inform dischargers within their geographic boundaries of this permit requirement.

S7.B.8.c. - Operation and Maintenance Programs

The requirements for an operation and maintenance program and an ordinance for operation and maintenance of facilities owned by entities other than the permittees, which discharge to municipal separate storm sewers, are drawn from the federal stormwater rules and the Puget Sound Water Quality Management Plan.

Ecology has added a requirement for a strategy to address the disposal of street waste decant. Current maintenance practices for catch basins and other similar stormwater facilities involve using a vactor truck to collect accumulated sediments. This process uses water to free-up the sediments and frequently this water is decanted from the truck back into stormwater conveyances to allow more solids to be put in the vactor truck. Vactor truck decant water often contains high levels of suspended sediments, metals, and petroleum hydrocarbons, and may contain other unpredictable contaminants.

Under federal and state law, it is not appropriate to continue to reintroduce these pollutants into storm drains. However, adequate alternatives to this practice have not been identified. Therefore, Ecology is requiring the permittees to cooperate in identifying solutions to this problem and to develop strategies consistent with those solutions.

The requirement for a strategy to address street waste decant is consistent with state policy prohibiting the reintroduction of pollutants into the waste stream. This policy has been applied by Ecology to traditional wastewater treatment systems and supported by the Pollution Control Hearings Board and the courts. This policy is expressed in General Condition G10 in this permit, which is based on a standard condition that is applied to all NPDES permits. This condition states that, except for decant from street waste vehicles, the permittee shall not allow removed substances to be resuspended or reintroduced to the storm sewer system. Decant from street waste vehicles may be reintroduced only when other practical means are not available and only to catch basins remote from the discharge point. The exception for decant will end as municipalities implement the solutions identified in response to Special Condition S.7.B.8.c.

S7.B.8.g. - Illicit Discharges

The requirement for a program to control illicit discharges and improper disposal is drawn from the U.S. EPA stormwater regulations in 40 CFR 122.26(d)(2). The U.S. EPA requirements are based on the provision in the Clean Water Act that municipal stormwater NPDES permits include a requirement to effectively prohibit non-stormwater discharges into the storm sewers.

In acknowledgement of the diverse contributions to storm drains, U.S. EPA included a list of discharges to storm sewers that must be addressed where they are identified by the permittees as sources of pollution to waters of the United States. This list is referenced in Special Condition S7.B.8.g., consists of the following: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl spaced pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, street wash water, and flows from fire fighting. Because this permit also covers stormwater discharges to all waters of the state, Ecology expects these sources to be addressed where they are sources of pollution to any receiving water, including ground water.

In special Condition S7.B.8.g., Ecology has allowed the use of alternative field screening methods for detecting illicit discharges. Use of alternative methods requires Ecology approval. During the permit application process several of the permittees reported problems with the colorimetric field test kits that were specified by U.S. EPA for this purpose. Some permittees have developed effective ways of detecting illicit discharges that include visual inspections of storm drains using television cameras and site inspections. Ecology agrees that there should be flexibility on field screening methods.

In addition, the permits specify that urbanized areas should be the focus of the field screening program. This is intended to provide some clarification for county governments that are under the permit program, where rural areas are not as likely to have illicit connections to storm sewers.

S7.B.8.h. - Industrial Facilities

The federal stormwater regulations envision that Ecology and the municipal permittees will cooperate to develop programs to monitor and control pollutants in stormwater discharges to municipal storm sewers from industrial facilities. A wide range of industrial facilities listed at 40 CFR 122.26(b)(14) must obtain an NPDES permit from Ecology if they discharge to surface waters or to municipal separate storm sewers which drain to surface waters. Under 40 CFR 122.26(d)(2)(iv)(C), municipal permittees are to establish a program to monitor and control discharges from industrial facilities that the permittees determine are contributing a substantial pollutant loading to municipal separate storm sewers. In the preamble to the federal stormwater regulations U.S. EPA clearly states its position on the dual responsibility for controlling stormwater discharges associated with industrial activity:

> "Although today's rule will require industrial discharges through municipal separate storm sewers to be covered by separate permit, EPA still believes that municipal operators of large and medium municipal systems have an important role in source identification, and the development of pollution controls for industries that discharge storm water through municipal separate storm sewer systems is appropriate. Under the CWA *(Clean Water Act)*, large and medium municipalities are responsible for reducing pollutants in discharges from municipal separate storm sewers to the maximum extent practicable. Because stormwater from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls for stormwater discharges associated with industrial activity through their system in their stormwater management program."[2]

[2] U.S. EPA, Federal Register, Vol.55, No. 222; November 16, 1990; p. 48090.

The Puget Sound Water Quality Management Plan goes a step further than the federal requirements. It requires municipalities in all urbanized areas of the Puget Sound Basin to develop a "comprehensive urban stormwater program" (Element SW-2). Such programs are to "seek to control the quality and quantity of runoff from public facilities and industrial, commercial, and residential areas including streets and roads, consistent with manuals and guidance provided by Ecology ..." (Element SW-2.4). Those programs are to include inspection, compliance and enforcement measures (SW-2.4.i.). Clearly, the Puget Sound Water Quality Management Plan requires local governments to develop programs to control stormwater flowing into their systems from industrial facilities.

This program component includes requirements from federal rules and the Puget Sound Water Quality Management Plan. The permittees must have a program to reduce pollutants from industrial stormwater. Subsection i requires that each permittee identify industries tributary to their storm sewer system. It does not require municipalities to identify, within a specific time frame, all industrial discharges to their system. But eventual identification of all industrial discharges to municipal storm sewers is the goal to be achieved. Subsection ii is drawn from the Puget Sound Water Quality Management Plan. Subsection iii is derived from the federal rules. In subsection iii, we added the last statement concerning coordination of monitoring and controlling pollutants from certain industries, because those same industries may have monitoring and control requirements mandated under their NPDES permit from Ecology.

It can be argued that industrial facilities which require NPDES permits, though they drain through the municipal storm sewer system, should be regulated solely by Ecology and not by the municipality. Ecology does not concur with this view. Municipalities are ultimately responsible for discharges from their storm sewer system. Therefore, they need to have a role in controlling what goes into that system.

Ecology acknowledges that the federal stormwater rules establish overlapping responsibilities for the control of industrial stormwater. Ecology and the local governments need to negotiate agreements that make the most efficient use of limited regulatory resources. Ecology expects to play the lead role in gaining compliance from industries covered under NPDES permits for their stormwater discharges. Municipalities are not expected to enforce the requirements of NPDES permits issued to industries. However, nothing in the federal regulations would prohibit the municipalities from requiring additional stormwater controls beyond those required in an industry's NPDES permit from Ecology. Municipalities may consider such actions necessary in order to meet their own NPDES permit obligations. Where such additional controls are required by a municipality, the municipality is responsible, and required by this permit, for gaining compliance with those controls.

S7.B.8.i. - Public Education

The public education program described in special condition S7.B.8.i is derived from the U.S. EPA stormwater regulations and the Puget Sound Water Quality Management Plan. Ecology has broadened the public education program to include permittees' staff whose job functions may impact stormwater quality. We feel it is appropriate to also direct education efforts internally.

As a means of reducing overall costs to the public, the education program requirement has been modified to allow permittees to develop education programs on a regional basis. For example, permittees in the Puget Sound Basin could develop an education campaign for the entire region. In addition, Ecology provides guidance materials and conducts workshops to provide training on BMP selection and the use of Ecology's Stormwater Management Manual for the Puget Sound Basin (the technical manual). There may be some overlap between Ecology's and the permittees' education efforts. However, Ecology's focus has been to educate local government staff (not just staff of NPDES permittees), to enable local governments to transfer information to the public.

S8 - Total Maximum Daily Load Allocations

Under some circumstances, when the water quality of a waterbody is impaired, the federal Clean Water Act requires states to set limits on the amount of pollutants that the waterbody receives from all sources. States may also set limits on pollutant loads when waterbodies are threatened. These limits are known as Total Maximum Daily Loads (TMDLs). TMDLs differ from commonly used technology-based or water quality-based numeric limits for individual discharges. A TMDL is developed through a defined process. Through this process, the maximum amount of a pollutant that may be discharged from all sources to a waterbody without causing violations of water quality standards is identified. Then pollutant control strategies are developed to keep the pollutant loading below that level. The strategies may be numerical wasteload allocations to NPDES permitted dischargers or management strategies to control the loads from nonpoint sources.

When controls for stormwater discharges are necessary to implement a TMDL, stormwater management programs must be modified appropriately. Ecology considers a four-month timeframe reasonable for making these modifications because the strategies for the TMDL will have already been identified in the approved TMDL. They will have been developed and discussed at length with all the affected dischargers. The condition also requires permittees to consider existing TMDLs when submitting their initial stormwater management program as required by S11.

S9 - Program Modification

This section is included in the permit because Ecology recognizes the need for permittees to modify their stormwater management programs in response to changing conditions and unplanned occurrences. However, Ecology also recognizes that it is the state's responsibility to make sure programs are not modified to the extent they undermine compliance with the terms of the permit. Therefore, we have identified certain types of modifications that must have prior approval from Ecology, and an opportunity for public comment.

The list of modifications requiring prior approval addresses several potential concerns:

> A change in the level of effort of program implementation (i.e., a greater than 20 percent reallocation, increase, or reduction in resources).
>
> A change in implementation of program components, as defined in special condition S7, that could negatively influence the effectiveness of the approved stormwater management program (i.e., significantly delaying, completely changing, or eliminating program components).
>
> Changing the geographic area of coverage by adding a co-permittee or accepting permit responsibility for another entity.

All other program modifications are to be described in the annual report required in Special Condition S10.

If, based on information in the annual report, Ecology finds that the basis for the stormwater management program priorities have significantly changed, parts of the program are proving to be ineffective, or there are other problems with program implementation, Ecology may require permittees to make program modifications.

S10 - Reporting Requirements

A. The federal stormwater rules at 40 CFR 122.42 require municipal stormwater permittees to submit an annual report. Ecology included the annual reporting requirement in these permits, and modifications were made to clarify what is requested from permittees and to make the reporting requirements consistent with other provisions in the permits.

To reduce the administrative burden for Ecology and permittees, brief status reports are requested at the end of years one, two, three, and five. Ecology does not want the annual reporting requirement to unnecessarily take resources away from program implementation. Also, Ecology does not have staff resources to respond to voluminous annual reports. However, it is necessary to have more detailed information to prepare the next permit. Therefore, the report scheduled for the end of year four (one year before the expiration of this permit), together with a Notice of Intent shall constitute permit reapplication.

The report at the end of the fourth year of the permit, shall include a detailed evaluation of the effectiveness of the stormwater management program, all of the annual reporting information, a summary and analysis of cumulative monitoring data, and a proposed stormwater management program for the term of the next permit. If U.S. EPA establishes application requirements for the next permit before the end of year four, this permit will be modified, if necessary.

B. The items for inclusion in the annual report have been modified from the federal requirements for the following reasons:

- Additional clarification is provided on what is to be included in the portion of the report on the status of implementing the components of the stormwater management program. Compliance with the approved implementation schedule is to be addressed. Also, program modifications that were made during the reporting year are to be described.

- The federal requirement to describe proposed changes to the stormwater management program has been deleted since this requirement is addressed by special condition S9 - Program Modifications.

- The portion of the report on annexations and incorporation has been added by Ecology. Major annexations and incorporation could have a negative impact on stormwater management program implementation if large areas are taken out of the municipal stormwater permit program. Ecology believes it is reasonable to be notified of these types of changes in the permit coverage area so that decisions can be made about designating new or newly enlarged municipalities under the permit program.

- Ecology has provided clarification on what kind of information is required in the portion of the report on annual expenditures. Ecology needs to assess differences between planned and actual expenditures for components of the stormwater management program to evaluate the level of effort each permittee is expending on their program. We recognize that permittees do not currently have budget tracking systems that reflect the stormwater management program required under this permit, and that it is difficult to create these systems.

Therefore, we have clarified our expectations on this requirement, narrative descriptions are acceptable, but over the term of the permit, reports shall evolve to show numeric expenditures.

- The federal requirement for information on revisions to the assessment of controls has been deleted from the annual report. The purpose of the federal requirement is to estimate the effectiveness of Stormwater Management Plans in reducing pollutants discharged. Except for qualitative observations, it would not be possible to estimate pollutant reductions annually without extensive monitoring of discharges. Ecology prefers the broader monitoring program outlined in S.7.B.4. for assessing success. These objectives include monitoring for overall program effectiveness. However, with multiple objectives for these programs, Ecology does not want to mandate a monitoring program which exclusively accomplishes one objective at the exclusion of the others.

  In addition, changes in program effectiveness will probably not be measurable on an annual basis. A longer time period in which trends may become observable seems more appropriate.

- Ecology has eliminated the requirement to provide a summary of monitoring data in each annual report, and replaced it with a requirement for a summary and analysis of cumulative data for the year four report. We did not feel it was necessary to look at the data annually, but do want to be able to judge trends, and make decisions about requirements for the next permit. In addition, Ecology has requested a description of any other stormwater monitoring programs to be provided in the annual reports. We need this information to stay aware of all available information about stormwater in the watershed.

- The requirements for a summary of enforcement actions and identification of water quality improvements or degradation are drawn from the federal rules.

- Ecology has added a requirement for a report on the status of watershed-wide coordination activities. Information that will be used to develop the next permit is required at the end of year four.

S11 - Schedules for Compliance with Permit Conditions

This section sets schedules for stormwater management program approval. The decision to approve or disapprove a stormwater management program is identified as a modification of the permit which gives a right of appeal before the Pollution Control Hearings Board.

Ecology has set an approximately one year deadline for stormwater management program approval for large municipalities and 17 months for medium municipalities. The intention is to prevent stormwater program development from dragging on too long during the term of the permit. Permittees have already spent several years developing proposed programs and submitting applications. Ecology is anxious to expedite formal program implementation. We have set staggered program approval deadlines for large and medium municipalities because large municipalities had a statutory deadline for filing applications that was six months ahead of medium municipalities and they are generally ahead of the medium municipalities in developing their stormwater management programs.

The steps to program approval are outlined on the following page. Note that large and medium municipalities have six and nine months, respectively, to submit revised programs after receiving notice of the adequacy of the programs proposed in their Part 2 applications. As part of the review process for each of these programs, Ecology, with the assistance of the permittee, will hold a public workshop and hearing on the proposed program. This will provide the public a chance to review and comment on all of the actions being taken by their local government to reduce stormwater pollution.

The dates listed for the various actions are the deadlines for those actions assuming that time extensions of the schedule are not necessary.

STEPS TO STORMWATER MANAGEMENT PROGRAM APPROVAL

Step	Dates: Seattle King Co.	Dates: Tacoma/Pierce Co Snohomish Co/WSDOT
Issue Permits	7/5/95	7/5/95
-> Notification of SWMP Adequacy, no later than	8/1/95	10/1/95
Revised SWMP Submission	2/1/96, or 6 mos. later	7/1/96, or 9 mos. later
Ecology Decision to Proceed or request revisions	4/1/96, or 2 mos. later	9/1/96, or 2 mos. later
Joint Public Hearing	6 weeks later	
	5/15/96	10/15/96
Ecology decision on SWMP Proposal	30 days after public comment	
	6/15/96	11/15/96
Approved / Not Approved-----> Further Ecology Action		
Deadline for Program Approval	7/1/96	12/1/96
Time After Issuance	12 months	17 months

WSDOT is a permittee that cannot be categorized as a large or medium municipality on the basis of population. Therefore, we have assigned WSDOT to the medium municipality category for the purpose of assigning a schedule for compliance.

Deadlines for program approval are contingent on Ecology meeting deadlines for review of proposed programs. It is unfair to have permittees in violation of permit requirements because Ecology was not able to provide a timely review. Therefore, Special Condition S11.D.1. extends the deadlines for program approval by the number of days by which Ecology exceeds its deadlines for program review. S11.D.3 also provides for schedule extensions for other actions beyond the permittee's control or caused by Ecology.

Special Conditions S11.D.2. and D.3. allow for compliance schedule extensions to accommodate comments on the SWMP and for good cause as requested in writing. If necessary, Ecology will establish compliance schedule extensions through administrative order.

Special Condition S12 - Thea Foss Waterway Basin Program (Applicable only to the South Puget Sound Water Quality Management Area municipal stormwater permit)

The sediments of the Thea Foss Waterway are a problem area within the Commencement Bay Nearshore/Tideflats Superfund site. Under an Administrative Order on Consent, the City of Tacoma must commit to a program to control ongoing stormwater sources of sediment contamination to Thea Foss Waterway. The City, U.S. EPA, and Ecology have agreed that the City's NPDES stormwater permit is the most appropriate legal document by which to require the source control program. Special Condition S12 in the South Puget Sound WQMA permit is the result of discussions among the parties concerning how to accomplish that. Under Special Condition S12, Tacoma must develop and submit, by September 1, 1995, a stormwater program for the City's drainage basins to the Thea Foss Waterway. The condition requires Tacoma to receive approval of the program by January 31, 1996.

As required by Special Condition S11, the City of Tacoma remains responsible for having an approved stormwater management program for its entire service area, including the areas draining to the Thea Foss Waterway, by December 1, 1996. That program will identify implementation of the control measures identified in the Thea Foss Waterway Basin Program as high priorities.

General Conditions

The General Conditions of this permit are requirements based on federal or state laws which must be included in all NPDES general permits, either expressly or by reference. Ecology has decided to expressly incorporate the requirements of federal and state law that can be applied to municipal stormwater discharges. Where necessary, the requirements have been modified to make sense when applied to municipal stormwater discharges. The significant modifications are summarized below.

As previously explained in the discussion of Special Condition S7.B.8.c., G10, Removed Substances, is changed to allow for the reintroduction of street waste vehicle decant water until a more appropriate strategy can be developed and implemented.

G4, Bypass Prohibited, is changed to allow for bypasses of stormwater treatment facilities when the design capacity is exceeded. Ecology has set a minimum technology-based requirement that stormwater treatment BMPs in the Puget Sound Basin should be designed to treat the six-month, 24-hour storm event. Roughly, this should provided capacity for treatment of 90 percent of the annual stormwater runoff. However, higher flows generated by larger storm events are allowed to bypass. The incremental costs and the space needed to provide additional capacity to treat flows generated by larger storms become prohibitive quickly beyond the six-month, 24-hour storm event.

APPENDIX A

QUALITY OF STORMWATER DISCHARGES

Nationwide Urban Runoff Program:

In 1983, The United States Environmental Protection Agency (EPA) published the results of a nationwide, multi-city study of urban stormwater. That study, known as the Nationwide Urban Runoff Program (NURP), provided the first extensive analysis of the quality of urban stormwater from residential, commercial, and mixed land use. The study did not include any truly industrial sites. In regard to the quality of urban stormwater runoff from the land uses examined, the study concluded:

> Heavy metals (especially copper, lead, and zinc) are by far the most prevalent priority pollutant constituents found in urban runoff. End-of-pipe concentrations exceed EPA ambient water quality criteria and drinking water standards in many instances. Some of the metals are present often enough and in high enough concentrations to be potential threats to beneficial uses.
>
> The organic priority pollutants were detected less frequently and at lower concentrations than the heavy metals.
>
> Coliform bacteria are present at high levels in urban runoff and can be expected to exceed EPA water quality criteria during and immediately after storm events in many surface waters, even those providing high degrees of dilution.
>
> Nutrients are generally present in urban runoff, but with a few individual site exceptions, concentrations do not appear to be high in comparison with other possible discharges to receiving water bodies.
>
> Oxygen demanding substances are present in urban runoff at concentrations approximating those in secondary treatment plant discharges. If dissolved oxygen problems are present in receiving waters of interest, consideration of urban runoff controls as well as advanced waste treatment appears to be warranted.
>
> Total suspended solids (TSS) concentrations in urban runoff are fairly high in comparison with (*sewage*) treatment plant discharges. Urban runoff control is strongly indicated where water quality problems associated with TSS, including build-up of contaminated sediments, exist.

The NURP report included the table on the next page (Table 6-12). We are including the table here as an indication of the general quality of urban stormwater runoff. With the possible exception of lead, the concentrations displayed in the table are still representative of the general quality of urban stormwater nationwide. Lead concentrations in urban stormwater have probably decreased because a significant source of lead pollution, leaded gasolines, is not as prevalent as it was at the time these data were collected.

The table lists the median "event mean concentrations" (EMCs) by land use category for all stormwater discharge sites monitored in the study. The "event mean concentration" is defined as the total constituent mass discharge divided by the total runoff volume. EMC's were based on flow-weighted composite samples or, where sequential discrete samples were taken over the hydrograph, were determined by calculating the area under the loadograph (the curve of concentration times discharge rate over time) and dividing it by the area under the hydrograph (the curve of runoff volume over time).

"Median EMC's" in the table are calculated by combining all the EMCs obtained during the study for a land use category and determining the 50th percentile value.

The coefficient of variation is a statistical parameter which indicates the extent of variability in the concentrations of the pollutants in the data. It is determined by dividing the standard deviation of the data by the mean.

To the extent that the sites included in the NURP database provide a "representative" sample of the land use classifications studied, then the information summarized by Table 6-12 indicates the effect of land use on urban stormwater pollutant discharges. However, the report cautions against using the table to conclude that there are significant differences in stormwater quality among residential, commercial, and mixed land use categories studied. By analyzing the statistical confidence limits of the data, the report concludes that only the open/non-urban land use category appears to be significantly different overall. In regard to the data collected and analyzed in the study, the report also concludes that "if land use category effects are present, they are eclipsed by the storm to storm variabilities and that, therefore, land use category is of little general use to aid in predicting urban runoff quality at unmonitored sites or in explaining site to site differences where monitoring data exist."

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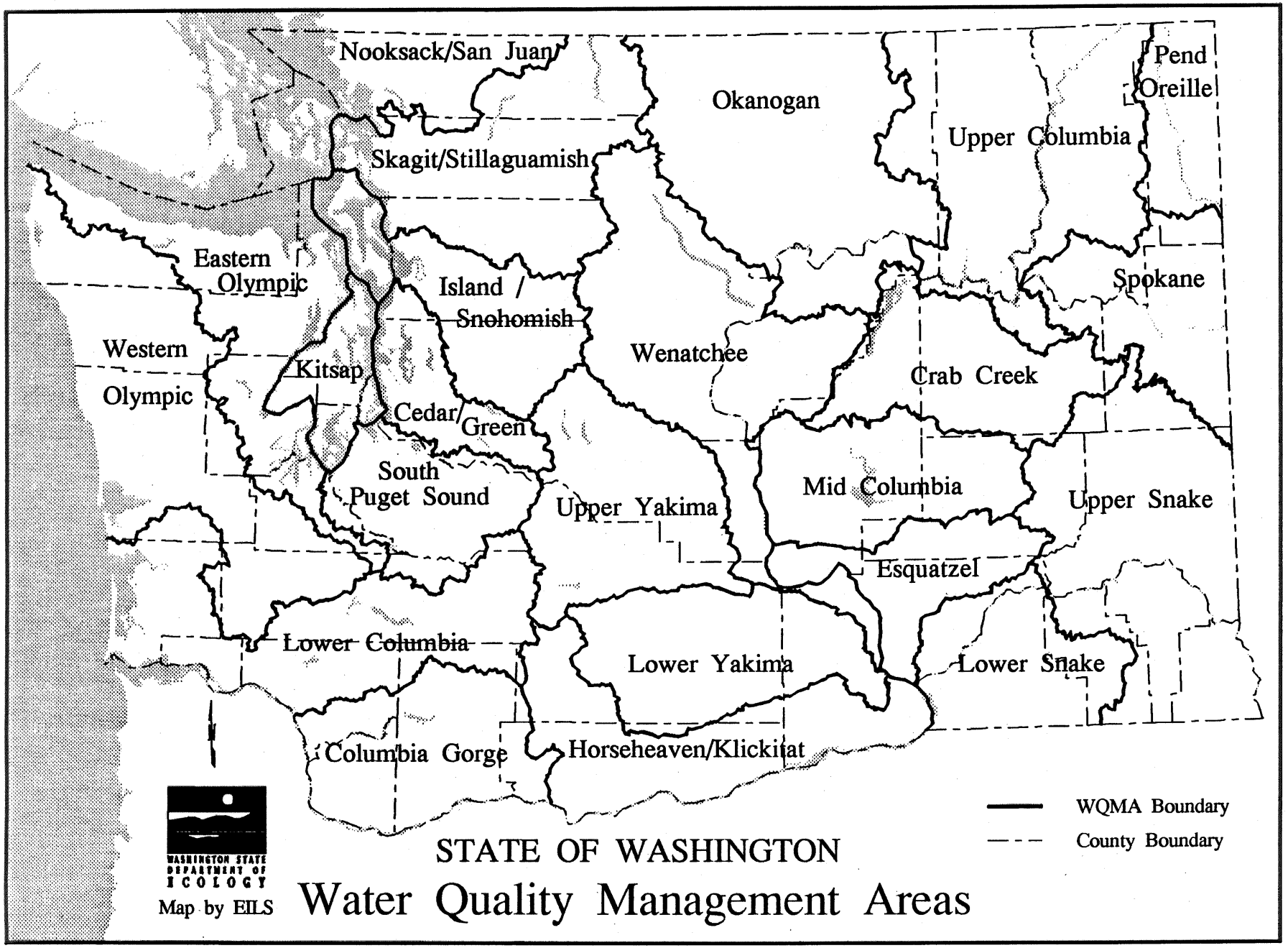
TABLE 6-12. MEDIAN EMCs FOR ALL SITES BY LAND USE CATEGORY

Pollutant		Residential		Mixed		Commercial		Open/Nonurban	
		Median	CV	Median	CV	Median	CV	Median	CV
BOD	mg/ℓ	10.0	0.41	7.8	0.52	9.3	0.31	-	-
COD	mg/ℓ	73	0.55	65	0.58	57	0.39	40	0.78
TSS	mg/ℓ	101	0.96	67	1.14	69	0.85	70	2.92
Total Lead	µg/ℓ	144	0.75	114	1.35	104	0.68	30	1.52
Total Copper	µg/ℓ	33	0.99	27	1.32	29	0.81	-	-
Total Zinc	µg/ℓ	135	0.84	154	0.78	226	1.07	195	0.66
Total Kjeldahl Nitrogen	µg/ℓ	1900	0.73	1288	0.50	1179	0.43	965	1.00
NO_2 -N + NO_3 -N	µg/ℓ	736	0.83	558	0.67	572	0.48	543	0.91
Total P	µg/ℓ	383	0.69	263	0.75	201	0.67	121	1.66
Soluble P	µg/ℓ	143	0.46	56	0.75	80	0.71	26	2.11

Appendix B


Nooksack/San Juan
Okanogan
Pend Oreille
Upper Columbia
Skagit/Stillaguamish
Eastern Olympic
Island / Snohomish
Spokane
Western Olympic
Kitsap
Wenatchee
Crab Creek
Cedar/Green
South Puget Sound
Upper Yakima
Mid Columbia
Upper Snake
Esquatzel
Lower Columbia
Lower Yakima
Lower Snake
Columbia Gorge
Horseheaven/Klickitat
WQMA Boundary
County Boundary
WASHINGTON STATE DEPARTMENT OF ECOLOGY
Map by EILS
STATE OF WASHINGTON
Water Quality Management Areas

APPENDIX C

Maps of Permit Areas

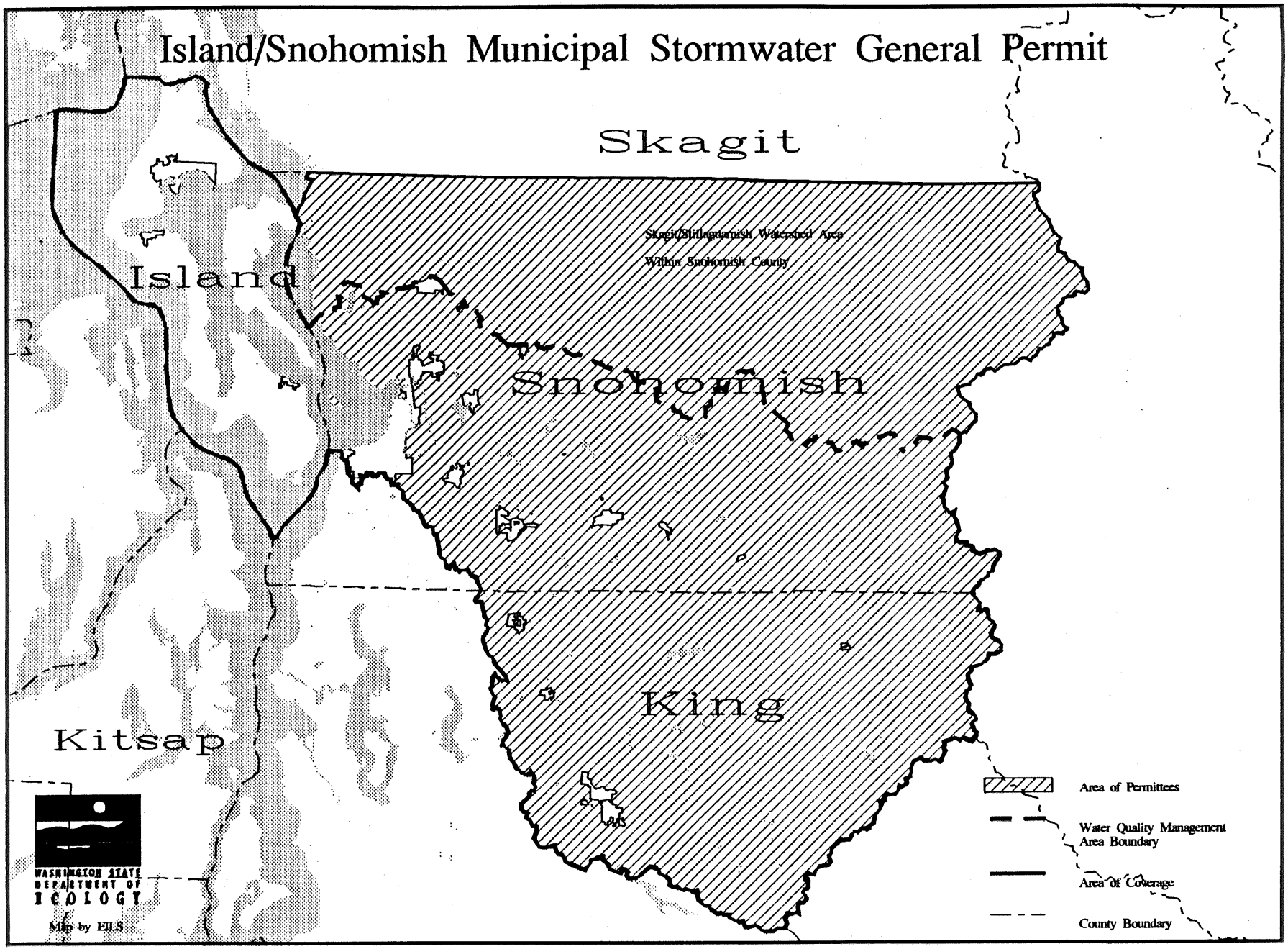
The attached maps show locations of the permit coverage areas, the area of the permittees permit coverage, and the water quality management area boundaries.

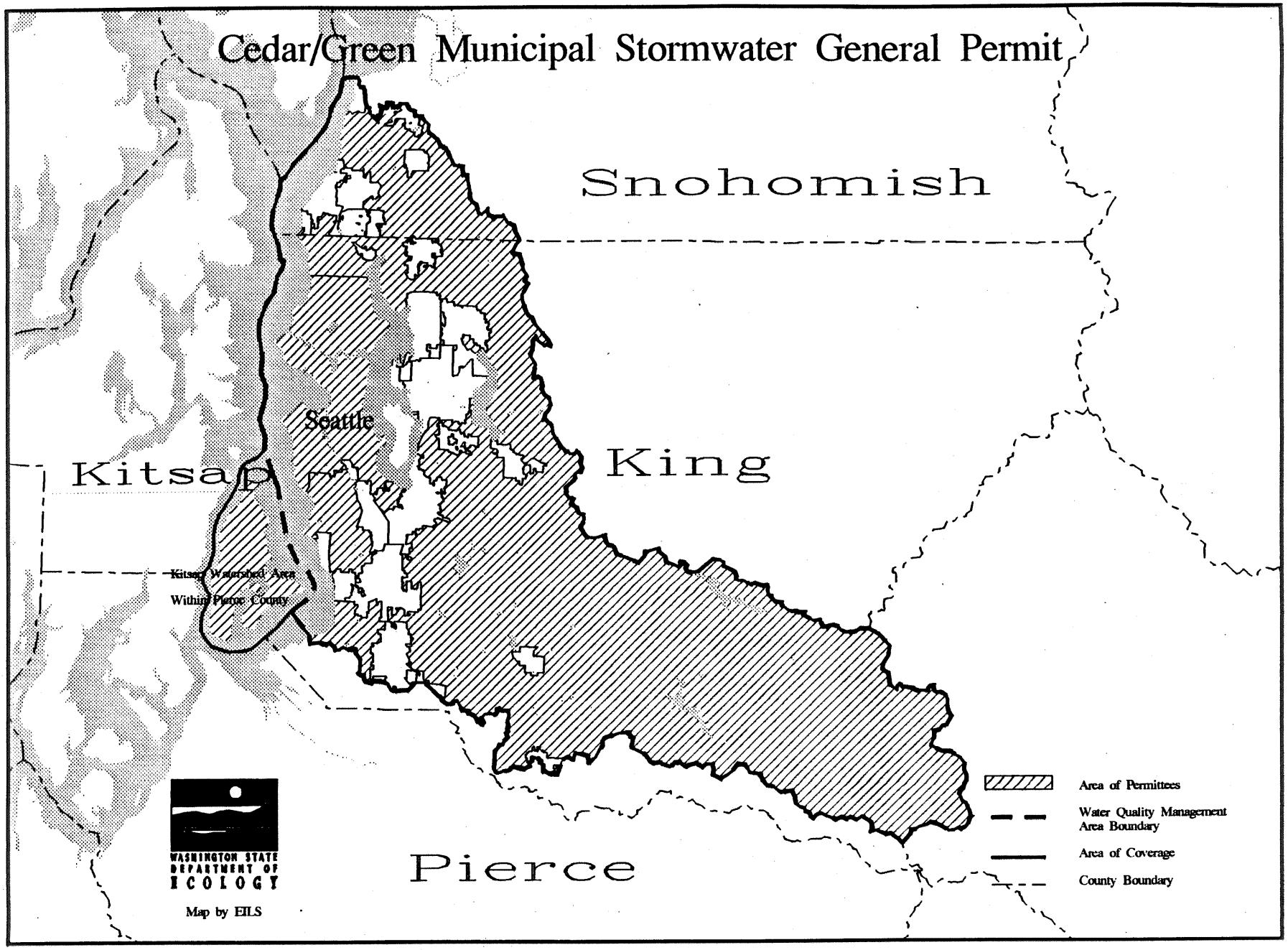
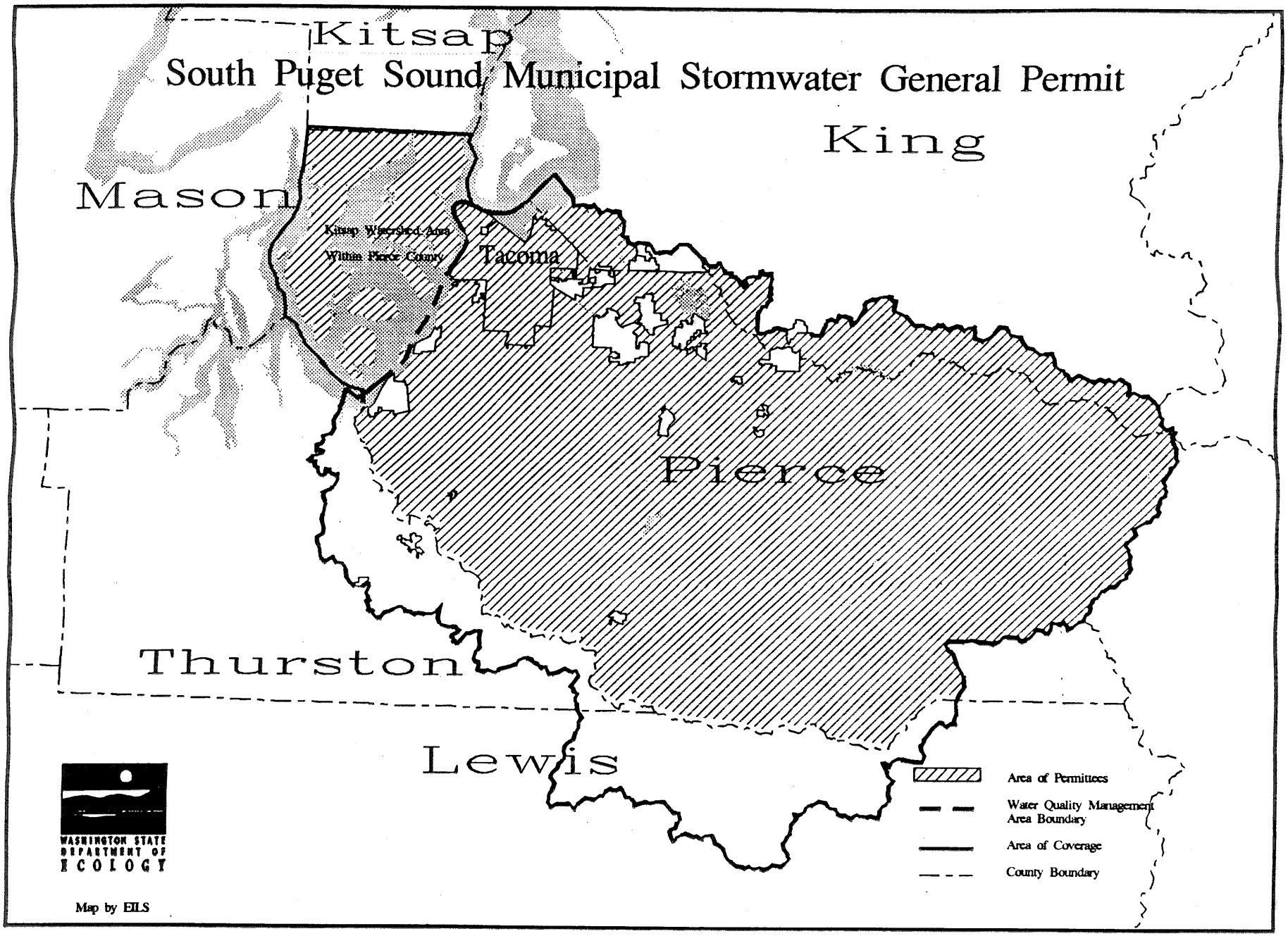
These maps were prepared on the Department of Ecology GIS system. Unfortunately, the boundaries of recently incorporated cities are not in the data library for the GIS system. As a result some cities are mapped as part of the unincorporated county they are located in and appear to be part of the permittees area of permit coverage. The following cities are not shown on the maps:

Seatac
Federal Way
Woodinville
Burien
Newcastle

These cities are not required to obtain a stormwater permit and, therefore, are not cuttently permittees under these permits.

Island/Snohomish Municipal Stormwater General Permit




Cedar/Green Municipal Stormwater General Permit
Snohomish
Seattle
King
Kitsap
Kitsap Watershed Area
Within Pierce County
Pierce
WASHINGTON STATE
DEPARTMENT OF
ECOLOGY
Map by EILS
Area of Permittees
Water Quality Management
Area Boundary
Area of Coverage
County Boundary

South Puget Sound Municipal Stormwater General Permit