



## *2008 Stormwater Management Program*

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Pierce County  
Permit # WAR04-4002



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## INTRODUCTION

Pierce County has been operating under a National Pollutant Discharge Elimination System (NPDES) Phase 1 Municipal Stormwater Permit since the first one was issued by the Washington State Department of Ecology (Ecology) in July 1995. The newest permit was issued in January 2007, and this Stormwater Management Program (SWMP) describes the compliance activities of Pierce County through the permit term (ending in February 2012). Since the County is required to update the SWMP each year, this SWMP will emphasize actions in 2008 through early 2009.

This permit represents a considerable increase in effort, personnel and funds over the requirements of the 1995 permit. This means that now, more than ever, we must enhance cooperation in regional efforts, such as education, monitoring and development of maintenance standards, to ensure efficient use of limited funds. The Phase 1 permittees are already moving forward with these efforts, and what is developed can potentially act as templates for the actions of the Phase 2 permittees, many of whom are already participating.

The program components of the SWMP as outlined in S5 are as follows:

1. **Legal Authority** – The County is required to have legal authority to control discharges into its municipal separate storm sewer system (MS4). This was required under the 1995 permit, and will only require enhancements due to the adoption of the new Stormwater Manual.
2. **Mapping** – Mapping of the MS4, land uses, and tributary areas is required. The County has already met these requirements, and continuously updates the GIS system.
3. **Coordination** – Intra- and intergovernmental coordination is required.
4. **Public involvement** – The SWMP must be updated annually in the same timeframe as the annual report, and public comment opportunities must be made available.
5. **Controlling runoff from new development, redevelopment and construction sites** – Pierce County must adopt a drainage design manual that is equivalent to Ecology's 2005 Manual. The County submitted the proposed Manual on time, and is now working through the equivalency process with Ecology.
6. **Structural stormwater controls** – This permit requires a structural control program, and greater detail about the benefits of the projects.
7. **Source control program for existing development** – This requirement is also tied to the adoption of criteria equivalent to the 2005 Ecology Manual. There are also additional requirements for identifying sources of pollutants.
8. **Illicit Connections and Illicit Discharges Detection and Elimination (IDDE)** – Specific procedural documents are called out, and enforcement timelines for corrections are established.
9. **Operation and Maintenance Program** – O and M standards for public and private stormwater facilities, and roads, streets and highways are required. Reducing impacts

to stormwater from pesticides, herbicides and fertilizers from County departments is also required. Stormwater Pollution Prevention Plans (SWP3) are also required for an expanded list of public facilities.

10. **Education and Outreach Program** – Educational topics to be addressed are specified, and attempting to measure effectiveness and change in actions is required.

Special Condition S8 requires a monitoring program that requires much more effort than the previous permit. Land use characterization, BMP effectiveness, first flush toxicity, and flow reduction are all required to be measured.

A number of County departments, and also several agencies outside of direct County Government control, participate in meeting the requirements of the permit:

## **Pierce County Public Works and Utilities**

### **Water Programs Division**

This division, formerly known as the Stormwater Management Utility, is responsible for coordinating the County's activities under the NPDES permit, including development of the SWMP and the Manual, and reporting activities. This agency also is responsible for basin planning, Lead Entity activities under ESA, source control inspection, stormwater monitoring, shellfish protection outreach and education, adult stormwater education, participation in the Puget Sound Partnership, IDDE, intergovernmental coordination activities, supports watershed councils, design, permitting, and construction of structural stormwater controls and river levees, stream restoration, maintenance of public stormwater ponds and stream corridors, and maintenance of river levees in 3 large river systems.

### **Road Maintenance**

This division is responsible for maintaining the County road system. Duties include repair and maintenance of roads, drywells, catchbasins, and pipes. Vegetation control activities along roads is also part of their duties, and they offer an "Owner Will Maintain" program for those who don't want any herbicide sprayed near their properties.

### **Transportation Services Division**

This division designs and builds new roads, bridges and ferries within the county, and ensures that these structures and the drainage from them meet the requirements of the Manual, as well as archeological, Corps, and ESA requirements.

### **Sewer Utility**

This division operates the Chambers Creek Regional Wastewater Treatment Facility, and the collection system which brings wastewater to the plant. Efficient operation of the collection system and plant ensures that wastewater does not end up in stormwater. The treatment plant operates under separate NPDES Industrial and Wastewater permits.

### **Solid Waste**

This division plans and coordinates solid waste disposal throughout the County. They also offer educational programs, and operate Pierce County Responds, a program for cleaning up illegal dumping and car wrecking operations, which can have substantial impact on stormwater quality. This program has won several awards, and is being emulated across the country.

## **Planning and Land Services Department (PALS)**

This department is responsible for ensuring that the requirements of the Manual are applied to construction activities in the County. They also enforce land use codes, such as animal number limits, wetlands regulations, vegetation retention and clearing and grading.

## **Parks and Recreation**

This department is responsible for developing and maintaining park facilities throughout the County. They operate under an Integrated Vegetation Management Program to limit the use of herbicides, pesticides and fertilizers coming off of their facilities. In conjunction with Water Programs, they have recently obtained grants to convert a large parking lot directly tied to a creek into pervious pavement.

## **Facilities Management**

Responsible for construction and maintenance of most County buildings and grounds.

## **Emergency Management**

Manage and coordinate responses to large emergency events. This would include major spills that may impact stormwater facilities.

## **Information Technology Department**

Geographic Information Systems Division

Responsible for operating and maintaining the County GIS system mapping.

## **Tacoma-Pierce County Health Department**

This agency handles permitting and enforcement of on-site sewage systems, solid waste disposal permitting, shellfish protection, education, some lake and beach monitoring, wellhead protection and groundwater monitoring.

## **Washington State University Pierce County Extension**

This agency provides education and guidance for home landscaping and use of pesticides, fertilizers and herbicides, and water quality information related to animal keeping practices. It has a water quality stewardship course, and is a current area leader in the development in Low Impact Development techniques.

## **Pierce Conservation District**

Receives \$5 per parcel assessment in unincorporated Pierce County and most of the cities, and utilizes that money for programs, and cost share for grants. Funds fish passage repairs, farm plans, fencing, Stream Team, water quality and lakes monitoring, and shellfish education.

## **Basin Planning in Pierce County**

The following description of basin planning in Pierce County is provided for 2 reasons:

1. To demonstrate the practical, structured way in which Water Programs allocates money to surface water management tasks.
2. To demonstrate that, despite the elimination of basin planning as a permit requirement during draft phases of the permit, Pierce County believes that such a unified approach to stormwater is a good way to consider and coordinate the myriad things happening in a basin that impact flows, water quality, and habitat, and that implementation of such plans fulfills many of the requirements of the SWMP.

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Starting in 2000, Pierce County has been developing surface water management Basin Plans for each of its 10 drainage basin plan areas. The Basin Plans are the work plan for the Surface Water Management utility. Each basin plan has cost Pierce County between \$300,000 and \$500,000 to develop, using local funds. The goals of the plans are to:

1. Reduce flood damage
2. protect and enhance water quality
3. Protect and enhance aquatic habitat

There are three phases to the Basin Plans:

### Phase 1- Basin Characterization

This phase is the classic physiographic, hydrologic, and cultural development status of a basin plan area. The objective of Phase 1 is to establish existing conditions and identification of water quality, flooding and habitat problems. Public meetings are held to inform citizens of the planning process, and enlist their aid in the identification of problems.

### Phase 2 - Basin Plan

This phase applies the results of Phase 1 into the development, evaluation and selection of solutions to the problems. It involves development of capital improvement projects, land acquisitions, and nonstructural solutions (i.e. programmatic). Solutions are rated for flood damage reduction, water quality enhancement, and natural resource enhancement. Selected projects are assigned preliminary cost estimates. A Draft Environmental Impact Statement is prepared for each Basin Plan, and public meetings are held. Each Basin Plan is adopted by formal ordinance of the County Council.

### Phase 3 - Implementation

Annually, Pierce County uses the Basin Plans to populate its six year Capital Facilities Plan (CFP) for surface water management and its operating budget request for nonstructural Basin Plan recommendations. Projects included in the CFP from the Basin Plans are selected for geographic diversity, and a diversity of flood damage, water quality, and habitat projects.

Total cost of Basin Plan implementation is estimated at approximately \$304,000,000, including both one time and ongoing costs. Since the Basin Plan program was substantially underway (2001), Pierce County has implemented approximately \$42,000,000 of those recommendations.

Seven of the 10 basin plans are complete and adopted. Those 7 plans, and the Characterization portion of the last 3 plans, can be viewed on the Pierce County Website. The remaining 3 plans will be complete in late 2008 or 2009.

## **Funding Issues**

Water Programs activities are funded from a Surface Water fee charged at the same time as property taxes are due. Water Programs has not had a fee increase since 1997, and actually had a fee decrease of \$5 per parcel several years ago in order to fund activities at the Pierce Conservation District. Inflation, costs of materials such as oil, steel and asphalt, and increase in construction costs due to competition for a set number of contractors have all led to soaring costs, as have costs for land. We have also run an aggressive CIP program over the last few years, which has drawn down much of our reserves. These reasons, coupled with a severe flood in November 2006, which is still affecting the workload of our Maintenance Section, means

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that our funding is at a much lower level than just 2 years ago. Costs of response to the flood have exceeded \$4 million dollars, and continue to mount, while FEMA has not yet reimbursed us for the \$2.5 million we believe we qualify for, and may choose not to reimburse the County.

Water Programs presented several alternatives for funding the enhanced NPDES program, including raising stormwater fees, or shelving some CIP projects temporarily to cover costs. Both of these options were not adopted by the County Council at budget hearings in November, which is the deadline for budget adoption, and for getting any fee increases passed so that they can be added to the property tax statements in April 2008. Since that time we have been working with the Council to further explain the needs, potential penalties, and lawsuit potential to try to pass a supplemental budget, however, as of the writing of this document, it has not occurred. In fact, our Council recently had to trim \$3.6 million from the General Fund, and it is expected that each department will be asked to reduce their current 2008 budget by 1-3% shortly.

Planning and Land Services, which is responsible for permitting and implementation of the new Manual when it takes effect, is currently operating with a projected shortfall of over \$4 million dollars due to the downturn in construction. Water Programs had included the additional personnel needed by PALS in the Water Programs budget, so these FTEs are also not available.

Currently, we believe we can meet permit conditions in 2008 with existing resources, but this will not be the case in early 2009 when monitoring and Manual implementation begin unless additional funding is provided. The budget process for 2009 will be starting shortly, and Water Programs will once again be asking for a funding increase that allows sufficient personnel to meet the requirements of the permit. We will update Ecology on the financial situation as it changes.

In the remainder of this document, language in *italics* is taken directly from the *2007 Phase I Municipal Stormwater Permit*.

**S5. STORMWATER MANAGEMENT PROGRAM**

**S5.A.**

*Each Permittee listed in S1.B. shall implement a Stormwater Management Program (SWMP) during the term of this permit. For the purpose of this permit a stormwater management program is a set of actions comprising the components listed in S5.C. and additional actions and activities, where necessary, to meet the requirements of S7 Compliance with Total Maximum Daily Load Requirements.*

**S5.A. 1.**

*In accordance with the requirements in S9 Reporting Requirements, each Permittee shall prepare written documentation of their SWMP and submit it to Ecology in written and electronic formats with the first year annual report. The documentation of the SWMP shall be organized according to the program components in S5.C., and shall be updated annually. The SWMP documentation shall include a description of each of the program components included in S5.C., and any additional actions necessary to meet the requirements of applicable TMDLs.*

**S5.B.**

*The SWMP shall be designed to reduce the discharge of pollutants from MS4s to the maximum extent practicable, meet state AKART requirements, and protect water quality.*

*Permittees are to continue implementation of existing stormwater management programs until they begin implementation of the updated stormwater management program in accordance with the terms of this permit, including implementation schedules.*

**S5.C.**

*The SWMP shall include the components listed below. The requirements of the stormwater management program shall apply to municipal separate storm sewers, and areas served by municipal separate storm sewers owned or operated by the Permittee. To the extent allowable under state and federal law, all SWMP components are mandatory.*

**S5.C.1. Legal Authority**

**S5.C.1.a.**

*No later than the effective date of this permit, each Permittee shall be able to demonstrate that they can operate pursuant to legal authority which authorizes or enables the Permittee to control discharges to and from municipal separate storm sewers owned or operated by the Permittee.*

**S5.C.1.b.**

*This legal authority, which may be a combination of statute, ordinance, permit, contracts, orders, interagency agreements, or similar means, shall authorize or enable the Permittee, at a minimum, to:*

**S5.C.1.b.i.**

*Control through ordinance, order, or similar means, the contribution of pollutants to municipal separate storm sewers owned or operated by the Permittee from stormwater discharges associated with industrial activity, and control the quality of stormwater discharged from sites of industrial activity;*

**S5.C.1.b.ii.**

*Prohibit through ordinance, order, or similar means, illicit discharges to the municipal separate storm sewer owned or operated by the Permittee;*

S5.C.1.b.iii.

*Control through ordinance, order, or similar means, the discharge of spills and the dumping or disposal of materials other than stormwater into the municipal separate storm sewers owned or operated by the Permittee;*

Pierce County Code Chapter 11.05 Illicit Stormwater Discharges

(<http://piercecountywa.org/sml/Abtus/ourorg/council/code/title11pcc.pdf>)

addresses S5.C.1.b.i.-iii. by prohibiting the discharge of contaminants into surface and storm water. It has been in effect since 1997. It was submitted with the proposed Manual on Feb. 14, 2008 because of its language in connection with Volume IV of the Manual. It will need some minor revisions in language to be passed along with the other code relating to the Manual, and we have informed our permit coordinator that these revisions will be available in early April 2008.

S5.C.1.b.iv.

*Control through interagency agreements among co-applicants, the contribution of pollutants from one portion of the municipal separate storm sewer system to another portion of the municipal separate storm sewer system;*

Pierce County currently does not have any co-applicants. There are two Drainage Districts that have expressed interest in becoming co-permittees with the County, and we are working on agreements at this time. When and if they become final, we will notify Ecology.

S5.C.1.b.v.

*Require compliance with conditions in ordinances, permits, contracts, or orders; and,*

PCC 11.05.040, 060, 080 and 090

(<http://piercecountywa.org/sml/Abtus/ourorg/council/code/title11pcc.pdf>)

Authorizes authority for immediate cessation of illicit discharges, directs persons to address existing discharges, and ability to inspect.

PCC17A.10.040

(<http://piercecountywa.org/xml/Abtus/ourorg/council/code/title17apcc.pdf>)

States that requirements of this title apply to all of unincorporated Pierce County - referring to compliance with the Manual.

S5.C.1.b.vi.

*Within the limitations of state law, carry out all inspection, surveillance, and monitoring procedures necessary to determine compliance and non-compliance with permit conditions, including the prohibition on illicit discharges to the municipal separate storm sewer and compliance with local ordinances.*

PCC 11.05, and specifically 040, 060, 080 and 090

(<http://piercecountywa.org/sml/Abtus/ourorg/council/code/title11pcc.pdf>)

Authorizes authority for immediate cessation of illicit discharges, directs persons to address existing discharges, and ability to inspect.

PCC17A.10.040

(<http://piercecountywa.org/xml/Abtus/ourorg/council/code/title17apcc.pdf>)

States that requirements of this title apply to all of unincorporated Pierce County—referring to compliance with the Manual.

**S5.C.2. Municipal Separate Storm Sewer System Mapping and Documentation**

**S5.C.2.a.**

*The SWMP shall include an ongoing program for mapping and documenting the MS4.*

**S5.C.2.b.**

*Minimum performance measures. The information and its form of retention shall include:*

**S5.C.2.b.i.**

*No later than 2 years from the effective date of this permit each Permittee shall map all known municipal separate storm sewer outfalls and receiving waters, and structural stormwater treatment and flow control BMPs owned, operated, or maintained by the Permittee. Mapping of outfalls and structural BMPs shall continue on an on-going basis as additional outfalls are found, and as new BMPs are constructed or installed. No later than 2 years from the effective date of this permit each permittee shall initiate a program to map connection points between municipal separate storm sewers owned or operated by the Permittee and other municipalities or other public entities.*

This task was completed in 2003. For several years, 3 GPS crews of 3 FTEs each located and GPS'd all apparent structures and waterbodies as noted above, plus private stormwater structures as well. This data was then mapped to various layers that are maintained by the Geographic Information Services Department. One remaining crew obtains new data as roads are built, developments go in, or structures found on inspections are discovered to have been missed in the first effort. Update is continuous, and will proceed as usual for the permit term.

**S5.C.2.b.ii.**

*No later than 4 years from the effective date of this permit each Permittee shall map the attributes listed below for all storm sewer outfalls with a 24" inches nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems. For Counties, the mapping shall be done within urban/higher density rural sub-basins. For Cities, the mapping shall be done throughout the City. Attributes mapped shall include: Land use, Tributary conveyances (indicate type, material, and size where known); and associated drainage areas.*

Please see comments in S5.C.2.b.i above, this is already done, and is updated continuously.

**S5.C.2.b.iii.**

*Each Permittee shall initiate a program to develop and maintain a map of all connections to the municipal separate storm sewer authorized or allowed by the Permittee after the effective date of this permit.*

Please see comments in S5.C.2.b.i above, this is already done, and is updated continuously. New connections are tracked via building permits.

**S5.C.2.b.iv.**

*Each Permittee shall map existing, known connections over 8" to municipal separate storm sewers tributary to all storm sewer outfalls with a 24" inches nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems, according to the following schedule:*

- *City of Seattle and City of Tacoma: 2 years after the effective date of this permit.*

- *Clark, King Pierce and Snohomish Counties: one half the area of the County within urban/higher density rural sub-basins 4 years after the effective date of this permit.*

Please see comments in S5.C.2.b.i above, this is already done, and is updated continuously.

*S5.C.2.b.v.*

*No later than 4 years from the effective date of this permit each Permittee shall map geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface water.*

Please see comments in S5.C.2.b.i above, this is already done, and is updated continuously. We know where the retention facilities are (public and private), where pothole areas are, and where all public and private drywells are located. We have provided public drywell locations to the UIC program as required.

*S5.C.2.b.vi.*

*To the extent consistent with national security laws and directives, each Permittee shall make available to Ecology, upon request, available maps depicting the information required in S5.C.2.b.i. through v., above. The preferred format of submission will be an electronic format with fully described mapping standards. An example description is available on Ecology's website. Notification of updated GIS data layers shall be included in annual reports.*

Pierce County will work to provide Ecology with whatever mapping tools they need, as we always have. However, due to differences in mapping systems, we may not be able to provide it in the exact format Ecology would want. We will strive to make it as consistent as is practicable.

*S5.C.2.b.vii.*

*Upon request, and to the extent appropriate, Permittees shall provide mapping information to Co-Permittees and Secondary Permittees. This permit does not preclude Permittees from recovering reasonable costs associated with fulfilling mapping information requests by Co-Permittees and Secondary Permittees.*

Pierce County already provides mapping information to Drainage Districts as requested. We have also requested information from them to update our maps, and they have, for the large part, been most accommodating. We will continue to assist with mapping requests for other jurisdictions, watershed groups, etc.

**S5.C.3. Coordination**

*S5.C.3.a.*

*The SWMP shall include coordination mechanisms among departments within each jurisdiction to eliminate barriers to compliance with the terms of this permit. The SWMP shall also include coordination mechanisms among entities covered under a municipal stormwater NPDES permit to encourage coordinated stormwater-related policies, programs and projects within a watershed.*

*S5.C.3.b.*

*Minimum performance measures:*

**S5.C.3.b.i.**

*No later than 1 year after the effective date of this permit, establish, in writing, and begin implementation of, intra-governmental (internal) coordination agreement(s) or Executive Directive(s) to facilitate compliance with the terms of this permit.*

An Executive Order, signed by John Ladenburg on February 8, 2008, directs the various departments to participate fully in developing and implementing programs and actions to ensure permit compliance. A copy of the directive is attached to the Annual Report.

**S5.C.3.b.ii.**

*No later than 2 years after the effective date of this permit, or within 2 years following the addition of a new Secondary Permittee, establish:*

- *Coordination mechanisms clarifying roles and responsibilities for the control of pollutants between physically interconnected MS3s of the Permittee and any other Permittee covered by a municipal stormwater permit.*
- *Coordinating stormwater management activities for shared waterbodies, among Permittees and Secondary Permittees, to avoid conflicting plans, policies and regulations.*

*Permittees shall document their efforts to establish the required coordination mechanisms. Failure to effectively coordinate is not a permit violation provided other entities, whose actions the Permittee has no or limited control over, refuse to cooperate.*

Pierce County will continue to participate in regional forums, meetings and efforts with other Permittees throughout the term of the permit. The Phase 1 permittees will continue to meet on a regular basis to coordinate specific aspects of the permit. Pierce County provides staff and financial support to the Puyallup River Watershed Council, the Key Peninsula/Gig Harbor/Islands Watershed Council, and the Chambers/Clover Watershed Council. Approximately 2 FTEs plus \$50,000 annually go to support these councils. This support will continue through 2008. Other permittees (Phase 1 and 2) also participate in these councils. For permit compliance, we intend to use these forums to gain agreements for shared waterbodies and interconnected MS4s. Pierce County also acts as Lead Entity for SRF Board actions in the County, and is working on education programs that are shared with other Permittees. We also participate in the Regional Roads Forum to develop consistent, protective road maintenance practices. Staff members are also active in the Monitoring Consortium, and on a committee of the Puget Sound Partnership.

**S5.C.4. Public Involvement and Participation**

**S5.C.4.a.**

*The SWMP shall provide ongoing opportunities for public involvement in the Permittee's stormwater management program and implementation priorities.*

**S5.C.4.b.**

*Minimum performance measures:*

**S5.C.4.b.i.**

*No later than 6 months after the effective date of this permit, develop and begin implementing a process to create opportunities for the public to participate in processes involving the development, implementation and update of the Permittee's SWMP. Each Permittee shall develop and implement a process for consideration of public comments on their SWMP.*

For the 2008 SWMP, Pierce County utilized our Stormwater Advisory Board (SWAB), which holds open public meetings monthly, to review and comment on the SWMP. The SWAB reviews and comments formally to the County Council on all major initiatives of Water Programs. They have thoroughly reviewed and commented on 7 of our basin plans, which form the basis for most of the County's stormwater program.

*S5.C.4.b.ii.*

*Each Permittee shall make their SWMP, the SWMP documentation required under S5.A.1. and all submittals required by this permit, including annual reports, available to the public, starting with the first annual report, on the Permittee's website or submitted in electronic format to Ecology for posting on Ecology's website.*

The SWMP and annual reports shall be published on the County's website at [www.piercecountywa.org/npdes](http://www.piercecountywa.org/npdes)

**S5.C.5. Controlling Runoff from New Development, Redevelopment and Construction Sites**

*S5.C.5.a.*

*The SWMP shall include a program to prevent and control the impacts of runoff from new development, redevelopment, and construction activities. The program shall apply to private and public development, including roads.*

*S5.C.5.b.*

*Minimum performance measures:*

*S5.C.5.b.i.*

*The Minimum Requirements, thresholds, and definitions in Appendix 1, or Minimum Requirements, thresholds, and definitions determined by Ecology to be equivalent to Appendix 1, for new development, redevelopment, and construction sites shall be included in ordinances or other enforceable documents adopted by the local government. Adjustment and variance criteria equivalent to those in Appendix 1 shall be included. More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of basin plans or other similar water quality and quantity planning efforts. Such local requirements and thresholds shall provide equal or similar protection of receiving waters and equal or similar levels of pollutant control as compared to Appendix 1.*

The existing Pierce County Stormwater and Site Development Manual requires public and private development to control the impacts of stormwater runoff. However, the thresholds in Appendix 1 (2005 DOE) for minimum requirement implementation are more stringent; for 5,000 sq. ft of impervious surface all minimum requirements are applicable, while for 2,000 sq. ft of impervious surface (minimum requirements 1-5). This will have an impact regarding review of additional stormwater submittals for single family homes. Additional staffing is needed (and has been requested) to accomplish the full measures as mandated in the latest NPDES permit.

Most "Adjustments" to the Manual criteria are done via 17A.10.090 "Technical Equivalency", which include the following steps;

- a.) The design engineer submits the request in writing, and addresses whether/how the requirements of 17.10.090.A are being met.

- b.) The engineering reviewer coordinates with the Water Programs or Road Maintenance Divisions as necessary, to determine acceptability of the request.
- c.) The reviewer provides a written decision (letter) to the design engineer approving or denying the request. The reason(s) for approval/denial is included in the letter.
- d.) If the design engineer wishes to challenge a denial, he/she will need to bring the issue before the Technical Equivalency Board. There is a \$600.00 application fee for this.

There is also a "Variance" process available, as described in 17A.10.080, which refers to 18A.75.040. The variance requires the Hearing Examiner to make the decision, which requires a public hearing.

Pierce County has been preparing a new Stormwater Manual, which will be equivalent to the 2005 DOE Stormwater Management Manual for Western Washington, ie Appendix 1 as stated in b. above. Pierce County's Manual is currently under review by DOE, and the target date for adoption is late 2008.

*S5.C.5.b.ii.*

*The local requirements shall include a site planning process and BMP selection and design criteria that, when used to implement the minimum requirements in Appendix 1, will protect water quality, reduce the discharge of pollutants to the maximum extent practicable, and satisfy the state requirement under chapter 90.48 RCW to apply all known, available, and reasonable methods of prevention, control and treatment (AKART) prior to discharge. Permittees shall document how the criteria and requirements will protect water quality, reduces the discharge of pollutants to the maximum extent practicable, and satisfies the state AKART requirements. Permittees who choose to use the site planning process, and BMP selection and design criteria in the 2005 Stormwater Management Manual for Western Washington [SMMWW], or an equivalent manual approved by Ecology, may cite this choice as their sole documentation to meet this requirement.*

The current version of the Pierce County Stormwater and Site Development Manual includes site planning processes and BMP selection criteria. Together with application of the minimum requirements and thresholds for this Manual, water quality is protected and discharge of pollutants is reduced. However, Pierce County has chosen to create and adopt a Stormwater Manual equivalent to the 2005 SMMWW; the target date for adoption of Pierce County's new Stormwater Manual is late 2008. The new Manual will use the site planning process, BMP selection and design criteria per the SMMWW.

*S5.C.5.b.iii.*

*The program must allow non-structural preventive actions and source reduction approaches such as Low Impact Development Techniques (LID), to minimize the creation of impervious surfaces, and measures to minimize the disturbance of soils and vegetation.*

Chapter 10 of the current Pierce County Stormwater and Site Development Manual "Low Impact Development" provides LID information for development in Pierce County. Certain portions of the county require development by LID standards; this requirement is promulgated in Community Plans, which are developed by the Long Range Planning section, which works with local citizens to shape the direction of their community. These plans are adopted by the County Council after extensive hearing processes.

*S5.C.5.b.iv.*

*No later than 18 months from the effective date of this permit, each Permittee shall adopt a local program that meets the requirements in S5.C.5.b.i through iii., above. Ecology review and approval of the local manual and ordinances is required. Permittees shall provide detailed, written justification of any of the requirements which differ from those contained in Appendix 1 of this permit.*

*The Permittee shall submit draft enforceable requirements, technical standards and manual to Ecology no later than 12 months after the effective date of this permit. Ecology will review and provide written response to the Permittee. If Ecology takes longer than 60 days to provide a written response, the required deadline for adoption will be automatically extended by the number of calendar days that Ecology exceeds a 60 day period for written response.*

*In the case of circumstances beyond the Permittee's control, such as litigation or administrative appeals that may result in noncompliance with the requirements of this section, the Permittee shall promptly notify Ecology and submit a written request for an extension.*

Pierce County has had an adopted Stormwater and Site Development Manual, which requires public and private development to control the impacts of stormwater runoff, since 1996. The latest version of this Manual is 2005. In addition, Pierce County has chosen to create and adopt a Stormwater Manual equivalent to the SMMWW; the target date for adoption of Pierce County's new Stormwater Manual is late 2008. The draft of this manual is currently under review by Ecology.

*S5.C.5.b.v.*

*No later than 18 months after the effective date of this permit, the program shall establish legal authority to inspect private stormwater facilities and enforce maintenance standards for all new development and redevelopment approved under the provisions of this section.*

Pierce County has an established program as well as legal authority to inspect private stormwater facilities, as well as enforce maintenance standards. For new development, a condition of permit approval (printed on all site development permits) is as follows: "The County is authorized to make inspections and take actions as required to enforce these regulations. The County representative shall present proper credentials and make a reasonable effort to contact the owner before entering onto private property." The County is therefore meeting this requirement.

*S5.C.5.b.vi.*

*No later than 18 months after the effective date of this permit, the program shall include a process of permits, plan review, inspections, and enforcement capability to meet the following standards for both private and public projects, using qualified personnel:*

- *Review all stormwater site plans submitted to the Permittee for proposed development involving land disturbing activity that meet the thresholds in S5.C.5.b.i., above.*
- *Inspect prior to clearing and construction, all permitted development sites that meet the thresholds in S5.C.5.b.i., and that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7.*

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- *Inspect all permitted development sites involving land disturbing activity that meet the thresholds in S5.C.5.b.i., above, during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.*
- *Inspect all development sites that meet the thresholds in S5.C.5.b.i., upon completion of construction and prior to final approval/occupancy to verify proper installation of permanent erosion controls and stormwater facilities/BMPs. Enforce as necessary based on the inspection. A maintenance plan shall be developed for permanent stormwater facilities/BMPs and responsibility for maintenance shall be assigned.*
- *Compliance with the above inspection requirements shall be determined by the presence of an established inspection program designed to inspect all sites involving land disturbing activity that meet the thresholds in S5.C.5.b.i., and achieve inspection of 95% of sites. The inspections in may be combined with other inspections provided they are performed using qualified personnel.*
- *The program shall include a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained.*
- *The program shall include an enforcement strategy to respond to issues of non-compliance.*

Both engineering plan review and site development inspections are functions of the Pierce County Development Engineering Section of Planning and Land Services. Development Engineering is further divided into Work Units. The Area Review Work Unit reviews all stormwater and site development plans for commercial projects as well as public road plats, private road plats and short plats. Review of single family home construction and enforcement is accomplished by a separate Single Family and Enforcement Work Unit, while inspections are performed by the Inspection Work Unit. A brief description of each Work Unit is as follows:

a.) Area Review; The Area Reviewer Engineers review the designs of proposed road, storm drainage, clearing, and impervious surface generating projects for compliance with the County's Stormwater Management and Site Development Manual/Ordinance.

b.) Single Family/Enforcement; The Technical Support Engineers assist single family building permit applicants in implementing necessary storm drainage and erosion BMPs required by ordinance. Also within this work unit engineer(s) respond to and process complaints and violations related to stormwater, erosion, filling and flooding.

c.) Inspection Work Unit; Inspectors perform erosion control and permanent BMP inspections on road, storm drainage, commercial, subdivision, and industrial developments, as well as erosion control and drainage inspections on single family home construction.

In addition, there is a Code Enforcement Section of Planning and Land Services; they act as the central clearinghouse for complaints, and are responsible for investigation and enforcement of numerous County ordinances. The Code Enforcement Section supports implementation of the Stormwater Management and Site Development Manual by fielding telephone calls and initiating

the documentation of complaints pertaining to storm drainage, erosion, sedimentation, and flooding.

Together, the Work Units of the Development Engineering Section are responsible for ensuring that development and redevelopment occurs in accordance with the requirements of the Pierce County Stormwater and Site Development Manual/Ordinance. It must be stressed that the financial impacts and adequate staffing needed to fully implement the latest NPDES permit have been researched. Additional staffing is needed (and has been requested) to accomplish the full measures as mandated in the latest NPDES permit.

*S5.C.5.b.vii.*

*No later than the effective date of this permit, the Permittee shall make available the "Notice of Intent for Construction Activity" and/or copies of the "Notice of Intent for Industrial Activity" to representatives of proposed new development and redevelopment. Permittees will continue to enforce local ordinances controlling runoff from sites that are covered by other stormwater permits issued by Ecology.*

Copies are available at the Pierce County Planning and Land Services Permit Counter.

*S5.C.5.b.viii.*

*No later than 18 months after the effective date of this permit, each permittee shall ensure that all staff whose primary job duties are implementing the program to Control Stormwater Runoff from New Development, Redevelopment, and Construction Sites, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. As determined necessary by the Permittee, follow-up training shall be provided to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.*

All inspection staff are presently required to maintain Certified Erosion Control Lead credentials. Other specific trainings regarding changes in procedures has not occurred. Additional staffing is needed (and has been requested) to accomplish the full measures as mandated in the latest NPDES permit.

**S5.C.6. Structural Stormwater Controls**

*S5.C.6.a.*

*The SWMP shall include a program to construct structural stormwater controls to prevent or reduce impacts to waters of the state caused by discharges from the MS4. Impacts that shall be addressed include disturbances to watershed hydrology and stormwater pollutant discharges. The program shall consider impacts caused by stormwater discharges from areas of existing development, including runoff from highways, streets and roads owned or operated by the Permittee, and areas of new development, where impacts are anticipated as development proceeds. The program shall address impacts that are not adequately controlled by the other required actions of the SWMP, and shall provide proposed projects and an implementation schedule.*

*The program shall consider the construction of projects such as: regional flow control facilities; water quality treatment facilities; facilities to trap and collect contaminated particulates; retrofitting of existing stormwater facilities; and rights-of-way, or other property acquisition to provide additional water quality and flow control benefits. Permittees should also consider other means to address impacts, such as reduction or prevention of hydrologic changes through the use of on-site (infiltration and dispersion) stormwater management BMPs and site design*

*techniques, riparian habitat acquisition, or restoration of forest cover and riparian buffers, for compliance with this requirement. Permittees may not use in-stream culvert replacement or channel restoration projects for compliance with this requirement.*

*S5.C.6.b.*

*Minimum Performance Measures:*

*S5.C.6.b.i.*

*No later than 1 year after the effective date of this permit, each Permittee shall develop a Structural Stormwater Control program designed to control stormwater impacts that are not adequately controlled by other required actions of the SWMP. Implementation of the program shall begin no later than 18 months after the effective date of this permit. Permittees shall provide a list of planned individual projects that are scheduled for implementation during the term of this permit. Updates and revisions to the list will be provided in the annual report.*

*The Structural Stormwater Control program may also include a program designed to implement small scale projects that are not planned in advance.*

Pierce County's Surface Water Management Utility (now known as Water Programs) was created in 1989 specifically to address non-riverine flooding throughout the County. Years of minimal stormwater planning were starting to show as urbanization increased throughout the County. Our Capital Improvement program (CIP), which is equivalent to a Structural Stormwater Control Program, continues to utilize the majority of stormwater funds collected in Pierce County. Reductions to urban flooding are a testament to the effectiveness of this program in recent years, however, there is still much to do, as indicated in our Basin Plans. Please see discussion of Basin Plans at the beginning of this SWMP.

Each year, Water Programs must submit an update to the County 6 Year Capital Facilities Plan, indicating which capital facilities we plan to construct over a 6 year time frame. Current year and 6 year projects and descriptions are included as an attachment to the Annual Report.

Water Programs Maintenance Section also performs Small Works Projects that are typically done immediately because they do not require the long planning and permitting timeline that large CIP projects do. When the program was begun, a limit of \$25,000 was the cutoff for this type of project, but over the years this has proven impractical. Small works can now include projects up to \$200,000. Projects over this amount revert to the CIP program.

The Road Maintenance Section also has a small works program, but they have kept their limit low, and so beyond minor culvert replacement, most projects revert to the Transportation Engineering Section for design and construction.

*S5.C.6.b.ii.*

*Each Permittee shall include a description of the Structural Stormwater Control Program in the written documentation of their SWMP. The description of the Structural Stormwater Control Program shall include the following:*

- The goals that the Structural Stormwater Control Program are intended to achieve.*
- The planning process used to develop the Structural Stormwater Control Program, including: the geographic scale of the planning process, the issues and regulations*

*addressed, the steps in the planning process, the types of characterization information considered, the amount budgeted for implementation, and the public involvement process.*

The County's goals for the Structural Control Program include:

1. Flood protection up to the 1% chance flood in most circumstances.
2. Meeting prescriptive design standards for water quality as outlined in the DOE Manual.
3. Improve habitat conditions using design standards and requirements outlined in permits from DOE, WDFW, and the Army Corps of Engineers.

Pierce County has developed basin specific plans for identifying stormwater capital improvement needs (see Basin Plan section at beginning of this document). The planning process has public involvement for the process of characterizing a basin's need in regard to flooding, water quality and habitat. The plans then recommend solutions to these problems, keeping in mind other plans in place, such as Community Plans. The basin plan prioritizes the projects into high, medium and low, based on the magnitude of the problem and the benefits of the solution. Basin plans are adopted by the County Council. Funding for individual projects is included in the annual adoption of a 6 year capital facilities plan by the council, and those numbers are included with the project list attached to this document.

*S5.C.6.b.iii.*

*For planned individual projects, and programs of small projects, provide the following information:*

- *The estimated pollutant load reduction that will result from each project designed to provide stormwater treatment.*
- *The expected outcome of each project designed to provide flow control.*
- *Any other expected environmental benefits.*
- *If planned, monitoring or evaluation of the project and monitoring/evaluation results.*

We do not have any projects planned for 2008 that are strictly for stormwater treatment. The expected outcomes of projects designed to provide flow control, plus other benefits, are listed in the *2008-2013 Surface Water and River Improvement Program* which is attached to the Annual Report. Please refer to individual basin plans on the County Website for more information on the rationale and process for selecting Structural Control projects.

*S5.C.6.b.iv.*

*Information about the Structural Stormwater Control Program shall be updated with each annual report.*

Each year we must update the 6 year program listed above, and updates will be provided in the annual report.

**S5.C.7. Source Control Program for Existing Development**

*S5.C.7.a.*

*The SWMP shall include a program to reduce pollutants in runoff from areas that discharge to municipal separate storm sewers owned or operated by the Permittee. The program shall include the following:*

S5.C.7.a.i.

*Application of operational and structural source control BMPs, and, if necessary, treatment BMPs to pollution generating sources associated with existing land uses and activities.*

S5.C.7.a.ii.

*Inspections of pollutant generating sources at commercial, industrial and multifamily properties to enforce implementation of required BMPs to control pollution discharging into municipal separate storm sewers owned or operated by the Permittee.*

S5.C.7.a.iii.

*Application and enforcement of local ordinances at applicable sites, including sites that are covered by other stormwater permits issued by Ecology. Permittees that are in compliance with the terms of this permit will not be held liable by Ecology for water quality standard violations or receiving water impacts caused by industries and other Permittees covered, or which should be covered under an NPDES permit issued by Ecology.*

S5.C.7.a.iv.

*Reduction of pollutants associated with the application of pesticides, herbicides, and fertilizer discharging into municipal separate storm sewers owned or operated by the Permittee.*

S5.C.7.b.

*Minimum Performance Measures for Source Control Program:*

S5.C.7.b.i.

*No later than 18 months after the effective date of this permit, adopt and begin enforcement of an ordinance, or other enforceable documents, requiring the application of source control BMPs for pollutant generating sources associated with existing land uses and activities (See Appendix 8 to identify pollutant generating sources).*

*The requirements of this subsection are met by using the source control BMPs in Volume IV of the 2005 Stormwater Management Manual for Western Washington, or a functionally equivalent manual approved by Ecology.*

*Ecology review and approval of the ordinance, or other enforceable documents, and source control program is required. Each Permittee shall submit the proposed source control program and all necessary documentation to Ecology for review, no later than 12 months after the effective date of this permit. If Ecology does not request changes within 60 days, the proposed source control BMPs are considered approved.*

*Operational source control BMPs shall be required for all pollutant generating sources. Structural source control BMPs shall be required for pollutant generating sources if operational source control BMPs do not prevent illicit discharges or violations of surface water, ground water, or sediment management standards because of inadequate stormwater controls. Implementation of source control requirements may be done through education and technical assistance programs, provided that formal enforcement authority is available to the Permittee and is used as determined necessary by the Permittee, in accordance with S5.C.7.b.iv., below.*

*Pierce County adopted its Stormwater Pollution Prevention Manual in 1996, and in 1997 created a Water Quality Investigation and Enforcement Guidance document, and a Water Quality Illicit Discharge Inspection Program Guidance document. Since that time, our Inspections program has used all 3 documents to guide our program. Pierce County*

submitted a new *Stormwater Pollution Prevention Manual* as part of the Manual submittal required by February 15, 2008. We submitted our existing code (PCC 11.05 Illicit Stormwater Discharges) along with the new Manual, and will be updating that ordinance along with Manual ordinances as we move through the approval process with both Ecology and the County Council.

We have a draft update of our *Water Quality Investigation and Enforcement and Guidance* document, and will be replacing our *Water Quality Illicit Discharge Inspection Guidance* with a new *Illicit Discharge Detection and Elimination Guidance* document which we have drafted based on the requirements in the permit.

Reduction of pesticides, herbicides and fertilizers being discharged is accomplished by several departments and agencies. County educators and WSU extension provide information on appropriate uses and alternatives to use of these compounds. Road Maintenance contracts out road vegetation control programs, and has a "Owner Will Maintain" program, and has established clearly marked buffers at water crossings to prevent spraying over water. Parks and Recreation, and Facilities Management, use Integrated Pest Management Plans to keep chemical usage to a minimum on their facilities. They track all pesticide, herbicide and fertilizer usage. These programs will continue during this permit cycle.

*S5.C.7.b.ii.*

*No later than 18 months after the effective date of this permit, establish a program to identify sites which are potentially pollution generating. The program shall include:*

- *Inventory or listing of the land uses/businesses using the categories of land uses and businesses in Appendix 8. The Permittee shall periodically update the inventory as new businesses are identified and business ownership/management and responsibilities change.*

Pierce County will compile a listing of businesses by the 18 month deadline. This will be accomplished using our GIS system, Washington State Department of Revenue records, Fire Marshall records, and business license records, as well as observation while in the field conducting inspections of other sites.

- *Complaint-based response to identify other pollutant generating sources, such as mobile or home-based businesses.*

Pierce County Water Programs Water Quality Inspection staff respond with 24 hours (usually same day in which it was called in) to any water quality complaint. We expect to continue with this level of service. We would perform an inspection of the site, talk to the owner/renter on site, or get contact information for off-site owners (common with gas stations), and provide BMP information on what is needed to come into compliance. A follow-up letter would be sent, with time frames for compliance. Progressive enforcement would follow if needed.

*S5.C.7.b.iii*

*Starting no later than 24 months after the effective date of this permit, implement an audit/inspection program for sites identified pursuant to S5.C.7.b.ii. above.*

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- *All identified sites with a business address shall be provided, by mail, telephone, or in person, information about activities that may generate pollutants and the source control requirements applicable to those activities. This information may be provided all at one time or spread out over the last three years of the permit term to allow for some tailoring and distribution of the information during site inspections. Businesses may self-certify compliance with the source control requirements at the discretion of the Permittee. The Permittee shall inspect 20% of these sites annually to assure BMP effectiveness and compliance with source control requirements. The Permittee may select which sites to inspect each year and is not required to inspect 100% of sites over a 5-year period. Sites may be prioritized for inspection based on their land use category, potential for pollution generation, proximity to receiving waters, or to address an identified pollution problem within a specific geographic area or sub-basin.*

Pierce County's Source Control Program has been in place since 1998. We have been inspecting businesses identified from the original SIC code list provided in the original 1995 permit. We have also been inspecting gas stations (due to problems we have observed), and any other businesses we see or that have been complained about that may not have adequate practices for protecting stormwater discharges. We currently inspect over 50% of these businesses each year, so meeting the permit goals for the next 2 years should be possible. Future years would depend upon the number of inspections that will be added by the new SIC code list in the 2007 permit, and the budget we are provided.

- *Each Permittee shall inspect 100% of sites identified through legitimate complaints*

We currently investigate all water quality complaints received within 24 hours. Complaints are entered into our Service Response System database, investigated, and then referred to proper agencies, or receive further review for action. Cases are closed when the problem is corrected, or no further action is necessary or possible under the constraints of County regulations or budget.

When the nature of a complaint refers to agricultural practices or animal keeping, County inspectors visit the site and assess the problem, and, if appropriate, contact the PCD to work with the property owner in developing a management plan. The PCD is a non-regulatory agency, and this often puts the owner in a more cooperative mood. The PCD reports progress to us, in case we have to take additional measures to ensure compliance.

*S5.C.7.b.iv.*

*No later than 24 months after the effective date of this permit, each Permittee shall implement a progressive enforcement policy to require sites to come into compliance with stormwater requirements within a reasonable time period as specified below:*

- *If the Permittee determines, through inspections or otherwise, that a site has failed to adequately implement required BMPs, the Permittee shall take appropriate follow-up action(s) which may include: phone calls, reminder letters or follow-up inspections.*
- *When a Permittee determines that a facility has failed to adequately implement BMPs after a follow-up inspection, the Permittee shall take further enforcement action as established through authority in its municipal code and ordinances, or through the judicial system.*

- *Each Permittee shall maintain records, including documentation of each site visit, inspection reports, warning letters, notices of violations, and other enforcement records, demonstrating an effort to bring facilities into compliance. Each Permittee shall also maintain records of sites that are not inspected because the property owner denies entry.*
- *A Permittee shall contact Ecology immediately upon discovering a source control violation that presents a severe threat to human health or the environment. A Permittee may refer non-emergency violations of local ordinances to Ecology, provided, the Permittee also makes a documented effort of progressive enforcement. At a minimum, a Permittee's enforcement effort shall include documentation of inspections and warning letters or notices of violation.*

PCC11.05 provides for enforcement actions relative to water quality violations and illicit discharges. Our inspection and enforcement program has been in place since 1998, and we keep records of inspections, send out warning letters and notices of violation, and engage in progressive enforcement. We will continue to notify Ecology of situations that present a severe threat to human health or the environment. Typically, it is Ecology that contacts us to investigate a complaint they have received. We investigate as appropriate, and provide verbal and written reports to Ecology, notifying them if they need to intervene, or if we were able to resolve the problem.

See comment above on use of PCD for agriculture-related actions.

*S5.C.7.b.v.*

*No later than 24 months after the effective date of this permit, each Permittee shall ensure that all staff whose primary job duties are implementing the source control program are trained to conduct these activities. The training shall cover the legal authority for source control (adopted codes, ordinances, rules, etc.), source control BMPs and their proper application, inspection protocols, and enforcement procedures. Follow-up training shall be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.*

Training is provided to new inspectors when they report for work. Typically, they inspect along with an experienced inspector for 2-4 weeks before they begin to do it on their own. They study and become familiar with County regulations and inspection protocol (from manuals cited above), and are encouraged to ask questions of more experienced inspectors if there is confusion about a particular site or protocol. Each inspector is equipped with a cell phone, and can call and ask questions on the spot if needed. We will be providing additional training by the 24 month deadline, and will report it in the next annual report.

**S5.C.8. Illicit Connections and Illicit Discharges Detection and Elimination**

*S5.C.8.a.*

*The SWMP shall include an ongoing program to detect, remove and prevent illicit connections and illicit discharges, including spills, into the municipal separate storm sewers owned or operated by the Permittee.*

*S5.C.8.b.*

*Minimum Performance Measures:*

S5.C.8.b.i.

No later than the effective date of this permit, each Permittee shall continue implementing an on-going program to prevent, identify and respond to illicit connections and illicit discharges. The program shall include procedures for reporting and correcting or removing illicit connections, spills and other illicit discharges when they are suspected or identified. No later than 24 months after the effective date of this permit, each permittee shall develop procedures for addressing pollutants entering the MS4 from an interconnected, adjoining MS4.

Illicit connections and illicit discharges shall be identified through field screening, inspections, complaints/reports, construction inspections, maintenance inspections, source control inspections, and/or monitoring information, as appropriate.

S5.C.8.b.ii.

No later than 18 months after the effective date of this permit, each Permittee shall evaluate, and if necessary update, existing ordinances or other regulatory mechanisms to effectively prohibit non-stormwater, illegal discharges, and/or dumping into the Permittee's municipal separate storm sewer system.

1. The ordinance or other regulatory mechanism, does not need to prohibit the following categories of non-stormwater discharges:

- Diverted stream flows;
- Rising ground waters;
- Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
- Uncontaminated pumped ground water;
- Foundation drains;
- Air conditioning condensation;
- Irrigation water from agricultural sources that is commingled with urban stormwater;
- Springs;
- Water from crawl space pumps;
- Footing drains; and
- Flows from riparian habitats and wetlands.

2. The ordinance or other regulatory mechanism, shall prohibit the following categories of non-stormwater discharges unless the stated conditions are met:

- Discharges from potable water sources, including water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4.
- Discharges from lawn watering and other irrigation runoff. These discharges shall be minimized through, at a minimum, public education activities (see S5.C.10) and water conservation efforts.
- Dechlorinated swimming pool discharges. The discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the

*MS4. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.*

- *Street and sidewalk wash water, water used to control dust, and routine external building washdown that does not use detergents. The Permittee shall reduce these discharges through, at a minimum, public education activities (see S5.C.10.) and/or water conservation efforts. To avoid washing pollutants into the MS4, Permittees shall minimize the amount of street wash and dust control water used. At active construction sites, street sweeping shall be performed prior to washing the street.*
  - *Other non-stormwater discharges. Other non-stormwater discharges shall be in compliance with the requirements of a stormwater pollution prevention plan reviewed by the Permittee which addresses such discharges.*
3. *The Permittee's SWMP shall, at a minimum, address each category in (2) above in accordance with the conditions stated therein.*
  4. *The SWMP shall further address any category of discharges in (1) or (2) above if the discharges are identified as significant sources of pollutants to waters of the State.*
  5. *Non-stormwater discharges covered by another NPDES permit and discharges from emergency fire fighting activities are allowed in the MS4 in accordance with S2 Authorized Discharges.*

Existing PCC 11.05 Illicit Stormwater Discharges has been used since 1996 to prohibit illicit discharges to the MS4. This ordinance was submitted with the Manual on February 15, 2008 because it is tied to the Source Control portion of the manual. It will be updated as the Manual proceeds thru the equivalency process with Ecology, and the legislative process with our County Council to reflect the changes indicated in the permit. Yard care education is done by our Solid Waste Department, who promotes composting and wise water use, and who also runs Pierce County Responds, which responds to dumping sites and illegal wrecking yard operations, both of which have negative impacts on stormwater. The Tacoma Pierce County Health Department also responds to illicit discharges, dumping and septic issues.

*S5.C.8.b.iii.*

*No later than 18 months after the effective date of this permit, each Permittee shall ensure that all municipal field staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, improper disposal and illicit connections, are trained to conduct these activities. Follow-up training shall be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.*

Pierce County Water Programs Inspection and Monitoring staff are trained to recognize and respond to illicit discharges. Road Maintenance has Road Incident Response Vehicles that respond to spills on the road, and field staff are trained to report illicit discharges. They also have a 10 page policy on spill handling, and a training module for responding to various spills. Parks and Recreation staff that apply herbicides or pesticides are licensed by the Department of Agriculture and have training in spill cleanup. By the 18 month deadline we will train additional county staff in Public Works and Utilities, Parks and Recreation, Water

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Programs, Facilities Maintenance, and any other staff we determine needs the training, in recognizing illicit discharges and knowing who to contact to fix them.

*S5.C.8.b.iv.*

*No later than 24 months after the effective date of this permit, develop and implement an ongoing training program for all municipal field staff, which, as part of their normal job responsibilities might come into contact with or otherwise observe an illicit discharge or illicit connection to the storm sewer system, shall be trained on the identification of an illicit discharge or connection and on the proper procedures for reporting and responding to the illicit discharge or connection. Follow-up training shall be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.*

Pierce County will train additional field staff as needed in 2009, and document that training.

*S5.C.8.b.v.*

*Each Permittee shall provide a publicly-listed, water quality citizen complaints/reports telephone number. Except for Clark County, which shall meet this requirement no later than 6 months from the effective date of this permit, this citizen compliant/reports telephone number shall be in place no later than the effective date of this permit. Complaints shall be responded to in accordance with S5.C.8.b.vii. and viii., below.*

Pierce County has had a public complaint line listed in the phone book for over 10 years (253-798-4274) that is for reporting of flooding, drainage concerns, water quality complaints and mosquito complaints.

*S5.C.8.b.vi.*

*Each Permittee shall conduct on-going screening to detect illicit connections. The program shall include field screening and source tracing; and may also include source control inspections and complaint response. To comply with the requirement the Permittee may use the methods identified in *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, October 2004; or field screening methods approved by Ecology in a Stormwater Management Program under a prior Phase I municipal stormwater NPDES permit, provided the approved methods include field screening and source tracing.*

Pierce County has been conducting field screening on outfalls as designated in our previous SWMP since 1998. Water Programs inspections personnel check for illicit discharges on and around sites in the course of their work, and respond to citizen complaints on illicit discharges. Monitoring personnel keep an eye out for illicit discharges in the course of their work, and set up sampling as needed to track problems. We have developed a new *Illicit Discharge Detection and Elimination Program* to be in compliance with the above requirements, and it will be used to track discharges.

*Each County covered under this permit shall prioritize outfalls and conveyances in urban/higher density rural sub-basins for screening and shall complete field screening for at least half of the conveyance systems in these areas no later than 4 years from the effective date of this permit. In addition, Counties shall complete field screening in at least 1 rural sub-basin no later than 4 years from the effective date of this permit.*

Pierce County has chosen 2 basins meeting the above requirement for action in 2008. We will begin screening in June 2008.

*S5.C.8.b.vii.*

*Response to Illicit Connections*

- *Investigation: Upon discovery or upon receiving a report of a suspected illicit connection, Permittees shall initiate an investigation within 21 days, to determine the source and nature of the connection, and the responsible party for the connection.*
- *Termination: Upon confirmation of the illicit nature of a storm drain connection, Permittees shall use their enforcement authority in a documented effort to eliminate the illicit connection within 6 months. All illicit connections to the MS4 shall be eliminated.*
- *Permittees shall contact Ecology immediately upon discovering an illicit connection that presents a severe threat to human health or the environment. Permittees may refer illicit connection violations to Ecology provided that the Permittee also makes a good faith effort of progressive enforcement. At a minimum, a Permittee's enforcement effort shall include documentation of inspections and warning letters and/or notices of violation.*

PCC 11.05 Illicit Stormwater Discharges requires the County to take action when an illicit connection is confirmed. The responsible party is notified in writing of the violation, and ordered to remove the connection. Progressive enforcement is available, and pursued through the Prosecutors office if necessary.

*S5.C.8.b.viii.*

*No later than 6 months after the effective date of this permit, each Permittee shall either participate in a regional emergency response program, or develop and implement procedures to investigate and respond to spills and improper disposal into municipal separate storm sewers owned or operated by the Permittee. Permittees shall have a program to prioritize and investigate complaints/reports or monitoring information that indicates potential illicit discharges, including a spill or illegal dumping. Permittees shall immediately respond to problems/violations judged by the Permittee to be urgent, severe, or an emergency. Spills of oil or hazardous materials shall be reported to appropriate authorities.*

Pierce County Water Programs, Road Maintenance, local Fire Districts, Emergency Management and Tacoma Pierce County Health Department all play a role in spill response, depending on the severity. Road Maintenance has a 10 page policy on spill response, and refers any spills on a roadway greater than 5 gallons of fuel to the Department of Ecology Spill Response team. Water Programs responds to identify where spills can gain access to surface waters. During normal working hours, Water Programs typically will be called by Ecology to assess the severity, and will let Ecology know if they should respond. In the event of large or hazardous spills, the Fort Lewis Response Team has responded off-base to assist, and spills to Puget Sound go to Emergency Management, who then notifies the Coast Guard.

*S5.C.8.b.ix.*

*Each Permittee shall track and maintain records of the illicit discharge detection and elimination program, including documentation of inspections, complaint/spill response and other enforcement records.*

Pierce County Water Programs tracks complaints and spills via our Service Response system. Inspections and enforcement are tracked in our inspections database. We are implementing a new database in April 2008 called RAIN (Report and Inspections Database) which will make tracking these items easier.

Road Maintenance uses the RMS (Road Maintenance System) and Service Response System to track spills and inspections. Citizens can use the Internet to request service from the road shops for a variety of problems. These systems replace the old 3 part paper request form with an electronic version that makes tracking easier.

**S5.C.9. Operation and Maintenance Program**

**S5.C.9.a.**

*The SWMP shall include a program to regulate maintenance activities and to conduct maintenance activities by the Permittee that prevent or reduce stormwater impacts. The program shall include:*

**S5.C.9.a.i.**

*Maintenance standards and programs for proper and timely maintenance of public and private stormwater facilities.*

**S5.C.9.a.ii.**

*Practices for operating and maintaining Permittee's streets, roads, and highways to reduce stormwater impacts.*

**S5.C.9.a.iii.**

*Policies and procedures to reduce pollutants associated with the application of pesticides, herbicides, and fertilizer by the Permittee's agencies or departments.*

**S5.C.9.a.iv.**

*Practices for reducing stormwater impacts from heavy equipment maintenance or storage yards, and from material storage facilities owned or operated by the Permittee.*

**S5.C.9.a.v.**

*A training component.*

**S5.C.9.b.**

*Minimum Performance Measures:*

**S5.C.9.b.i.**

*Maintenance Standards. No later than 18 months after the effective date of this permit, each Permittee shall establish maintenance standards that are as protective or more protective of facility function than those specified in Chapter 4 of Volume V of the 2005 Stormwater Management Manual for Western Washington. For existing facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard.*

Pierce County developed and adopted the *Pierce County Stormwater Management and Site Development Manual* in 1997. It has been revised a number of times since then, with the latest revision in 2005. It has now been revised to comply with the Ecology Manual, and was submitted for equivalency review on February 15, 2008. Public and private facilities off right of way are required to use maintenance standards in the County's Manual.

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1. *The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facility's required condition at all times between inspections. Exceeding the maintenance standard between inspections and/or maintenance is not a permit violation.*
2. *Unless there are circumstances beyond the Permittee's control, when an inspection identifies an exceedence of the maintenance standard, maintenance shall be performed:*
  - *Within 1 year for wet pool facilities and retention/detention ponds.*
  - *Within 6 months for typical maintenance.*
  - *Within 9 months for maintenance requiring re-vegetation, and*
  - *Within 2 years for maintenance that requires capital construction of less than \$25,000.*

*Circumstances beyond the Permittee's control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedence of the required timeframe, the Permittee shall document the circumstances and how they were beyond the Permittee's control.*

Maintenance for the Road Maintenance Division is scheduled via inspection or timing. If it is found that maintenance is needed, it will be scheduled via the electronic Road Maintenance System, and prioritized for action based on all other maintenance needs. Typically, this would fall with the Ecology timeframes unless emergency response to an event dictates otherwise, and we will document such occurrences.

For pond maintenance handled by the Maintenance Section of Water Programs, they prioritize pond maintenance based on a number of things, including fire hazard potential if the vegetation gets too tall, storm events, inspection results, and the experience of knowing which ponds need maintenance every year due to the characteristics of the basin they serve. These crews maintain ¼ to ½ of the total ponds they are responsible for each year, but this large variance is a result of this same crew being responsible for maintaining and repairing the County's extensive system of river levees on 3 major river systems. The November floods of 2006 are still having an impact on their workload, with 3 major levee repair sites (structure missing), and 12 levee rehabilitation sites (damaged, but repairable) still to be done as a result of the flood. This group did manage to obtain 2 additional FTEs for 2008, and plans to double the number of extra hire workers (from 6 to 12) specifically to keep up with the pond maintenance.

*S5.C.9.b.ii.*

*Maintenance of stormwater facilities regulated by the Permittee*

1. *No later than 18 months after the effective date of this permit, each Permittee shall evaluate and, if necessary, update existing ordinances or other enforceable documents requiring maintenance of all permanent stormwater treatment and flow control facilities regulated by the Permittee (including catch basins), in accordance with maintenance standards established under S5.C.9.b.i., above.*

PCC17A.10.040

<http://piercecountywa.org/xml/Abtus/ourorg/council/code/title17apcc.pdf>

States that requirements of this title apply to all of unincorporated Pierce County—referring to compliance with the Manual.

- 2. No later than 18 months after the effective date of this permit, each Permittee shall develop and implement an initial inspection schedule for all known, permanent stormwater treatment and flow control facilities (other than catch basins) regulated by the Permittee to inspect each facility at least once during the term of this permit to enforce compliance with adopted maintenance standards as needed based on the inspection. The inspection program is limited to facilities to which the Permittee can legally gain access, provided the Permittee shall seek access to the types of stormwater treatment and flow control facilities listed in the 2005 Stormwater Management Manual for Western Washington.*

Pierce County has had a private facility inspections program in place since 1998. We do not, therefore, restrict this program to only those facilities listed in the *2005 Stormwater Manual for Western Washington*. We recognize the value in inspecting older systems. For instance, as an exercise in prioritization of inspections, we looked at the GIS layer that shows where roads are regularly flooded. We then tracked upstream from those areas, and found numerous older plats that had non-functioning stormwater systems. We required them to maintain them, and eliminated a number of flooding locations. Pierce County currently is inspecting over 100 plats and businesses per month, and will continue that average pace through 2008.

- 3. No later than 4 years after the effective date of this permit, each Permittee shall develop an on-going inspection schedule to annually inspect all stormwater treatment and flow control facilities (other than catch basins) regulated by the Permittee. The annual inspection requirement may be reduced based on maintenance records.*

*Reducing the inspection frequency to less frequently than annually shall be based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 Certification and Signature.*

Pierce County has inspections records dating back to 1998, and will be able to adjust the frequency of inspection for some sites. We have attempted to have every plat or business with a maintenance agreement submit an annual report prior to our inspection. Even with a reminder letter, only 30-50% submit the required report. For this reason, we do not accept self-certification of stormwater systems. We will be able to meet Ecology's requirements for 2008.

- 4. No later than 2 years after the effective date of this permit each Permittee shall manage maintenance activities to inspect all new permanent stormwater treatment and flow control facilities, including catch basins, in new residential developments every 6 months during the period of heaviest construction to identify maintenance needs and enforce compliance with maintenance standards as needed.*

See response under S5.C.5.b.vi above for information on inspection schedules of Planning and Land Services. Additional personnel will be needed to perform this frequency of inspection.

5. *Compliance with the inspection requirements of S5.C.9.b.ii.(2), (3), and (4), above, shall be determined by the presence of an established inspection program designed to inspect all sites, and achieving inspection of 95% of all sites.*

Additional personnel will be needed to perform all of the inspections listed in (2), (3), and (4) to meet compliance by 2011. We are working with the County Council to obtain funding.

6. *The Permittee shall require cleaning of catch basins regulated by the Permittee if they are found to be out of compliance with established maintenance standards in the course of inspections conducted at facilities under the requirements of S5.C.7. (Source Control Program), and S5.C.8. (Illicit Connections and Illicit Discharges Detection and Elimination), or if the catch basins are part of the treatment or flow control systems inspected under the requirements of S5.C.9.*

Pierce County requires catch basin cleaning as part of its private facility inspection and water quality compliance programs, and will continue to do so.

*S5.C.9.b.iii.*

*Maintenance of stormwater facilities owned or operated by the Permittee*

1. *No later than 24 months after the effective date of this permit each Permittee shall begin implementing a program to annually inspect all permanent stormwater treatment and flow control facilities (other than catch basins) owned or operated by the Permittee, and implement appropriate maintenance action in accordance with adopted maintenance standards. The annual inspection requirement may be reduced based on inspection records.*

*Changing the inspection frequency to less frequently than annually shall be based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 Certification and Signature.*

2. *No later than 24 months after the effective date of this program each Permittee shall begin implementing a program to conduct spot checks of potentially damaged permanent treatment and flow control facilities (other than catch basins) after major storm events (24 hour storm event with a 10 year recurrence interval). If spot checks indicate widespread damage/maintenance needs, inspect all stormwater treatment and flow control facilities that may be affected. Conduct repairs or take appropriate maintenance action in accordance with maintenance standards established under S5.C.9.b.i., above, based on the results of the inspections.*

Pierce County Water Programs and Road Maintenance Divisions currently spot check facilities after a major storm event. Which facilities they check are based on knowledge of which facilities typically have problems after an event—in other words, years of experience in knowing the Pierce County stormwater system. Maintenance needs are then prioritized and scheduled. Some must wait for better weather to let ponds go dry to reach structures.

We have checked all ponds maintained by Water Programs (over 400) to check for fencing damages after the December 06 windstorm. We did this because FEMA allows an extremely short time frame to come up with damage estimates. For 400 ponds, the effort took 6 days and 5 FTEs. In the meantime, those FTEs could not do their regular jobs, so this kind of effort, though possible, would be rare.

- 3. Compliance with the inspection requirements of S5.C.9.b.iii.(1), and (2) above, shall be determined by the presence of an established inspection program designed to inspect all sites, and achieving inspection of 95% of all sites.*

Pierce County will develop a program to inspect all structures that require annual inspection, and determine from maintenance records those that do not need that frequency of inspection. This program will be developed in 2008, and implemented in 2009, provided adequate funding for FTEs is obtained in the budget period.

*S5.C.9.b.iv.*

*Maintenance of Catch Basins Owned or Operated by the Permittee*

- 1. No later than 24 months after the effective date of this permit each Permittee shall begin implementing a program to annually inspect catch basins and inlets owned or operated by the Permittee.*
  - Inspections may be conducted on a “circuit basis” whereby a sampling of catch basins and inlets within each circuit is inspected to identify maintenance needs. Include in the sampling an inspection of the catch basin immediately upstream of any system outfall. Clean all catch basins within a given circuit at one time if the inspection sampling indicates cleaning is needed to comply with maintenance standards established under S5.C.9.b.i., above.*
  - As an alternative to inspecting catch basins on a “circuit basis,” the Permittee may inspect all catch basins, and clean only catch basins where cleaning is needed to comply with maintenance standards.*

Pierce County Road Maintenance is responsible for catchbasin cleaning. They have established circuits for catchbasins using the GIS system. Within the allowed time frame, they plan to inspect every catchbasin that is within 50 feet of a waterbody, and clean the entire circuit if the lowest one shows that maintenance is needed.

- 2. The annual catch basin inspection schedule may be changed as appropriate to meet the maintenance standards based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records for catch basins, the Permittee may substitute written statements to document a specific, less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 Certification and Signature.*
- 3. The disposal of decant water shall be in accordance with the requirements in Appendix 6 – Street Waste Disposal.*

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The Road Maintenance Division operates vacuators for public catchbasin cleaning in Pierce County. They haul all vacuum waste to one of 2 decant stations operated (Puyallup and Purdy) and discharge all contents there. They no longer decant in the field.

*S5.C.9.b.v.*

*Records of inspections and maintenance or repair activities conducted by the Permittee shall be maintained. Records of maintenance or repair requiring capital construction of \$25,000 or more shall be maintained and provided in the annual report.*

These records are available, and will be reported in annual reports.

*S5.C.9.b.vi.*

*Within 12 months of the effective date of this permit, establish practices to reduce stormwater impacts associated with runoff from parking lots, streets, roads, and highways owned or operated by the Permittee; and road maintenance activities conducted by the Permittee.*

*Implementation of practices shall begin no later than 18 months after the effective date of this permit, and continue on an ongoing basis throughout the term of the permit. The following activities shall be addressed:*

- 1. Pipe cleaning*
- 2. Cleaning of culverts that convey stormwater in ditch systems*
- 3. Ditch maintenance*
- 4. Street cleaning*
- 5. Road repair and resurfacing, including pavement grinding*
- 6. Snow and ice control*
- 7. Utility installation*
- 8. Maintaining roadside areas, including vegetation management.*
- 9. Dust control*
- 10. Pavement striping maintenance*

Pierce County Road Maintenance is a part of the Regional Road Maintenance Forum, and adopted and has been using the Maintenance Manual created in that effort, and approved by NOAA Fisheries and U.S. Fish and Wildlife. Roads is continuing its participation in the Forum to produce updates to the Maintenance Manual to comply with this permit, and will adopt the new version as soon as it is available.

*S5.C.9.b.vii.*

*No later than 18 months after the effective date of this permit, each Permittee shall establish and implement policies and procedures to reduce pollutants in discharges from lands owned or maintained by the Permittee subject to this permit. Lands owned or maintained by the Permittee include but are not limited to: parks, open space, road right-of-ways, maintenance yards, and stormwater treatment and flow control facilities.*

*The policies and procedures shall address, but are not limited to:*

- 1. Application of fertilizer, pesticides, and herbicides, including the development of Nutrient management and Integrated Pest Management Plans;*
- 2. Sediment and erosion control;*
- 3. Landscape maintenance and vegetation disposal;*
- 4. Trash management; and*

5. *Building exterior cleaning and maintenance.*

As discussed above, Parks and Recreation, and Facility Maintenance use IVMP to minimize the use of chemicals. Some supervisors have taken courses on sustainability, and are working toward a lighter carbon footprint as well as less chemical usage. Vegetation removed from facilities is sent to the Land Recovery, Inc. composting facility for reuse. Road Maintenance uses as little pesticide as they can to maintain safe driving conditions, and mark waterbody buffers to protect from overspraying. As facilities are developed, more use of bioswales is becoming prevalent, as is use of pervious pavement for walking paths. Parks and Recreation is partnering with Water Programs to retrofit a large parking lot at Sprinker Recreation Facility to disconnect flows from Spanaway Creek. This project is funded by grants from Ecology. Washing of building exteriors is done using plain water only at most facilities. Sediment and erosion control is accomplished using methods from the Ecology manual.

Lands owned by Water Programs include public ponds, wetland reserves, and riparian areas. Buildings and septic tanks are removed when we purchase floodplain, and it is returned to a natural condition. In our public ponds, pesticides are only used at the request of the Weed Board, when they observe that we have noxious weeds that need control. Hand-pulling is the preferred method for many weeds, such as tansy ragwort.

*S5.C.9.b.viii.*

*No later than 24 months after the effective date of this permit, develop and implement an ongoing training program for employees of the Permittee who have primary construction, operations or maintenance job functions that could impact stormwater quality. Follow-up training shall be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.*

Training already occurs with many of these groups (pesticide licenses, Road Maintenance training), so we will be examining what is missing from those programs and providing appropriate training within the permit time frame.

*S5.C.9.b.ix.*

*Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this permit, that are not covered under by another Ecology issued stormwater discharge permit. The Permittee shall identify facilities subject to this requirement. The SWPPPs shall be developed within 24 months of the effective date of this permit. Implementation of non-structural BMPs shall begin immediately after the pollution prevention plan is developed. A schedule for implementation of structural BMPs shall be included in the SWPPP. Generic SWPPPs that can be applied at multiple sites may be used to comply with this requirement. The SWPPP shall include periodic visual observation of discharges from the facility to evaluate the effectiveness of BMPs.*

SWPPPs shall be developed for all County road shops. The Water Programs Quarry is under a separate NPDES permit, and currently has a SWPPP.

**S5.C.10. Education and Outreach Program**

*S5.C.10.a.*

*The SWMP shall include an education program aimed at residents, businesses, industries, elected officials, policy makers, planning staff and other employees of the Permittee. The goal of*

*the education program is to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. An education program may be developed locally or regionally.*

*S5.C.10.b.*

*Minimum Performance Measures:*

*S5.C.10.b.i.*

*No later than 12 months after the effective date of this permit, each Permittee shall implement or participate in an education and outreach program that uses a variety of methods to target the audiences and topics listed below. The outreach program shall be designed to achieve measurable improvements in each target audience's understanding of the problem and what they can do to solve it.*

*1. General Public*

- General impacts of stormwater flows into surface waters.*
- Impacts from impervious surfaces.*
- Source control BMPs and environmental stewardship, actions and opportunities in the areas of pet waste, vehicle maintenance, landscaping and buffers.*

*2. General public and businesses, including home based and mobile businesses*

- BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials.*
- Impacts of illicit discharges and how to report them.*

*3. Homeowners, landscapers and property managers*

- Yard care techniques protective of water quality.*
- BMPs for use and storage of pesticides and fertilizers.*
- BMPs for carpet cleaning and auto repair and maintenance.*
- Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees.*
- Stormwater treatment and flow control BMPs.*

*4. Engineers, contractors, developers, review staff and land use planners*

- Technical standards for stormwater site and erosion control plans.*
- Low Impact Development techniques, including site design, pervious paving, retention of forests and mature trees.*
- Stormwater treatment and flow control BMPs.*

*S5.C.10.b.ii.*

*Each Permittee shall implement or participate in an effort to measure understanding and adoption of the targeted behaviors by the targeted audiences. The resulting measurements shall be used to direct education and outreach resources most effectively as well as to evaluate changes in adoption of the targeted behaviors.S5.C.10.b.iii.*

Pierce County Public Works and Utilities has had an education program for sewers and solid waste since 1990. This program has emphasized recycling, water conservation, and biosolids reuse. Water Programs has provided money for 1 additional educator in this group since the mid-90's to also carry forward a storm and surface water message in grades K-12. In 2005, Water Programs hired an educator to work on adult education for stormwater and flooding issues. A listing of events for 2007 is included below as an example.

We also have reallocated staff to work on Shellfish Partners, a cooperative education effort with the Pierce Conservation District, Tacoma Pierce County Health Department and Kitsap County to help keep shellfish areas safe for use. Shellfish Partners have sponsored two Beachwalks over the years, and have done surveys to begin to assess the awareness and level of concern about water quality related issues. The report was published in 2006, and is available if needed (response rate of 20%). A listing of 2008-2011 activities includes:

- Continuation of 2007 activities such as Lu Winsor grants, newsletters, workshops, fair booths, and beach walks
- Expanded outreach on septic system care and availability of grant/loan program
- Local Stormwater grants for shellfish growing areas will include:
  - Education and outreach for streamside property owners in conjunction with Kitsap County
  - Expanded assistance and partnership with local school district and community groups working in schools on environmental education
  - Boater education focused on Filucy Bay
  - Outreach associated with tracking dog pollution identification trial
  - Expanded property owner contact and education on animal keeping and on-site practices
  - Restaurant poster distribution
  - Improved weather tracking and notification
- The KGI Watershed Council has the following new activities planned:
  - Publish 5-Year Action Agenda
  - Publish State of the Watershed Report
  - Trial discussion groups around books and topics

All education staff will be discussing the needs for better evaluation of programs and behaviors in 2008 to design surveys and studies.

When the new Manual is in place, we will be holding classes for developers, engineers, review staff and planners to let them know how to use it, and what has changed from the last Manual.

Example of special education events Pierce County has sponsored are described below. We will continue to plan for and implement such events as allowed by staff availability and funding. We believe this will meet the requirements of the permit.

Pierce County Water Programs sponsored a number of conferences and special events during 2007 and 2008 on topics related to surface water management and watershed health. The Chambers-Clover Watershed Conference was held October 5<sup>th</sup> and 6<sup>th</sup> and offered resource managers, scientists and citizens the opportunity to learn more about the functioning and management of the watershed. The event included technical presentations and a focus on public involvement and stewardship, as well as a field trip to the Naches Trail Preserve. Approximately 150 people attended this two-day conference.

A second set of public events focused on the local use of low impact development (LID). The Puyallup Watershed Low Impact Development Conference, held October 12<sup>th</sup>, provided an introduction to LID tools and techniques and gave examples of how LID is being utilized in Pierce County and the Puget Sound region. The LID Implementation Workshop, which followed on October 18<sup>th</sup>, was designed to give developers, plan reviewers, and others more in-depth

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information on the ground-level implementation of LID practices. These events were well attended, with a total of 225 in attendance at both the conference and workshop.

In addition, a third event focusing on low impact development was held during 2008. City and county council members, mayors and other local leaders learned about how LID can be used for the benefit of their own communities at the LID for Elected Officials Workshop on February 14<sup>th</sup>.

Pierce County Water Programs worked with a number of partners on these events, including the Washington Department of Ecology, U.S. EPA, USGS, the Puyallup and Chambers-Clover watershed councils and MBA of Pierce County. Additional information about Water Programs special events can be found online at [www.piercecountywa.org/wpconf](http://www.piercecountywa.org/wpconf).

Chambers-Clover Watershed Conference  
October 5-6, 2007  
Pacific Lutheran University, Tacoma

Puyallup Watershed Low Impact Development Conference  
October 12, 2007  
Pierce College – Puyallup

LID Implementation Workshop  
October 18, 2007  
La Quinta Inn & Suites Conference Center, Tacoma

LID for Elected Officials Workshop  
February 14, 2008  
Sumner City Hall

*S5.C.10.b.iii.*

*Each Permittee shall track and maintain records of public education activities.*

This will continue to be done. Below is a listing of the activities for Water Programs in 2007:

## **WATER PROGRAMS EDUCATION/OUTREACH 2007 RECAP**

<b>Events attended:</b>	<b>Date</b>	<b>Staff Hours Worked</b>
1. Water 4 Life	March 26	48
2. Magnificent Mutt Show	March 31	18
3. McChord Earth Day	April 19	14
4. Puyallup Spring Fair	April 18-21	47
5. Soundview Trail Grand Opening	May 5	26
6. Key Peninsula Livable Community Fair	May 12	20
7. Shellfish Partners @ Key Peninsula LCF	May 12	8
8. Shellfish Partners Mini-Conference	May 19	18
9. Meeker Days	June 7-10	60

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10. Shellfish Partners Beach Walk	June 30	16
11. Woodland Pond Ribbon Cutting	July 10	17
12. Shellfish Partners @ Key Peninsula Fair	July 12-15	20
13. Humane Society Dog-A-Thon	July 21	18
14. University Place Community Festival	August 3-4	23
15. Pierce County Fair	August 8-12	68
16. Spanaway Fish Bypass Ribbon Cutting	September 6	19
17. Puget Sound Leadership Meeting	September 21	3
18. Shellfish Partners @ Puget Sound Leadership	September 21	3
19. Harbor Hounds Walk	September 22	16
20. South Prairie Creek Salmon Homecoming	September 29	22
21. Nisqually Salmon Homecoming	September 29	17
22. Chambers/Clover Watershed Conference	October 5-6	39
23. Naches Trail Preserve Site Dedication	October 6	16
24. Puyallup Watershed LID Technical Series	October 11-12, 18	60
25. Shellfish Partners Shoreline Workshop	October 12	4
26. Shellfish Partners @ Donkey Ck Chum Fest	October 20	9
27. Pierce County Parks Woof-Woof Walk	October 30	12

**Total number of staff hours working at 2007 events:**

**641**

**Equipment, promotional supplies and printed materials purchased:**

	<b>Hardware</b>
\$2,253	10x10 tent with 4 sidewalls and Water Programs custom imprinted top
57	Water Programs 5-ft banner
54	2 Electric fans for fair booth
42	6 Countertop pamphlet/brochure holders
74	Custom Dog-A-Thon baked enamel sign
	<b>Employee Gear</b>
744	40 Water Programs event shirts
25	4 Water Programs name badges
	<b>Expendables</b>
423	1,000 - 12 x 4 x 4" Cardboard boxes for mailing flashlights
60	3 x 4-pack Scotch 3650 mailing and storage tape for mailing flashlights
353	3,000 Water Programs contact information stickers
	<b>General Promotionals and Program Identity</b>
1,772	1,000 Baby Dewey droplet squeeze balls
2,499	1,000 Dewey water drop figures
1,061	216 Surface Water Management mugs
364	1,000 "Talk to Us" contact cards
	<b>Flood Education and Awareness</b>
866	5,000 flood information line magnets
6,690	2,500 "2006 Flood Owners' Manual" reprints
4,944	1,600 shake flashlights
1,713	500 Mold & Mildew booklets
592	500 "Floodplain Management" brochures
2,316	6,000 "Floods Happen" cards
	<b>Pet Waste/Water Quality Education and Awareness</b>
807	15,700 black plastic "Scoop the Poop" bags (split cost with Chambers Prop.)
5,624	1,960 Bags-on-Board individual waste bag dispensers
2,770	10 Dog pole-mount waste bag dispensers and 20 cases dog waste refill bags for pole-mount dispensers
442	2 "Scoopy-Doo" dog costume character appearances
	<b>Boater's Water Quality Education and Awareness</b>
687	500 Oil absorb sheets
815	500 custom labels for oil absorb sheets
	<b>Sponsorships</b>
250	Pierce County Magnificent Mutt Show (for judging classes)
In-kind	Soundview Trail Grand Opening (tent, drinking water, Bags-on-Board)
1,000	Humane Society Dog-A-Thon (\$360 in goods, \$640 in cash)
In-kind	Pierce County Parks Woof-woof Dog Walk (2 dog waste stations w/refill bags, Scoopy-Doo appearance)

**S8 Monitoring**

*Pierce County is working collaboratively with other Phase 1 permittees and Ecology to develop coordinated monitoring programs. We submitted the required letter by August 15, 2007 stating our intent to do so, and are currently working with other Permittees (even those who opted out of the collaborative process) to develop standard operating procedures, and select sites. We will continue with these efforts throughout 2008. Unless funding for personnel and equipment is obtained for late 2008-early 2009, we will not be able to implement the full monitoring program.*