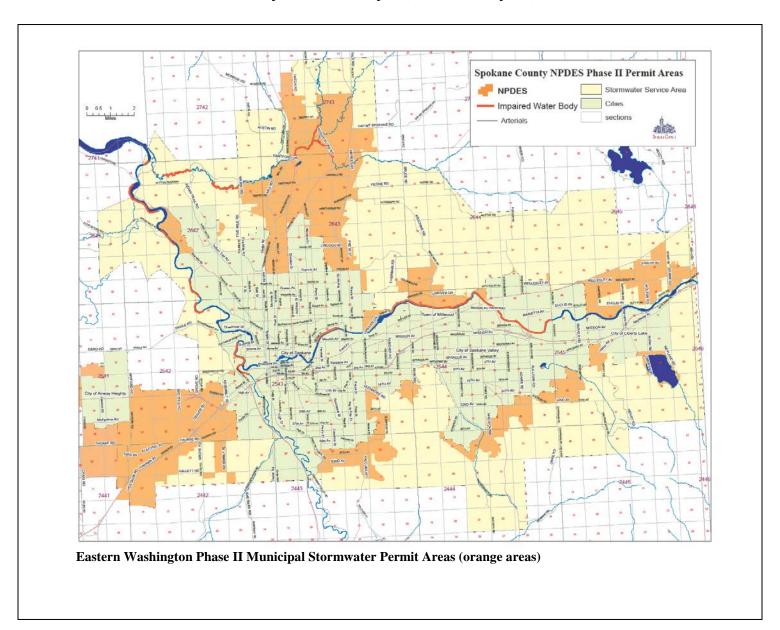


SPOKANE COUNTY STORMWATER MANAGEMENT PROGRAM (SWMP)

Eastern Washington Phase II Municipal Stormwater Permit Compliance

Permit Cycle - February 16, 2007 to July 31, 2014



Spokane County Public Works

Division of Engineering and Roads Stormwater Utility

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FORWARD

Spokane County is required to develop and implement a Stormwater Management Program in order to meet its requirements under the Eastern Washington Phase II Municipal Stormwater Permit.

The Stormwater Management Program (SWMP) for Spokane County described in the following document is designed to be a "Public Working Document".



Section

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SECTION 1 – INTRODUCTION

1.1 **History**

The United States Environmental Protection Agency (EPA) considers pollution from all diffuse sources, including urban stormwater pollution, to be the most important source of contamination in our nation's waters. Runoff pollution occurs every time rain or snowmelt flows across the ground and picks up contaminants.

This Stormwater Management Program (SWMP) focuses on runoff pollution from developed areas, which occurs when stormwater carries away a wide variety of contaminants as it runs across rooftops, roads, parking lots, baseball diamonds, construction sites, golf courses, lawns, and other surfaces. A majority of Spokane County's population lives in urbanized areas where the water resources are highly vulnerable to degradation from urban runoff.



Figure 1. Spangle Creek - circa 1930's

Urban stormwater continues to impair the nation's waterways, 29 years after passage in 1972 of the law now known as the Clean Water Act. The main reason urban stormwater remains such an important contributor to water pollution is the fact that in most areas, stormwater receives no treatment before entering waterbodies.

Over the past three decades, national and local water pollution control efforts have focused primarily on certain process water discharges from facilities such as factories and sewage treatment plants, with less emphasis on diffuse sources. While these efforts have led to many water quality improvements, new efforts are now needed to address the remaining sources of water pollution, including urban runoff pollution.



On December 8, 1999, EPA promulgated a rule requiring smaller municipalities, those with populations of fewer than 100,000 people located in urbanized areas (where population density is greater than 1,000 persons per square mile), to develop a Stormwater Management Program that addresses stormwater pollution runoff that enters surface waters. In Washington, EPA's smaller municipality rule is directed to local jurisdictions through the National Pollution Discharge Elimination System (NPDES) – Phase II Permits that are under the direction of the Department of Ecology.

Spokane County (County) was issued coverage under the *Eastern Washington Phase II Municipal Stormwater Permit* (Permit), under Permit No. WAR04-6506, effective February 16, 2007. The Permit states, "All Counties shall develop and implement a *Stormwater Management Program* (SWMP) during the term of this permit." The Permit primarily addresses stormwater discharges to surface waters. Stormwater that is directed to underground injection control (UIC) wells is regulated under the State of Washington's, Underground Injection Control Program, and therefore is not addressed within the SWMP.

The following Stormwater Management Program is designed to meet Spokane County's Permit obligations.

1.2 Purpose

The purpose of this SWMP is to describe the programs, practices and responsibilities adopted by the County to manage the municipal separate storm sewer system (MS4) in implementing the requirements of the Permit.

The SWMP describes the activities that will be performed to comply with the Permit conditions, provides measurable goals for key activities, and outlines staffing and funding responsibilities for the County. The SWMP will apply to the 5-year duration of the current Permit cycle (expiring February 15, 2012) and forms the foundation for a long-term program to reduce pollutants discharged to waters of the state within Spokane County. The Washington State Legislature extended the expiration date of Permit to July 31, 2014.

Annual updates to the SWMP will be provided to encourage public involvement, hear public comment, to address necessary revisions in program elements and to provide for necessary revisions as conditions change within the Permit.

1.3 Authorization



This SWMP was prepared by the Spokane County, Engineering and Roads - Stormwater Utility.

1.4 Area of Coverage

The area of coverage is defined in paragraph S1 of the municipal permit:

"For all Counties required to obtain coverage under this permit, the geographic area of coverage is the urbanized areas and the urban growth areas associated with Cities within the urbanized areas that are under the jurisdictional control of the County. The geographic area of coverage also includes any urban growth areas that are contiguous to urbanized areas that are under the jurisdictional control of the County."

The focus is on the discharge of municipal stormwater runoff into the waters of the U.S. and waters of the state as described within the Permit. Consistent with this focus, the activities described in the SWMP will be conducted within the urban growth areas of Spokane County. See Appendix A for a detailed Spokane County map of the initial Permit boundary covered by this permit, as well as the current Stormwater Service Area (SWSA) boundary.

The City of Spokane and the City of Spokane Valley are also subject to the Permit issued by Ecology and are developing their own processes of compliance with that permit. Spokane County will be coordinating with these jurisdictions and other agencies on various elements of the SWMP, particularly on the Public Education tasks.

1.5 Period of Performance

This SWMP applies to the 5-year effective period of the municipal permit, valid from February 16, 2007 to February 15, 2012. The SWMP refers to Permit Years specifying when various activities are scheduled to occur. Permit Years are defined as follows:

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Permit Year 1 - February 16, 2007 to February 15, 2008
Permit Year 2 - February 16, 2008 to February 15, 2009
Permit Year 3 - February 16, 2009 to February 15, 2010
Permit Year 4 - February 16, 2010 to February 15, 2011
Permit Year 5 - February 16, 2011 to February 15, 2012
Permit Year 6 - February 17, 2012 to February 15, 2013
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In addition, the Permit also requires annual reports that are subject to the following "reporting periods":

Annual Report, Year 1 - February 16, 2007 to December 31, 2008



Annual Report, Year 2 - January 1, 2008 to December 31, 2009 Annual Report, Year 3 - January 1, 2009 to December 31, 2010 Annual Report, Year 4 - January 1, 2010 to December 31, 2011 Annual Report, Year 5 - January 1, 2011 to December 31, 2012 Annual Report, Year 6 – January 1, 2012 to December 31, 2013

1.6 **Public Process**

The SWMP is continually available for public comment on the Spokane County webpage (www.spokanecounty.org/stormwater). Prior to each year's deadline for the annual report, the SWMP will be evaluated and updated in response to public comments received.

1.7 **Stormwater Management Program Permit Requirements**

There are six (6) basic elements described within the Permit that make up the heart of the SWMP. Those elements are as follows:

- 1) Public Education and Outreach;
- 2) Public Involvement and Participation;
- 3) Illicit Discharge Detection and Elimination;
- 4) Construction Site Stormwater Runoff Control;
- 5) Post-Construction Stormwater Management for New Development and Redevelopment;
- 6) Pollution Prevention and Good Housekeeping for Municipal Operations.

1.8 **Spokane County - Stormwater Management Program, Sections**

The SWMP components are described within the following Sections of this document:

- Section 2.0 Legal Authority
- Section 3.0 Baseline Data and Maps
- Section 4.0 Public Education and Outreach
- Section 5.0 Public Involvement and Participation
- Section 6.0 Illicit Discharge Detection and Elimination
- Section 7.0 Construction Site Stormwater Runoff Control
- Section 8.0 Post Construction Stormwater Management for New Development and Redevelopment
- Section 9.0 Pollution Prevention and Good Housekeeping for Municipal **Operations**



- Section 10 Stormwater Management Program Implementation Responsibilities
- Section 11 Years 1, 2, 3, 4 and 5 Measurable Goals



SECTION 2 – LEGAL AUTHORITY

2.1 Introduction

This section addresses the Eastern Washington Phase II Municipal Permit (Permit) requirements dealing with legal authority of the County to implement the various aspects of the proposed Stormwater Management Program (SWMP). The objective is to provide documentation that the County either currently has adequate legal authority to conduct all necessary activities, or has a plan for obtaining that authority.



Figure 2. Chester Creek August 2004

2.2 Existing Legal Authority

The Spokane County, Stormwater Utility was formed in 1992 to prepare and implement basin stormwater management plans. The Utility is funded through stormwater service charges based on impervious coverage on developed parcels.

On January 17, 2006, the Board of County Commissioners adopted the *Comprehensive Stormwater Management Plan* (CSWMP) along with individual stormwater plans for Glenrose, North Spokane and West Plains and their associated Capital Improvement Plans. Each of the individual basin plans emphasizes protecting natural drainage features as the most cost effective means of handling stormwater over the long term.

In addition, Spokane County has implemented flood controls through Title 3, Buildings and Structures, Chapter 3.20, Flood Damage Protection, a comprehensive flood control ordinance that manages development within floodplain zones in compliance with the National Flood Insurance Program (NFIP).

Spokane County has adopted engineering design standards and BMPs that are described within the *Spokane Regional Stormwater Manual* (SRSM). The SRSM was approved by the Board of Commissioners on April 15, 2008 and officially became law on June 1, 2008. The SRSM replaces the *Spokane County - Guidelines for Stormwater Management*".



In addition to the new requirements within the SRSM, the following chapters of the existing Spokane County Code address stormwater requirements: 1) Chapter 9.14, Roads, Approach and Drainage in New Construction; 2), Chapter 12.400 Subdivisions; 3) Chapter 14.802.060, Parking Lot Location and Design.

Spokane County Code, Title 8, Health and Sanitation Code, Chapter 8.03, Sanitary Sewer Code, includes various sections that address illicit discharges within Spokane County. The primary relevant sections include: 8.03.1570 POTW; 8.03.1710 Private Storm Sewer; 8.03.1730 Prohibited Discharge Standards or Prohibited Discharges; 8.03.1750 Public Sewer; 8.03.1830 Sewer; 8.03.1990 Stormwater; 8.03.2010 Storm Sewer or Storm Drain; 8.03.3200 Prohibited Uses of Sanitary Sewer; 8.03.3220 Use of Storm Sewers-Combined Sewers--Natural Outlets; 8.03.3260 Obstructing Sewer Prohibited; 8.03.3300 Unauthorized Connection to Public Sewers; 8.03.3240 Prohibited Uses--Public Sewers; 8.03.4040 Prohibited Discharge Standards--General Prohibitions; 8.03.4060 Prohibited Discharge Standards--Specific Prohibitions.

Spokane County Code, Title 8, Health and Sanitation Code, Chapter 8.26, Litter and Discriminate Dumping, includes various sections that are relevant to protecting the integrity of stormwater and other surface waters, such as Section 8.26.020, Litter in General, which addresses the disposing of litter upon any public place or private property, or within any waters in Spokane County. This Chapter also addresses notice of violation, enforcement and penalty.

Spokane County Code, Chapter 8.60.030 Oil Sellers--Educational Responsibilities, requires sellers of lubricating oil to do the following: 1) post educational materials that describe the importance of used oil recycling and how and where used oil may be recycled; and 2) provide for the sale of reusable used oil containers.

In 2008, County staff evaluated current regulations relating to illicit discharge detection and elimination. The results of the investigation concluded that County Code, although covering many aspects of the illicit discharge detection and elimination components of the Permit, fell short of meeting all requirements. As a result, draft amendments to Spokane County Code, Chapter 9.14, Roads, Approach and Drainage in New Construction, were developed and approved (Resolution No. 09-0672) through the public review and process referenced in Section 1.6. The new illicit discharge regulations bring the County into compliance with the requirements of the Permit by addressing the following:

- Prohibit illicit discharges to the municipal separate storm sewer system;
- Control spills, dumping or disposal of materials other than stormwater to the storm sewer system;



- Require compliance with conditions in ordinances related to stormwater discharges;
- Carry out inspection and monitoring procedures necessary to determine compliance with the prohibition on illicit discharges to the storm sewer system;
- Provide regulations guiding inspection, enforcement and penalty.

2.3 Additional Required Legal Authority

If the review of current regulations and ordinances identifies deficiencies in the ability to implement SWMP programs, a plan for addressing those deficiencies will be developed.

2.4 Priorities and Measurable Goals

Existing legal authority will be documented first, followed by development of a plan to address any deficiencies in current ordinances, etc. Measurable goals are defined below.

Completed by	Measurable Goal/Milestone
End of Permit Year 1	Begin to assemble and summarize existing legal
(February 15, 2008)	authority
End of Permit Year 2	 Develop a plan for addressing deficiencies in current
(February 15, 2009)	legal authority
	 Begin developing policy and code revisions in legal
	authority
End of Permit Year 3	 Complete implementing policy and code revisions
(February 15, 2010)	relating to illicit discharge (September 1, 2009)
	 If necessary, revise existing codes relating to
	construction and post construction
End of Permit Year 4	 Continue evaluating construction and post construction
(February 15, 2011)	codes and procedures
End of Permit Year 5	 Monitor previous Code revisions.
(February 15, 2012)	
End of Permit Year 6	 Continue implementing previous year goals and
(February 15, 2013)	milestones

2.5 Staffing and Funding

Funding for review of legal authority will be provided by: Engineering and Roads - Stormwater Utility.

Staffing for review of legal authority will be provided by: Engineering and Road - Stormwater Utility.



SECTION 3 – STORMWATER BASELINE DATA AND MAPS

3.1 Introduction

An initial task (special provision S 5. B. of the permit) is to gather information about the County's storm drainage infrastructure. Most stormwater runoff in unincorporated Spokane County is discharged into the ground, either via natural infiltration or through drywells. In many areas the local geology, including the gravel soils that lie over the Spokane Valley Rathdrum Prairie (SVRP) Aquifer, allows stormwater to infiltrate rapidly into the ground.

Unincorporated Spokane County has developed without an extensive system of storm sewers. Much of the runoff discharged into the ground recharges the aquifer which has an interchange of flows with both the Spokane River and the Little Spokane River. Providing a comprehensive approach to inventorying the County's stormwater system requires combining an inventory of any municipal discharges to surface waters with an inventory of county facilities that discharge stormwater into the ground.

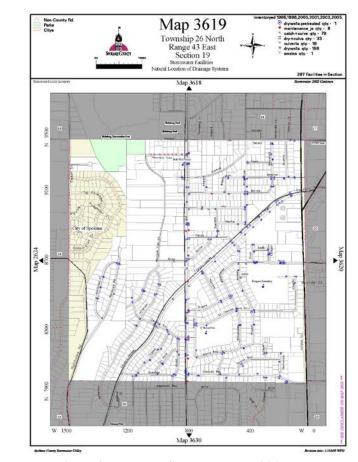


Figure 3. Example Stormwater Facilities Infrastructure Map

This SWMP is focusing on meeting the requirements of the Permit. At the same time, Spokane County is preparing a separate program to meet the requirements of the state Underground Injection Control (UIC) program. The municipal separate storm sewer system (MS4) in Spokane County is comprised of roads with ditches, culverts, curbs, bridge drains, swales, detention ponds, and piping systems that direct stormwater into a surface water body such as a DNR stream, wetland, pond, etc.



A stormwater system map for the Permit area of unincorporated Spokane County has been prepared and is being continually updated. A stormwater system map is valuable to the various departments within the County, the public, regulatory agencies and others by documenting the stormwater system and in determining where potential stormwater quality problems may exist or originate. The initial stormwater system map is based on field work conducted regularly within the Stormwater Service Area since the Stormwater Utilities inception in 1992. The existing computerized inventory information is periodically evaluated and updated annually based field surveys.

3.2 Stormwater System Maps

Maps of the existing regional storm drainage system have been prepared to document locations and contributing areas of major outfalls. The maps will also include underground injection wells and Spokane County detention and retention ponds located within the Permit boundary. As information is gathered and developed, GIS data will be reviewed and updated annually.

The base maps prepared in since the beginning of the Permit were developed from existing stormwater data layers developed over many years of the Stormwater Utility's past work activities. Data layers include facilities such as: catch basins, swales, roadside ditches, drywells, inlets, etc. The maps show the locations of major regional stormwater drainage and collection systems, stormwater control facilities and other relevant information.

The SWU hired a field crew in 2008 to find and document MS4 outfalls located within the Permit jurisdictional area. That data was processed and finalized in 2009.

In 2009, 2010 and 2011 additional outfall inventory analysis and field investigations were conducted. This work further located and defined outfalls to the MS4. The data collected expanded the existing GIS outfall database.

The following maps were developed and/or updated by the Stormwater Utility:

- (a) Permit jurisdictional area map;
- (b) Permit areas in relation to the Stormwater Service Area;
- (c) Permit area in relation to the Spokane Valley-Rathdrum Prairie Aquifer;
- (d) Stormwater conveyance and collection infrastructure systems (outfalls, UIC wells, detention and retention ponds, etc.);
- (e) Natural Drainage areas and contours (streams, rivers, lakes, ponds, etc.);
- (f) Regional watersheds;
- (g) County rights-of-way within the Permit boundary;



- (h) Sites where NPDES Construction Permits have been issued by Ecology;
- (i) Public road systems within the Permit area.

The maps will also be useful in discovering and documenting illicit discharges and related information.

Each year, the maps will be updated with new information. Future maps are anticipated to include but may not be limited to the following:

- (a) Public facilities within the Permit area (parks and open spaces, public buildings, material storage; county shops, etc.);
- (b) New sites where NPDES Construction Permits have been issued by Ecology.

Additional GIS coverages and maps will be identified and developed throughout the life of the Permit.

3.3 Priorities and Measurable Goals

Activities in this category were or will be conducted as defined below.

Completed by	Measurable Goal/Milestone
End of Permit Year 1 (February 15, 2008)	Begin preparing MS4 base maps
End of Permit Year 2 (February 15, 2009)	 Continue developing the MS4 base maps Begin evaluation of existing stormwater infrastructure, facilities and properties
End of Permit Year 3 (February 15, 2010)	 Update stormwater GIS data layers and maps Complete the analysis and development of the MS4 outfall coverage from 2008 and 2009 field investigations
End of Permit Year 4 (February 15, 2011)	Gather data and develop infrastructure maps for all public facilities and activities relating to the development of the O&M Plan
	Conduct priority water body outfall field investigations and continue updating outfall database Health and CIG to the conduct priority water body outfall field investigations and continue updating outfall database.
End of Permit Year 5	Update stormwater GIS coverages and mapsUpdate stormwater GIS coverages and maps
(February 15, 2012)	Develop public facility site maps to accompany the Stormwater O&M Plan site assessment analysis
	Develop material storage, heavy equipment storage area and maintenance area maps for the O&M Plan SWPPP



SPOKANE COUNTY				
	 Conduct priority water body outfall field investigations and continue updating outfall database 			
End of Permit Year 6 (February 15, 2013)	Continue implementing previous year Permit requirements			

Staffing and Funding 3.4

Funding for the stormwater system infrastructure map will be provided by:

Spokane County, Engineering and Roads - Stormwater Utility

Staffing for map preparation will be provided by:

Spokane County, Engineering and Roads - Stormwater Utility



SECTION 4 - PUBLIC EDUCATION AND OUTREACH

4.1 Introduction

This section describes the public education and outreach activities used by the County in response to the Permit requirements for such a program (special provision S5.B.1). The rationale for the program is to inform the general public on the importance of stormwater quality, and to influence behavior in a way that benefits water quality within the region. Activities were selected to take advantage of existing programs, and to target specific water quality problems and audiences that are important in Spokane County.



Figure 4. Soils and Geology Educational Tour 2004

4.2 Public Education and Outreach Program Elements

4.2.1 Objectives for Public Education and Outreach

The overall objectives of the Public Education and Outreach Program are to:

- (a) Inform the general public in Spokane County about important water quality issues related to stormwater runoff;
- (b) Inform businesses and the general public about the need to prevent illicit discharges;
- (c) Inform engineers, construction contractors, developers, development review staff and land use planners about technical standards, the development of stormwater site plans and erosion control plans and stormwater *Best Management Practices* (BMPs) for reducing adverse impacts of stormwater runoff from development sites; and
- (d) Influence behavior of the general public, businesses and those involved in the land development sector to reduce activities that have a negative impact on stormwater runoff quality and increase activities that have a positive impact on stormwater runoff quality.



4.2.2 Public Education and Outreach Activities

Spokane County is working individually and where mutually beneficial with the Cities of Spokane and Spokane Valley to develop public education and outreach program. Activities being considered include, but are not limited to:

- (a) Community Events. County will continue to use community events related to environmental awareness and regional water issues as opportunities for education and outreach. Booths will be staffed by volunteers from the County and/or other local organizations (e.g., Spokane Aquifer Joint Board of water purveyors), who will hand out informational materials and answer questions;
- (b) Media Materials. County will evaluate the production or distribution of media materials to disseminate public education and outreach information. Media materials may include: (1) a program for local public television including general information on stormwater quality issues; and (2) public service announcements or a commercial for targeted messages and audiences;
- (c) Printed Materials. County will continue to develop, produce or distribute printed materials (e.g., brochures, flyers, promotional items) for specific topics related to stormwater quality. Spokane County has supported the City of Spokane's efforts in the developing a stormwater atlas as a companion document to the SVRP Aquifer Atlas. Older printed materials will be updated as necessary;
- (d) Grants. County will continue to pursue opportunities for obtaining grants and loans through Ecology for specific projects addressing stormwater quality issues, public education and outreach, and low impact development projects. This will be done in cooperation with other affected jurisdictions, as well as other regional planning and management agencies;
- (e) Website. County will continue to enhance, maintain and update the "stormwater" section of the existing Spokane County webpage, to provide information to the public on stormwater permitting, Spokane County water quality issues, BMPs, and links to other related websites;
- (f) School Programs. County will continue to conduct outreach activities in public schools in Spokane County to promote awareness of water quality issues, pollution prevention, and basic watershed principles;
- (g) Involvement in Other Organizations. County will continue to be active in other organizations in Spokane County that promote inter-agency cooperation and have outreach and education functions;
- (h) Construction Program. County will conduct education and outreach activities targeting construction industry organizations (developers, contractors, engineers, surveyors, etc.) about technical standards, the development of



- stormwater site plans and erosion control plans and BMPs for reducing adverse impacts from development sites. When opportunities become available, Spokane County will work through professional engineering and land planning groups to provide education regarding compliance with the Spokane Regional Stormwater Manual and with other Permit requirements.
- (i) Illicit Discharge Program. County will provide information to businesses and the general public about illicit discharges what they are and how to prevent them and encourage proper management and disposal of toxic materials.
- (j) Regional Stormwater Facilities. Signage and other information will be developed to explain the meaning of watersheds, and the value of using natural stormwater systems to control and treat stormwater runoff. Regional stormwater facilities will include opportunities for hands on education about wetlands, the stormwater cycle and the value of clean water.
- (k) Civic Groups. County will provide stormwater pollution prevention information to various community groups.

4.3 Priorities and Measurable Goals

Coordinate public outreach and education with various departments and jurisdictions.

4.4 Staffing and Funding

The annual budgets of the Spokane County Stormwater Utility and the Water Resources Program fund public education and outreach related to water quality. Funds can be used for producing printed material and other education and outreach materials and for assisting in developing long-term education and outreach strategies and methods.

Spokane County supports the utilization of funds for staff time to make presentations at public schools and before civic groups.

Attendance of Spokane County staff members at community outreach events, where part of staff employment responsibilities, will be funded by various participating government agencies.



SECTION 5 – PUBLIC INVOLVEMENT AND PARTICIPATION

5.1 Introduction

In meeting the requirements of the Permit, Spokane County intends to integrate the stormwater management program as much as possible into existing programs and activities. Spokane County has, under the State's Growth Management Act, adopted the *Public Participation Program Guidelines* (PPPG) which describes procedures to ensure a wide range of opportunities for public participation in land use decisions.



Figure 5. Price & Wall Regional Stormwater Facility Ground Breaking Ceremony, June 2008

The County will use the PPPG to ensure there are ongoing opportunities for public involvement and participation in the development and update of stormwater related codes. This section describes the public involvement and participation activities to be used to meet the municipal permit requirements for such a program (paragraph S5.B.2).

5.2 Public Involvement and Participation Program Elements

5.2.1 Objectives for Public Involvement and Participation

The overall objectives of the Public Involvement and Participation Program are to:

- (a) Provide opportunities for public participation in the decision making processes related to stormwater management plans and regulations; and
- (b) Ensure the public has opportunities to participate in activities and discussions that will mold and guide the local stormwater management program.



5.2.2 Public Involvement and Participation Activities

In 2008, Spokane County utilized the public participation guidelines in adopting the *Spokane Regional Stormwater Manual* (SRSM). The public involvement guidelines include the following: communication programs and information services; broad dissemination of proposals and alternatives; public meetings after effective notice; provision for open discussion; opportunity for written comments; and consideration of and response to public comments.

In 2009, Spokane County utilized the public participation guidelines in adopting the Illicit Discharge Detection and Elimination related amendments to Spokane County Code. The public involvement guidelines include the same elements mentioned in the previous paragraph.

In 2011, the SWU conducted a randomly distributed public survey to gauge the level of the public's knowledge on stormwater related pollution sources, concerns, issues, and to begin to gain an understanding of where future education efforts should be focused towards.

The SWMP is available on the Spokane County webpage where public involvement and participation is encouraged.

5.3 Priorities and Measurable Goals

Coordinate public involvement and participation with various departments and jurisdictions to encourage compliance with the adopted guidelines.

The SWMP is available for public review and comment on the Spokane County web-site.

5.4 Staffing and Funding

Following the adopted guidelines and creating ongoing opportunities for involvement in stormwater management activities is, and will continue to be, a part of doing business at Spokane County. Funding and staffing for the public participation work are part of the operations of the Stormwater Utility and other County agencies such as the Water Resources Program.



SECTION 6 – ILLICIT DISCHARGE DETECTION AND ELIMINATION

6.1 Introduction

This section describes the elements of the Illicit Discharge Detection and Elimination (IDDE) Program required by the Permit in paragraph S5.B.3. This element may be somewhat difficult initially for Spokane County to define clearly since the County does not have an extensive stormwater pipe system. As previously discussed in Section 3.1, most stormwater, including that conveyed by gutters or ditches in unincorporated Spokane County, is discharged into the ground, either via natural infiltration or through drywells. In many areas the geology above the SVRP aguifer allows for rapid stormwater infiltration. Therefore, opportunities for stormwater monitoring are limited.



Figure 6. Motor Oil Entering Storm Drain in Parking Lot

Illicit discharge program elements are focusing initially on evaluating the existing stormwater system and potential non-stormwater discharges into the system to determine potential illicit discharge issues and future water quality monitoring sites.

In late 2009, the County began the process of developing an IDDE Guidance Manual (GM) that will define the procedures for locating, assessing, characterizing, tracing and ending illicit discharges, as per Section S5.B.3.c. of the Permit. The GM will also aid in guiding field assessments on three high priority water bodies (Spokane River, Little Spokane River and Liberty Lake). The IDDE Guidance Manual has been completed in 2010 and has been shared with other Eastern Washington Phase II Permittees.



6.2 Illicit Discharge Data and Mapping

The County will develop MS4 maps showing the following: all known and new connections; all known outfalls; the names and locations of all waters of the state that receive discharges from those outfalls; and areas served by discharges to the ground.

The illicit discharge related maps are described and included in Section 3, Stormwater Baseline Data and Maps.

6.3 Non-Stormwater Discharges

Spokane County Code, Chapter 9.14.215, Roads, Approach, and Drainage in New Construction, Discharge of Unauthorized Waters - Prohibited, historically prohibited the discharge of unauthorized waters onto County property or rights-of-way. Unauthorized waters include, but are not limited to groundwater, surface water containing sediment, discharges from swimming pools, hot tubs, detention or evaporation ponds, water discharged from the cleaning of containers or equipment used in laying, cutting or processing concrete and mortar, and water discharged from the cleaning of equipment or containers holding paint solvents or similar contaminants. The Code also requires control of pollutants on construction sites in a manner that does not cause contamination of stormwater or groundwater.

Also, Spokane County non-stormwater discharges are described in Spokane County Code, Section 9.14.185, Erosion and Sediment Control as well as in the Spokane Regional Stormwater Manual.

However, Chapter 9.14 falls short of meeting the illicit discharge requirements mandated under the IDDE component of the Permit. Therefore, the County went through an extensive public review process, and adopted code revisions to Chapter 9.14.215, that address all IDDE Permit requirements. This code amendment (Resolution 09-0672) was formally adopted by the Spokane County Commissioners on July 21, 2009.

In addition, Spokane County Code, Title 8, Health and Sanitation Code, Chapter 8.03, Sanitary Sewer Code, includes various sections that address illicit discharges within Spokane County's municipal separate storm sewer system (MS4). See Section 2.2, Existing Legal Authority, for a detailed list of primarily relevant sections.

6.4 Visual Inspection Program Elements

Municipal separate storm sewer systems (MS4s) is periodically inspected for evidence of non-stormwater discharges by visually observing open channel sections.



Emphasis will be on those areas that, based on the results of visual inspections or other appropriate information, indicate a reasonable potential of containing illicit discharges, infiltration from the sanitary sewer system, or other sources of non-stormwater discharges. Inspections will be performed by Stormwater Utility staff who will work with landowners to correct the problems.

Municipal maintenance staff for streets and storm drains within Spokane County will be trained to look for evidence of non-stormwater discharges to the drainage system during their normal duties. A process for reporting potential problems will included with the existing *Hotline* and *Request for Investigation* processes currently utilized by the County.

6.5 Spill Prevention and Response Program Elements

Hazardous spill prevention and response programs and procedures are in place through the fire department, emergency management and/or contracts with special emergency response contractors. These programs and procedures are designed to addresses safe storage, handling, containment and cleanup of hazardous substances that have the potential to contaminate surface or ground water.

6.6 Public Reporting Program Elements

Public reporting of illicit discharges or other water quality problems is currently available through the following avenues:

- (a) stormwater Hotline:
- (b) calls to Spokane County Public Works;
- (c) emails via Spokane County website;
- (d) calls to Spokane County Health District;
- (e) calls directly to the Department of Ecology.

Spokane County added an IDDE "hotline" (509-477-7525) in February of 2009 and developed a process to following up on calls. We also developed a public informational mail insert describing the hotline.

6.7 Hazardous Waste Disposal Program Elements

The Spokane Regional Solid Waste System (System) was created by an Interlocal Agreement between Spokane County and the City of Spokane on October 11, 1988. All ten of the existing regional cities and towns, as well as Fairchild Air Force Base, subsequently joined the System by executing inter-local agreements with the City and



County of Spokane. In 2003, the newly incorporated cities of Liberty Lake and Spokane Valley also executed inter-local agreements and joined the System.

The System operates as a department of the City of Spokane's government and manages solid waste facilities and contracts for the benefit of all citizens residing in Spokane County. The concurrence of the County is required for certain major decisions. A Liaison Board was established by interlocal agreement in 1987. The Board's purpose is to recommend policy and provide direction on matters pertaining to the management of solid waste and related environmental issues in the incorporated and unincorporated areas throughout Spokane County. Areas of responsibility include recycling/waste reduction, composting, solid waste disposal, household hazardous waste and litter programs. The Liaison Board is also responsible for monitoring capital assets and recommending capital improvements of the System.

Spokane County will work with the System to gather information and assist in evaluating existing household hazardous waste pollution prevention measures.

Spokane County Code, Title 8, Health and Sanitation Code, Chapter 8.26, Litter and Discriminate Dumping, Litter in General, addresses the disposition of litter upon any public place or private property, or within any waters in Spokane County. See Section 2.2, Existing Legal Authority, for additional details.

6.8 High Priority Water Body Assessment

In 2010, the County conducted field assessments in an effort to find unknown illicit discharges on three (3) high priority water bodies, including; portions of the Spokane River, Silver Lake and Liberty Lake.

In 2011, the County conducted field assessments in an effort to find unknown illicit discharges on sections of the Little Spokane River from Colbert Road to the Riverside State Park river access point near St. George School. See attached, 2010-2012 Compliance Actions Primary Water Body Inspections for updated details.

Each year the County will conduct a field assessment on one additional high priority water body.

6.9 Priorities and Measurable Goals

In addition to the on-going activities of dry weather monitoring and field inspections, the first priority will be to identify existing inspection programs that are conducted by maintenance staffs. This will be followed by development of training materials and



execution of a training program for these staffs. These and other measurable goals are defined below.

Completed by	Measurable Goal/Milestone
End of Permit Year 1	Review existing local regulations related to discharge of
(February 15, 2008)	materials and non-stormwater to stormwater systems
End of Permit Year 2	Conduct periodic field inspections of open channels
(February 15, 2009)	 Evaluate existing practices of municipal maintenance staff
	Conduct public education and outreach as per Section 4
	 Develop training materials for municipal maintenance staff and the public
	• Establish a citizen hotline by the end of February 2009
	Draft amendments to Spokane County Code to meet
	permit requirements to prohibit illicit discharges by August of 2009
End of Permit Year 3	 Conduct periodic field inspections of MS4
(February 15, 2010)	 Evaluate existing practices of municipal maintenance staff
	Conduct public education and outreach
	 Update training materials, as needed, for municipal maintenance staff and the public
	 Revise Spokane County Code (Chapter 9.14) to include IDDE components per the Permit
End of Permit Year 4 (February 15, 2011)	Evaluation of existing non-stormwater related local and state laws
-	Conduct periodic field inspections of MS4
	 Evaluate existing practices of municipal maintenance staff
	Conduct public education and outreach as per Section 5
	Conduct training, as needed, for municipal maintenance staff and the public
	Develop a IDDE Guidance Manual to direct field
	personnel on inventory procedures and field inspections
	Conduct field inspections on three primary water bodies
	(Spokane River, Silver Lake, Liberty Lake)
End of Permit Year 5	Conduct dry weather assessments per Section 4
(February 15, 2012)	Conduct semi-annual field inspections of open channels
	Evaluate existing practices of municipal maintenance



Spokane County	
	 staff Evaluate regional maintenance facilities Conduct a field inspection of a high priority water bodies (Spokane River, Liberty Lake, Little Spokane River) Continue refining training of field crews
End of Permit Year 6 (February 15, 2013)	Continue implementing previous year Permit requirements

6.10 Staffing and Funding

Staffing and funding for the illicit discharge and elimination system program elements shall be provided by Spokane County, with assistance from Ecology where available.



SECTION 7 – CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

7.1 Introduction

Currently, Spokane County has included within the site plan review permitting process for new construction notification to applicants regarding the criteria and potential need for coverage under Ecology's NPDES Construction Permit. This section describes the construction site engineering design standards and best management practice (BMP) program required by S5.B.4 of the municipal permit. Construction activity has been singled out by EPA as a potential source of pollutants that require special permitting attention.



Figure 7. Construction Site Stormwater Runoff

Also, within the development review process the public is advised that proposed development projects need to comply with the standards described within the Spokane Regional Stormwater Manual (SRSM), including the erosion and sediment control plan requirements during construction.

The proposed program includes activities intended to provide guidance to public and private groups in Spokane County regarding appropriate construction practices, as well as activities intended to support Ecology in implementing its construction permitting program.

7.2 NPDES Construction Stormwater Permit - Ecology

Any construction projects disturbing one (1) acre or more of ground, or construction projects of less than one acre that are part of a common plan of development or sale shall receive a NPDES Construction Stormwater Permit from Ecology prior to beginning any construction activities.



7.3 Spokane Regional Stormwater Manual

In 1980, Spokane County Commissioners approved Resolution No. 80-1592, which included the *Guidelines for Stormwater Management* (GSM). The GSM was prepared to provide engineers and developers information regarding drainage requirements for land development in Spokane County. This document has been amended over the years to include updates such as the adoption of an "Erosion and Sediment Control" section in April of 1998.

The GSM was replaced by the Spokane Regional Stormwater Manual (SRSM), adopted by the Board of County Commissioners in June of 2008. The SRSM has been accepted by Ecology as being equivalent to the Stormwater Management Manual for Eastern Washington (SWMM).

The SRSM establishes standards for stormwater design and management to protect water quality, natural drainage systems and downstream/down gradient properties as urban development occurs. The purpose of the SRSM is not only to protect surface and ground water quality but also to control stormwater runoff and reduce adverse impacts from flooding.

The SRSM describes, or references recommended design criteria for BMPs that will be applied to new development and redevelopment. The BMPs include criteria for wetlands, bio-infiltration swales, bio-filtration channels, oil-water separators, emerging technologies, etc.

7.4 Erosion and Sediment Control Plan - General Requirements

In Spokane County, under the SRSM, the Erosion and Sediment Control Plan (ESC Plan) is equivalent (as approved by Ecology) to the Construction Stormwater Pollution Prevention Plan (SWPPP), referenced as in Appendix 1 of the Permit. An ESC Plan shall be submitted with each proposed application for development that is proposing to disturb more than one acre of land, as required within the municipal permit, and for projects of less than one acre that are part of a common plan of development or sale, as required within the municipal permit.

When required, a proposed development shall submit an ESC Plan in accordance with the erosion and sediment control plan requirements described within the SRSM at the time of application to Spokane County.



7.5 Developer Notification Program Elements

When a landowner or developer applies for a land action approval (subdivision, etc.) from the County, the applicant is notified of the need to prepare a drainage plan that meets local and state requirements prior to the actual development of the property. Public notification of "construction program elements" will also be part of the public education and outreach efforts described in Section 4.

7.6 Construction Site BMP Elements

Existing construction site engineering design standards and BMPs are described within the *Stormwater Management Manual for Eastern Washington* and the *Spokane Regional Stormwater Manual*. Practices recommended for Spokane County are described in detail within these manuals. As current construction practices evolve, BMP designs in one or more of these manuals are likely to be modified and updated.

In addition, the following chapters of the Spokane County Code include provisions focusing on stormwater related planning, design, construction and maintenance: 1) Chapter 9.14, Roads, Approach and Drainage in New Construction; 2), Chapter 12.400 Subdivisions; 3) Chapter 14.802.060, Parking Lot Location and Design.

If new or improved BMPs are developed and/or approved by Ecology and included within the SWMM, those BMPs will be readily available in Spokane County due to the current language within the SRSM that adopts by reference those BMPs approved within the SWMM.

7.7 Contractor Education and Training Program Elements

Spokane County will support Ecology in conducting local construction site permit program workshops for developers, contractors and engineers. This will include providing venues for workshops, handling local logistics, assisting with advertising, and providing staff to assist with workshop activities. Informational links will be provided via the Spokane County website regarding Ecology (or other organization) sponsored training opportunities for contractors.

Existing printed outreach and education materials for the construction site management program will be reviewed and evaluated.

Printed outreach and education materials for the construction site management program will be distributed with assistance from Ecology and the EPA. Possible examples include *Construction Site Permit Program, How to Prepare an Erosion and Sediment Control*



Plan (Stormwater Pollution Prevention Plan), and Proper Selection and Installation of Construction Site BMPs. Printed materials will be distributed to developers and contractors during the land use application process, and will also be available to Ecology and Spokane County staff to distribute at construction sites during field visits.

Spokane County provides information to construction site operators through the SRSM, the Planning/Permitting processes, brochures, publications, and on the web-page on erosion and sediment control and BMP requirements for development and redevelopment.

7.8 Employee Education and Training Program Elements

Relevant Spokane County staff will receive training on stormwater pollution prevention construction procedures to minimize stormwater pollution from Spokane County construction activities. Training will be focused to be specific to the various departments' operations and functions. "Refresher" training will be provided to County staff as requested or as needed. See Sections 9.4.1 and 9.4.2 for details about additional employee construction training activities.

Information for construction site operators about Certified Erosion and Sediment Control Lead (CESCL) training is displayed in an interactive calendar on the Spokane County webpage. The CESCL training covers erosion and sediment control topics such as; BMPs, how to install and maintain erosion and sediment controls, and how to meet related Ecology requirements.

7.9 Priorities and Measurable Goals

Existing laws, programs and procedures will be reviewed and evaluated.

All of the program set-up activities occurred in permit year 1. The first priority achieved in year 2 was the adoption of the *Spokane Regional Stormwater Manual (SRSM)*. The SRSM provides the regulatory mechanism to require erosion and sediment controls, and other construction phase stormwater pollution controls at new development and redevelopment projects.

Other measurable goals are defined below.

Completed by	Measurable Goal/Milestone
End of Permit Year 1	 Review existing laws, programs and procedures
(February 15, 2008)	• Develop the <i>Spokane Regional Stormwater Manual</i> , in
	coordination with City of Spokane and the City of



Spokane County	
	Spokane Valley
	 Provide information to construction site operators on
	training in methods for erosion and sediment control.
End of Permit Year 2	 Review existing stormwater facility construction
(February 15, 2009)	inspection procedures
	 Complete the public review process and final adoption of the "Spokane Regional Stormwater Manual"
	 If required, begin drafting regulations to implement
	construction permit requirements by February 2010
	 Include construction permitting information in
	public/design professional education and outreach efforts
End of Permit Year 3	If necessary, refine plan/process for conducting
(February 15, 2010)	construction inspections and enforcement
	 Review BMP publication documents
	 If required, draft and adopt regulations to implement
	construction permit requirements by February 2010
	 Include construction permitting information in
	public/design professional education and outreach efforts
End of Permit Year 4	 Enhance and improve the data base for construction
(February 15, 2011)	permits and inspections
	 Include construction permitting information in
	public/design professional education and outreach efforts
	 Complete the development of the process for conducting
	construction inspections and enforcement
	 Begin developing a record keeping system for
	construction and post construction inspections
End of Permit Year 5	 Continue to refine and improve construction inspection
(February 15, 2012)	process
	 Continue to notify and educate the development
	community
	 Continue refining record keeping
	 Continue construction inspections
	 Continue training activities
End of Permit Year 6	 Continue implementing previous year Permit
(February 15, 2013)	requirements



7.10 Staffing and Funding

Spokane County, in coordination with Ecology, will be responsible for preparation of materials and the development of a process for notifying the public, developers and design professionals of construction permitting, inspection and compliance requirements.

The Spokane County departments involved with construction permitting and inspection will keep a record of all relevant data, documentation and information.



SECTION 8 – POST-CONSTRUCTION STORMWATER MANAGEMENT FOR NEW DEVELOPMENT AND REDEVELOPMENT

8.1 Introduction

This section describes the postconstruction stormwater management for new development and redevelopment programs required by S5.B.5 of the municipal permit.

Post-construction activity has been singled out by EPA as a potential source of pollutants that require special permitting attention. The proposed program includes activities intended to provide for the long term inspection, maintenance and management of stormwater facilities.



Figure 8. Post Construction Stormwater Drainage Problem

8.2 Post Construction General Requirements

The Spokane Regional Stormwater Manual (SRSM) requires the ESC Plan (described within section 7) to include post-construction review, inspection and compliance. The ESC Plan is required to be submitted with each proposed application for new development or redevelopment that is proposing to disturb more than one acre of land, and from projects of less than one acre that are part of a common plan of development or sale, as required within the Permit.

Post-construction review, inspection, and compliance requirements are described within the following chapters of the Spokane County Code: 1) Chapter 9.14, Roads, Approach and Drainage in New Construction; 2), Chapter 12.400 Subdivisions.



8.3 Post-Construction Notification Program Elements

Public notification of "post-construction program elements" shall be made a part of the public education and outreach efforts described in Section 4.

8.4 Post-Construction Site Inspection Program Elements

The County is currently reviewing all new construction projects located within the Permit jurisdictional boundary within the site plan review process.

The County shall work with Ecology to develop a database of "state permitted" construction sites within the Permit jurisdictional area. The database, combined with Spokane County construction project information and other tools will be used to identify areas of recent construction projects and to track adverse impacts to surface waters from the projects after completion.

8.5 Education and Training Program Elements

When possible, Spokane County will work with Ecology and other jurisdictions to conduct post-construction inspection training for County personnel. This will include providing venues for workshops, handling local logistics, assisting with advertising, and providing staff to assist with training activities.

Spokane County provides information to construction site operators through the SRSM, the Planning/Permitting processes, brochures, publications, and on the web-page on erosion and sediment control and BMP requirements for development and redevelopment.

8.6 Priorities and Measurable Goals

All of the program set-up activities are given high priority and scheduled in Permit Year 1. The contractor education and training program shall take place throughout the permit cycle. Other measurable goals are defined below.

Completed by	Measurable Goal/Milestone	
End of Permit Year 1 (February 15, 2008)	 Review current laws relative to post-construction review, inspection and compliance Evaluate and develop procedure for including site plan review of all construction projects within the Permit boundary 	
End of Permit Year 2	Begin evaluating post-construction procedures	



Spokane County	
(February 15, 2009)	 Include post-construction information in public/design professional education and outreach efforts Work with Ecology to develop a database of current "NPDES General Permit" construction sites within the Permit boundary Review process for post-construction inspections Complete formal adoption of the "Spokane Regional Stormwater Manual" If necessary, begin drafting regulations for policy and public review by the end of Permit Year 3 Complete including in the site plan review process, review of all construction projects located within the Permit boundary
End of Permit Year 3 (February 15, 2010)	 Begin developing post-construction review, inspection, compliance procedures and if necessary ordinance revisions Enhance and improve the current database for Ecology NPDES General Permitted construction sites Continue with post-construction information in public education and outreach efforts
End of Permit Year 4 (February 15, 2011)	 Continue improving the Permit databases and processes Finalize post-construction review, inspection, compliance procedures and if necessary ordinance revisions Post-construction information to the public Begin evaluating and developing staff training materials Evaluate record keeping process Evaluate inspection process
End of Permit Year 5 (February 15, 2012)	 Enhance record keeping process Enhance inspection practices and procedures Develop and implement training programs Evaluate existing policy that promotes the maintenance of natural drainage systems
End of Permit Year 6 (February 15, 2013)	Continue implementing previous year Permit requirements



8.7 Staffing and Funding

Spokane County will work with Ecology in the preparation of materials and development of a process for notifying the public, developers and design professionals of post-construction review, inspection and compliance requirements.

The various Spokane County departments involved in compliance with the Permit will provide relevant data, documentation and information to the Spokane County and Ecology Phase II Permit coordinators necessary to support the successful implementation of this section of the SWMP.



SECTION 9 – POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

9.1 Introduction

In coordination with multiple departments, Spokane County has developed a Stormwater Operations and Maintenance Plan (O&M Plan). This section describes the various pollution control, good housekeeping, BMPs and source control measures that will be applied to existing and new public facilities, and operations to mitigate the effects of urbanization on stormwater quality. These practices and measures address the miscellaneous requirements described in special provision S5.B.6 of the municipal permit.



Figure 9. County Crews Cleaning Storm Drain

Specific activities and programs were selected because of their link to existing County activities (e.g., for street and stormwater system maintenance) and their relevance to the Spokane County environment. Emphasis is on enhancing and documenting existing programs and activities.

Many County operations already meet the requirements under the Permit. Therefore, the SWMP for "Good Housekeeping" will primarily be a documentation of existing activities and recommendation/implementation of necessary modifications to reduce pollutants to surface and ground water. The Stormwater Operations and Maintenance Plan is available at the office of Engineering & Roads, Stormwater Utility.

9.2 Municipal Stormwater Facilities and Programs

Public stormwater facilities in unincorporated Spokane County fall into three general categories: (1) regional stormwater facilities; (2) facilities that mainly handle road runoff; and (3) on-site stormwater facilities at county owned parks, maintenance shops, county buildings, parking lots, etc. In several cases, county road crews also maintain stormwater facilities serving a specific development using funds from the owners of the parcels of land within the area served.



In addition, many new developments install on-site stormwater facilities that are owned and maintained privately. For residential developments this may mean that a homeowners association is responsible for maintenance of all stormwater facilities in the neighborhood. For commercial and private industrial facilities, the landowner or operator of the establishment on the site operates and maintains the stormwater facilities.

Spokane County will review the following Public Works O&M activities and document the activities in relation to complying with the Permit.

9.2.1 Regional Stormwater Facilities

On January 17, 2006, the Board of County Commissioners adopted the *Comprehensive Stormwater Management Plan* (CSWMP) along with individual stormwater plans for Glenrose, North Spokane and West Plains and their associated Capital Improvement Plans. Each of the individual basin plans emphasizes protecting natural drainage features as the most cost effective means of handling stormwater over the long term.

The Stormwater Utility has constructed or participated in the funding to construct regional stormwater facilities and has purchased or is planning to purchase parcels of land for stormwater facilities. Two regional stormwater facilities were constructed in 2008. Regional stormwater facilities are generally maintained by the Stormwater Utility, County road maintenance, private landscape maintenance contractors and at times, County Parks crews.

Existing maintenance plans for regional stormwater facilities will be reviewed for consistency with the Permit and UIC requirements. As maintenance plans are developed for the new regional facilities, they will comply with Permit and UIC requirements.

9.2.2 Roadway Stormwater Facilities

Stormwater facilities in the county road rights-of-way are maintained by crews from the County Engineering and Roads Maintenance Section. Generally, curbs and gutters, culverts and ditches alongside County roads make up a large portion of the MS4. Stormwater Utility staff will work with maintenance section employees to develop the inventory of facilities and potential outfalls to surface waters and a program of preventative or proactive maintenance. Topics to be



addressed include appropriate frequencies for cleaning catch basins, inlets and storm drains and appropriate ditch cleaning methods and frequencies.

Staff has examined current street sweeping and dust control practices and have determined that current practices are meeting Permit guidelines. All County streets are cleaned once in the Spring and once in the Fall of each year. In addition, spot street cleaning operations are conducted primarily based on field inspections or in response to public complaints. In addition, Spokane County has placed GPS units on all street sweepers to provide documentation of sweeping activities, as well as provide the public an opportunity to view street sweeping progress.

The County also constructs new roads and improves existing roads. Stormwater staff will work with the Engineering and Roads - Design Section regarding compliance with the Spokane Regional Stormwater Manual (SRSM).

Stormwater staff is also working with the Maintenance Section on common procedures for tracking and reporting stormwater facility maintenance activities. This will include standardization of the data that will be collected, and how it will be reported.

9.2.3 Stormwater Facilities at Parks and Other County Owned Properties

Stormwater Utility staff will work with the Parks and Golf Courses, Fair and Expo, Utilities, Human Resources, Sherriff, and Facilities Maintenance Departments and with maintenance supervisors at the county shops within the Permit boundary to review site management practices. Staff will review site operations, the use of herbicides, pesticides and other chemicals, the disposal of vactor wastes and the treatment and disposal of stormwater from the various sites. Existing maintenance plans will be reviewed and updated as necessary.

9.2.3.1 Parks and Open Spaces

Stormwater Utility staff will interview Parks staff and discuss current landscaping and maintenance practices. Staff will review any water quality data collected by Parks personnel. Staff will also discuss current training opportunities for Parks staff about proper storage, handling and application of pesticides, herbicides and fertilizers and whether additional training is warranted.



Spokane County communities are implementing water conservation plans that have guidelines and ordinances addressing outdoor landscape irrigation. The plans are aimed at reducing water waste resulting from over watering. This will also reduce the contribution of pesticides, herbicides and fertilizers to downstream receiving waters.

Spokane County currently operates three golf courses; Meadow Wood Golf Course and Liberty Lake Golf Course are located within the City of Liberty Lake, which are outside of the county's Permit boundary.

The Hangman Valley Golf Course is located within the jurisdiction of Spokane County, however, it is located approximately 3 miles south of the Permit boundary.

9.2.3.2 Vehicle Fleets, Heavy Equipment Storage Areas, Maintenance Areas

Appropriate frequencies and practices will be reviewed and where necessary improvements implemented for cleaning, washing, painting and other maintenance activities related to County vehicles, equipment, heavy equipment and maintenance/repair areas.

The County shall conduct all vehicle and equipment washing, maintenance and repair in a self-contained covered building or in a designated wash and/or maintenance and repair area operated to separate wash-water contaminants from discharging to the MS4.

Spokane County has developed a Stormwater Pollution Prevention Plan (SWPPP) for all vehicle fleets, heavy equipment storage areas, and maintenance areas. The SWPPP is on file at each maintenance or repair shop.

9.2.3.3 Municipal Buildings

Stormwater Utility staff will work with County Facilities Maintenance staff to learn about current frequencies and practices for cleaning, washing, painting and other maintenance activities related to County owned, operated or maintained buildings.

The staff will discuss any concerns and the need for additional training regarding pollution prevention and good housekeeping practices for all County owned, operated or maintained buildings.



9.2.3.4 Material Storage

All hazardous material storage areas shall be contained within a secure structure, in accordance with all applicable local, state and federal codes (i.e. Building and Fire Codes, OSHA Regulations, State of Washington, etc.). Hazardous material handling procedures and practices are currently being implemented.

All non-hazardous materials shall be stored in secure areas where the potential for stormwater pollution or contamination are minimal. Material storage is addressed within the SWPPP at all vehicle fleets, heavy equipment storage areas, maintenance areas.

9.2.3.5 Industrial Activities and Other Public Facilities

The following publicly owned industrial facilities in Spokane County will be identified using best available information:

- (a) Municipal landfills;
- Public hazardous waste treatment, disposal and recovery facilities; (b)
- Public industrial facilities that could contribute a substantial (c) pollutant load to the municipal storm sewer system.

Public facilities identified above will be shown on a GIS map. Current permit requirements and available information about onsite BMPs will be identified.

At this time, no public industrial facilities have been identified that require coverage under the Permit.

9.3 **Construction Projects**

See Spokane Regional Stormwater Manual (SRSM) for details regarding engineering design standards, including BMPs relevant to construction projects. Spokane County will comply with the applicable construction standards relating to stormwater pollution control.

9.4 **Spokane County Employee Education and Training**

Relevant Spokane County staff will be periodically trained on operation and maintenance procedures to minimize stormwater pollution from operations and maintenance activities.



Training will be focused to be specific to the various departments operations and functions. "Refresher" training will be provided to County staff as requested or as needed.

9.4.1 Objectives for Spokane County Employee Education and Training

The overall objectives of the Employee Education and Training Program are to:

- (a) Inform the employee about important water quality issues, regulations, BMPs, and other construction practices related to stormwater management;
- (b) Influence behavior of the employee to reduce activities that have a negative impact on stormwater runoff quality and increase activities that have a positive impact on stormwater runoff quality.

9.4.2 Employee Education and Training Activities

The following activities will be part of the employee education and training program.

- (a) Training Events. County, in coordination with Ecology, will use training events for employees that focus on stormwater pollution awareness, stormwater construction practices, pollution prevention practices and regional stormwater issues.
- (b) Printed Materials. County will continue to develop, produce or distribute printed materials (e.g., brochures, flyers, promotional items) for specific topics related to stormwater quality. Older printed materials will be updated as necessary.
- (c) Website. County will continue to enhance, maintain and update the "stormwater" section of the existing Spokane County webpage, to provide information to employees on stormwater pollution potential sources and pollution prevention practices, Spokane County water quality issues, BMPs, and links to other related websites.
- (d) Construction Program. County will conduct education and training activities targeting County employee construction and maintenance personnel.

9.5 Priorities and Measurable Goals

The first priority is to evaluate pollution prevention and good housekeeping areas of interest within the Permit jurisdiction.



The second priority is to determine and evaluate existing tracking/reporting procedures within the various County departments in order to establish needs and goals for the following years.

These and other measurable goals are listed below.

Completed by	Measurable Goal/Milestone	
End of Permit Year 1	Begin reviewing pollution prevention and good	
(February 15, 2008)	housekeeping areas of interest within the Permit jurisdiction	
End of Permit Year 2	Review the availability of information on cleaning catch	
(February 15, 2009)	basins, inlets and storm drains	
	 Review existing available information for tracking and 	
	reporting storm drain system maintenance	
	• Review existing available information on street sweeping	
	and dust control	
	 Review existing available information on pesticide, 	
	herbicide and fertilizer monitoring data and existing	
	management procedures	
	• Review existing available information on vehicle fleet and	
	heavy equipment maintenance/repair procedures	
	Review existing available information on hazardous	
	material storage	
	Begin determining where employee training may be needed	
End of Permit Year 3	• Evaluate a reporting program for the various items activities	
(February 15, 2010)	listed in years 2 and 3	
	Begin developing a database to track various activities listed	
	in years 2 and 3	
	• Conduct employee training as determined in Years 2 and 3	
	• Continue reviewing the availability of information on	
	cleaning catch basins, inlets and storm drains	
	• Continue reviewing available information for tracking and	
	reporting storm drain system maintenance	
	 Continue reviewing available information on street 	
	sweeping and dust control	
	• Continue reviewing available information on pesticide,	
	herbicide and fertilizer monitoring data and existing	
	management procedures	
	 Continue reviewing available information on vehicle fleet 	
	and heavy equipment maintenance/repair procedures	
	 Continue reviewing available information on hazardous 	



SPOKANE COUNTY	
	material storage
	Evaluate future training needs
End of Permit Year 4 (February 15, 2011)	• Continue to develop a reporting program for the various activities listed in years 2 and 3
	• Begin developing a database to track various activities listed in years 2 and 3
	Conduct employee training as needed
	Evaluate future training needs
	Complete the development of the O&M Plan
End of Permit Year 5 (February 15, 2012)	Complete reporting program development for the various O&M activities
(1 coluary 13, 2012)	
	Update files for various activities
	Conduct employee training
	Evaluate future training needs
	Evaluate and update the O&M Plan as needed
End of Permit Year 6	Vehicle Fleets, Heavy Equipment Storage Areas,
(February 15, 2013)	Maintenance Areas

9.6 Staffing and Funding

The evaluation of existing procedures and practices relating to pollution prevention and good housekeeping measures will be funded by Spokane County. Staffing will also be provided by Spokane County.



SECTION 10 – SWMP IMPLEMENTATION RESPONSIBILITIES

10.1 Introduction

This section describes how the responsibilities for implementing the adopted SWMP programs will be shared among the various Spokane County entities.

This section is in compliance with the Eastern Washington Phase II Municipal Stormwater Permit, special provision S5.A and S5.B, which requires an implementation strategy within the Stormwater Management Program (SWMP).



Figure 10: Residential Grassy Swale

10.2 Implementation Responsibilities

In general, Spokane County provides overall program oversight, funding and staffing for activities that are described within the SWMP.

Responsibility for implementing the various elements of the SWMP will be primarily by various Spokane County entities as described below:

Public Works, Engineering and Roads – Development Services, Stormwater Utility, Fleet Management and Road Maintenance Sections

Building and Planning

Public Works, Utilities

Parks, Recreation and Golf Department

Facilities

Human Resources



Fair & Expo Center

The State of Washington, Department of Ecology will provide various services in support of the SWMP.

The various Spokane County entities shall coordinate through the Stormwater O&M Plan.

10.3 Implementation in New Areas

The programs outlined in this SWMP will be applied to Spokane County areas described as United States Census classified urbanized areas, *Urban Growth Areas* (UGA) associated with Phase II Permit regulated cities under the jurisdictional control of the County, and UGA areas contiguous to urbanized areas (see *Spokane County - Comprehensive Plan* for UGA details) that are under the jurisdictional control of the County, as required by Section S1.A.2. Those areas that become urbanized or are included in an UGA area during the period of the current municipal permit will be documented and included within the next subsequent Phase II Municipal Stormwater Permit cycle.



SECTION 11 – MEASURABLE GOALS

11.1 Year 1 Goals

This section summarizes the measurable goals proposed in the previous sections for years 1, 2, 3 and 4 of the five year Permit cycle. Many activities are proposed from year to year establish a foundation for public education and outreach, public involvement, IDDE, construction, post-construction programs, and operations and maintenance.

Year 1 measurable goals are summarized in the following table.

Program Category	Measurable Goal/Milestone
Section 2: Legal Authority	Begin to Assemble and summarize existing legal authority
Section 3: Stormwater System Map	Begin preparing MS4 base maps
Section 4: Public Education and Outreach	Begin reviewing public outreach and education opportunities with various departments and jurisdictions
Section 5: Public Involvement and Participation	Begin reviewing public involvement and participation opportunities with various departments and jurisdictions
Section 6: Illicit Discharge Detection and Elimination Program	Review existing local regulations related to discharge of materials and non-stormwater to stormwater systems
Section 7: Construction Site Stormwater Control Program	 Review existing laws, programs and procedures Develop the <i>Spokane Regional Stormwater Manual</i>, in coordination with City of Spokane and the City of Spokane Valley Provide information to construction site operators on training in methods for erosion and sediment control
Section 8: Post Construction Management for New Development and Redevelopment	 Review current laws relative to post-construction review, inspection and compliance Evaluate and develop procedure for including site plan review of all construction projects within the Permit boundary
Section 9: Pollution Prevention and Good Housekeeping for Municipal Operations	Begin reviewing pollution prevention and good housekeeping areas of interest within the Permit jurisdiction



11.2 Year 2 Goals

This section summarizes the measurable goals proposed in the previous sections for year 2 of the five year Permit. Many activities proposed for year 2 will build and expand on year 1 goals.

Year 2 measurable goals are summarized in the following table.

Program Category	Measurable Goal/Milestone		
Section 2: Legal	Develop a plan for addressing deficiencies in current legal		
Authority	authority		
	Begin developing policy and code revisions in legal authority		
Section 3: Stormwater	 Continue Developing the MS4 base maps 		
System Map	 Begin evaluation of existing stormwater infrastructure, facilities and properties 		
Section 4: Public Education and Outreach	 Coordinate public outreach and education with various departments and jurisdictions 		
Section 5: Public Involvement and	 Coordinate public involvement and participation with various departments and jurisdictions 		
Participation	 Post SWMP on the Spokane County web-site by May 31, 2008 		
Section 6: Illicit	Conduct periodic field inspections of open channels		
Discharge Detection and	Evaluate existing practices of municipal maintenance staffs		
Elimination Program	Conduct public education and outreach as per Section 4		
	Develop training materials for municipal maintenance staff		
	and the public		
	• Establish a citizen hotline by the end of February 2009		
	• Draft amendments to Spokane County Code to meet permit requirements to prohibit illicit discharges by August of 2009		
Section 7: Construction Site Stormwater Control	 Review existing stormwater facility construction inspection procedures 		
Program	Complete the public review process and final adoption of the "Spokane Regional Stormwater Manual"		
	If required, begin drafting regulations to implement		
	construction permit requirements by February of 2010		
	• Include construction permitting information in public/design professional education and outreach efforts		
Section 8: Post	Begin evaluating post-construction procedures		
Construction	Include post-construction information in public/design		



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Management for New	professional education and outreach efforts
Development and	Work with Ecology to develop a database of current "Ecology
Redevelopment	- NPDES General Permit" construction sites within the Permit
	boundary
	Review process for post-construction inspections
	Complete formal adoption of the "Spokane Regional
	Stormwater Manual"
	If necessary, begin drafting regulations for policy and public
	review by the end of Permit Year 3
	• Complete including in the site plan review process, review of
	all construction projects located within the Permit boundary
Section 9: Pollution	Review the availability of information on cleaning catch
Prevention and Good	basins, inlets and storm drains
Housekeeping for	Review existing available information for tracking and
Municipal Operations	reporting storm drain system maintenance
	Review existing available information on street sweeping and
	dust control
	Review existing available information on pesticide, herbicide
	and fertilizer monitoring data and existing management
	procedures
	Review existing available information on vehicle fleet and
	heavy equipment maintenance/repair procedures
	Review existing available information on hazardous material
	storage
	Begin determining where employee training may be needed

11.3 Year 3 Goals

This section summarizes the measurable goals proposed in the previous sections for year 3 of the five year Permit. Many activities proposed for year 3 will build and expand on years 1 and 2 goals.

Year 3 measurable goals are summarized in the following table.

Program Category	Measurable Goal/Milestone	
Section 2: Legal Authority	 Complete implementing policy and code revisions relating to illicit discharge (September 1, 2009) If necessary, revise existing codes relating to construction and post construction 	
Section 3: Stormwater System Map	 Update stormwater GIS data layers and maps Complete the analysis and development of the MS4 outfall 	



Spokane County	2000 6:-11 : 1:	
	coverage from 2008 field investigations	
Section 4: Public	 Coordinate public outreach and education with various 	
Education and Outreach	departments and jurisdictions	
Section 5: Public	Coordinate public involvement and participation with various	
Involvement and	departments and jurisdictions	
Participation	• Post updated SWMP on the Spokane County web-site by May	
	31, 2009	
Section 6: Illicit	 Conduct periodic field inspections of MS4 	
Discharge Detection and	 Evaluate existing practices of municipal maintenance staff 	
Elimination Program	 Conduct public education and outreach 	
	• Updated training materials, as needed, for municipal	
	maintenance staff and the public	
	• Revise Spokane County Code, Chapter 9.14, to include IDDE	
	components per the Permit	
Section 7: Construction	• If necessary, refine plan/process for conducting construction	
Site Stormwater Control	inspections and enforcement	
Program	 Review BMP publication documents 	
	• If required, draft and adopt regulations to implement	
	construction permit requirements by February 2010	
	• Include construction permitting information in public/design	
	professional education and outreach efforts	
Section 8: Post	 Begin reviewing developing post-construction review, 	
Construction	inspection, compliance procedures and if necessary ordinance	
Management for New	revisions	
Development and	• Enhance and improve the current database for "Ecology -	
Redevelopment	NPDES General Permit" construction sites	
	• Continue with post-construction information in public	
	education and outreach efforts	
Section 9: Pollution	• Evaluate a reporting program for the various items activities	
Prevention and Good	listed in years 2 and 3	
Housekeeping for	Begin developing a database to track various activities listed in	
Municipal Operations	years 2 and 3	
	• Conduct employee training as determined in Years 2 and 3	
	• Continue reviewing the availability of information on cleaning	
	catch basins, inlets and storm drains	
	 Continue reviewing available information for tracking and 	
	reporting storm drain system maintenance	
	• Continue reviewing available information on street sweeping	
	and dust control	
	 Continue reviewing available information on pesticide, 	



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	nerbicide and fertilizer monitoring	ng data and existing
	nanagement procedures	
	Continue reviewing available in	formation on vehicle fleet and
	neavy equipment maintenance/re	epair procedures
	Continue reviewing available in	formation on hazardous
	naterial storage	
	Evaluate future training needs	

11.4 Year 4 Goals

This section summarizes the measurable goals proposed in the previous sections for year 4 of the five year Permit. Many activities proposed for year 4 will build and expand on years 1, 2 and 3 goals.

Year 4 measurable goals are summarized in the following table.

Program Category	Measurable Goal/Milestone	
Section 2: Legal	•	Continue evaluating construction and post construction codes
Authority		and procedures
Section 3: Stormwater	•	Gather data and develop infrastructure maps for all public
System Map		facilities and activities relating to the development of the O&M Plan
	•	Conduct priority water body outfall field investigations and continue updating outfall database
	•	Update stormwater GIS coverages and maps
Section 4: Public	•	Coordinate public outreach and education with various
Education and Outreach		departments and jurisdictions
Section 5: Public	•	Coordinate public involvement and participation with various
Involvement and		departments and jurisdictions
Participation	•	Post updated SWMP on the Spokane County web-site by May 31, 2010
Section 6: Illicit	•	Evaluation of existing non-stormwater related local and state
Discharge Detection and		laws
Elimination Program	•	Conduct periodic field inspections of MS4
	•	Evaluate existing practices of municipal maintenance staff
	•	Conduct public education and outreach as per Section 5
	•	Conduct training, as needed, for municipal maintenance staff and the public
	•	Develop a IDDE Guidance Manual to direct field personnel on inventory procedures and field inspections
	•	Conduct field inspections on three primary water bodies



(Spokane River, Silver Lake, Liberty Lake)
• Enhance and improve the data base for construction permits
and inspections
• Include construction permitting information in public/design
professional education and outreach efforts
Complete the development of the process for conducting
construction inspections and enforcement
Begin developing a record keeping system for construction
and post construction inspections
Continue improving the Permit databases and processes
• Finalize post-construction review, inspection, compliance
procedures and if necessary ordinance revisions
Post Construction information to the public
Begin evaluating and developing staff training materials
 Evaluate record keeping processes
 Evaluate inspection processes
Continue to develop a reporting program for the various items
activities listed in years 2 and 3
• Begin developing a database to track various activities listed in
years 2 and 3
 Conduct employee training as needed
• Evaluate future training needs
• Complete the development of the Stormwater Operations and
Maintenance Plan

11.5 Year 5 Goals

This section summarizes the measurable goals proposed in the previous sections for year 5 of the five year Permit. Many activities proposed for year 5 will build and expand on years 1, 2, 3 and 4 goals.

Year 5 measurable goals are summarized in the following table.

Program Category	Measurable Goal/Milestone
Section 2: Legal	Monitor previous Code revisions.
Authority	-
Section 3: Stormwater	Update stormwater GIS coverage areas and maps
System Map	Develop public facility site maps to accompany the
	Stormwater O&M Plan site assessment analysis



Spokane County	
	Develop material storage, heavy equipment storage area and maintenance area maps for the Stormwater O&M Plan SWPP Company to the Stormwater O&M Plan SWPP
	Conduct priority water body outfall field investigations and continue updating outfall database
Section 4: Public	Coordinate public outreach and education with various
Education and Outreach	departments and jurisdictions
Section 5: Public Involvement and	 Coordinate public involvement and participation with various departments and jurisdictions
Participation Participation	
Tarticipation	• Post updated SWMP on the Spokane County web-site by May 31, 2011
Section 6: Illicit	Conduct dry weather assessments per Section 4
Discharge Detection and	Conduct semi-annual field inspections of open channels
Elimination Program	Evaluate existing practices of municipal maintenance staff
	Evaluate regional maintenance facilities
	• Conduct field inspection of a high priority water bodies
	(Spokane River, Liberty Lake, Little Spokane River)
	Continue refining training of field crews
Section 7: Construction	Continue to refine and improve construction inspection
Site Stormwater Control	process
Program	Continue to work with notification and education of the
	development community
	Continue refining record keeping
	Continue refining construction inspections
	Continue training activities
Section 8: Post	Enhance record keeping processes
Construction	Enhance inspection practices and procedures
Management for New	Develop and implement training programs
Development and	• Evaluate existing policy that promotes the maintenance of
Redevelopment	natural drainage systems
Section 9: Pollution	Continue to develop a reporting program for the various O&M
Prevention and Good	activities
Housekeeping for	Begin developing a database to track various activities
Municipal Operations	Conduct employee training
	Evaluate future training needs
	Complete the development of the Operations and Maintenance
	Plan



11.6 Year 6 Goals

This section summarizes the measurable goals proposed in the previous sections for year 6 of the extended five year Permit. Year six will be a continuation of the implementation of previous year Permit actions and requirements. See above sections for details.