

*This SWMP is an attachment to the City's 2014 Annual Report to the Department of Ecology for its  
Phase II NPDES Permit*

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*In compliance with the provisions of  
The State of Washington Water Pollution Control Law Chapter 90.48 Revised Code of Washington  
and*

*The Federal Water Pollution Control Act (The Clean Water Act)  
Title 33 United States Code, Section 1251 et seq.*

## Stormwater Management Program 2015 for

City of Kelso

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### Abbreviation and Acronyms

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BMP	Best Management Practice
CESCL	Certified Erosion and Sediment Control Lead
City	City of Kelso
Ecology	Washington Department of Ecology
IDDE	Illicit Discharge Detection and Elimination
KEDM	Kelso Engineering Design Manual
KMC	Kelso Municipal Code
KSAC	Kelso Stormwater Advisory Committee
LID	Low Impact Development
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
Permit	Phase II Western Washington NPDES Municipal Stormwater Permit
Phase II Permit	Phase II Western Washington NPDES Municipal Stormwater Permit
SIDIR	Source Identification Information Repository
SWMMWW	Stormwater Management Manual for Western Washington
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan



# CITY OF KELSO STORMWATER MANAGEMENT PROGRAM 2015

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## I. INTRODUCTION

### I.1 Overview and Background

The City of Kelso (City) operates a municipal separate storm sewer system (MS4) which collects and conveys stormwater runoff from developed areas of the City to surface waters. Discharge of runoff from the MS4 is regulated by the Washington State Department of Ecology (Ecology), and the City is required to obtain a permit to operate the system.

The Western Washington Phase II Municipal Stormwater Permit (Permit) outlines stormwater program activities and implementation milestones that the City must follow to comply with federal Clean Water Act. As a general permit, the Permit applies to more than 80 MS4s in western Washington. Each Phase II community is required to develop a Stormwater Management Program (SWMP) that includes a description of the required activities, implement those activities within the required timeframes of the permit term, and submit annual reports to Ecology by March 31<sup>st</sup> each year to document progress toward permit compliance.

Kelso was first issued a Phase II Permit in 2007 and has been implementing a SWMP since that time.

Ecology issued the current Permit in 2012, and it became effective on August 1, 2013. Ecology subsequently issued a permit modification on December 17, 2014, which became effective January 16, 2015. The permit modification includes minor changes to correct inconsistencies and scrivener's errors, changes to definitions to clarify the intent of some permit language, and substantial changes to the watershed-scale stormwater planning requirement, which is not applicable to the City. The Permit covers a five-year period from August 2013 to July 2018.

Stormwater flows from the City eventually enter the Cowlitz and Coweeman Rivers through a combination of gravity outfalls and pump stations operated by the Diking Improvement District No. 1 and the Consolidated Diking Improvement District No. 3. The City's MS4 also connects to and discharges stormwater to the City of Longview's MS4.

In accordance with Permit requirements, the City has developed a SWMP designed to reduce the discharge of pollutants to the maximum extent practicable (MEP), meet all known, available, and reasonable methods of prevention, control and treatment (AKART) requirements, and to protect water quality. The following sections describe the actions that Kelso has and will take to comply with the requirements of the Permit.

## **I.2 Departmental Responsibilities**

The Community Development Department employs a full-time Senior Stormwater Engineer, who acts as the City's NPDES Coordinator.

The Community Development Department is responsible for general Permit compliance, stormwater public education and outreach, public involvement in stormwater concerns, regulating the entrance of non-stormwater pollutants into the MS4, regulating runoff on construction sites and developments, developing procedures for compliance with the Permit, planning stormwater capital projects, training staff from other departments, and reporting.

The Public Works Department is responsible for spill response, maintaining components of the MS4, and operating City properties such as roads, rights-of-way, parks, and municipal buildings in a manner that prevents and reduces stormwater impacts.

Employees in the Police Department are responsible for maintaining awareness of the stormwater system and reporting potential illicit discharges that may be observed during the normal course of their duties in the community.

The City's stormwater utility funds the SWMP based on impervious area for commercial properties and on a base rate for residential properties.

## **I.3 Document Organization**

This report comprises the required written documentation of the City's SWMP.

To aid in tracking NPDES permit requirements, this document has been organized into sections that correspond with the Permit Special Conditions and are outlined in the Phase II Permit as follows:

- Chapter 2 – Stormwater Management Program
  - 2.1 - Public Education and Outreach, Special Condition S5.C.1
  - 2.2 - Public Involvement and Participation, Special Condition S5.C.2
  - 2.3 - Illicit Discharge Detection and Elimination (IDDE), Special Condition S5.C.3
  - 2.4 - Controlling Runoff from New Development, Redevelopment, and Construction Sites, Special Condition S5.C.4
  - 2.5 - Operation and Maintenance for Municipal Operations, Special Condition S5.C.5
  - 2.6 - NPDES Program Administration
- Chapter 3 – Stormwater Monitoring

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## 2. STORMWATER MANAGEMENT PROGRAM

This chapter describes five required components of the NPDES Permit Stormwater Management Program and the City's plan to meet each requirement and administer the program.

### 2.1 Public Education and Outreach

The City's public education and outreach program focuses on building general awareness among the public of problems created by stormwater runoff. The program is carried out by the NPDES Coordinator.

#### 2.1.1 Permit Requirements

Section S5.C.1 requires the following:

- Develop and administer an education program to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts and encourage the public to participate in stewardship activities. The program must target residents, businesses, industry, and city employees at all levels.
- Provide an education and outreach program designed to educate target audiences about the stormwater problem and provide specific actions they can follow to minimize the problem.
- Measure adoption of targeted behaviors for at least one target audience in at least one subject area. Use the resulting measurements to direct outreach resources most effectively and to evaluate changes in adoption of the targeted behaviors and evaluation of the education program's effectiveness at changing targeted behaviors.
- Create stewardship opportunities to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, and riparian plantings.

#### 2.1.2 Existing Programs and Activities

Kelso's activities in this area are ongoing.

- Maintain a stormwater educational website at <http://www.kelso.gov/departments-services/community-development/engineering-department/stormwater>.
- Distribute the *Solution to Stormwater Pollution* brochure.
- Coordinate a storm drain stenciling volunteer program.
- Hold educational workshops.

#### 2.1.3 Planned Activities

Planned activities for 2015 include:

- Continue to maintain the stormwater educational website.
- Design and implement a program to educate a target audience and measure adoption of targeted behavior.
- Update the City's outreach plan based on results of measurement.
- Select and reach out to a non-profit organization or other community group to explore developing stewardship opportunities.

## 2.2 Public Involvement and Participation

The City's public involvement and participation program is designed to seek regular input from stakeholders through the Kelso Stormwater Advisory Committee (KSAC). The NPDES Coordinator carries out this requirement.

### 2.2.1 Permit Requirements

Section S5.C.2 requires the following:

- Provide ongoing opportunities for public involvement through advisory councils, public hearings, watershed committees, participation in developing rate structures or other similar activities.
- Create opportunities for the public to participate in the decision-making processes involving the development, implementation and update of the SWMP.
- Make the SWMP document and Annual Report available to the public on the City's website. Any other submittals required by Ecology also must be available on the website.

### 2.2.2 Existing Programs and Activities

Kelso's activities in this area are ongoing:

- Holds quarterly public meetings of KSAC.
- Seeks public input through the City Council.
- Posts annual reports, the SWMP, and other stormwater-related documents to the City's website.

### 2.2.3 Planned Activities

Planned activities for 2015 include:

- Continue to hold quarterly meetings of KSAC.
- Update the SWMP by March 2015.
- Post the SWMP and 2014 Annual Report to website by May 2015.

## 2.3 Illicit Discharge Detection and Elimination (IDDE)

The City's IDDE ordinance prohibits the discharge of non-stormwater, with a few exceptions, into the MS4. The IDDE program guides City responses to spills and to reports of potential discharges to the storm sewer. Staff monitored the system through inspection of priority outfalls. During the permit term, the City plans to make minor modifications to its prohibited and allowable discharges, update its MS4 maps, and increase system monitoring through a greater number of outfall inspections. The program is carried out primarily by Community Development, although primary responsibility for spill response is with Public Works.

### 2.3.1 Permit Requirements

Section S5.C.3 requires the following:

- Implement an ongoing program to prevent, detect, characterize, trace, and eliminate illicit discharges, connections and improper disposal into the MS4.
- Develop a storm sewer system map and update it on an ongoing basis.

- Implement an ordinance to prohibit non-stormwater illicit discharges into the MS4 that includes allowable discharges, conditionally allowable discharges, and escalating enforcement procedures and actions.
- Implement a compliance strategy that includes informal compliance actions such as public education and technical assistance as well as escalating enforcement penalties and an enforcement strategy. Include the following tools:
  - Apply operational and structural source control Best Management Practices (BMPs) for pollutant generating sources to prevent illicit discharges.
  - Maintain stormwater facilities to standards to prevent illicit discharges.
- Implement an ongoing program to detect and identify non-stormwater discharges and illicit connections to the MS4, including the following components:
  - Procedures for conducting investigations of the MS4, including field screening and methods for identifying potential sources of illicit discharges and connections.
  - Publicize a hotline or other local telephone number for reporting of spills or other illicit discharges.
  - Provide appropriate training to City field staff on identification and reporting of illicit discharges.
  - Inform public employees, businesses, and the general public of the hazards associated with illicit discharges and improper disposal of waste.
- Implement an ongoing program to address illicit discharges and illicit connections, including the following components:
  - Procedures for characterizing the nature of, and threat posed by, any illicit discharges found by or reported to the City, including evaluating if the discharge must be immediately contained.
  - Procedures for tracing the source of an illicit discharge, including visual inspection and other methods and procedures.
  - Procedures for eliminating the discharge through notification, technical assistance, inspections and the compliance strategy required above.
- Comply with requirements to address illicit discharges found or reported within permit-established timelines (see S5.C.3.d.iv.).
- Train technical staff that is responsible to conduct these activities.
- Track and maintain records of the activities conducted to meet the requirements of S5.C.3.

### 2.3.2 Existing Programs and Activities

Kelso's activities in this area are both completed and ongoing.

#### Completed Activities

- Developed a stormwater system map and geographic information system (GIS) in three phases completed in 2006, 2008, and 2013.
- Adopted Ordinance 09-3713 prohibiting illicit discharges in 2009; it is codified as Kelso Municipal Code (KMC) 13.11.
- Developed procedures for detection, reporting, characterization, response, investigation, removal, clean-up, and enforcement in the *Municipal Stormwater Illicit Discharge Detection and Elimination (IDDE) Program 2011*.

## Ongoing Activities

- Follows procedures for detection, reporting, characterization, response, investigation, removal, clean-up, and enforcement in the *Municipal Stormwater Illicit Discharge Detection and Elimination (IDDE) Program 2011*.
- Contacts the public to provide education and enforcement when illicit discharges are reported or discovered.
- Provides training on IDDE awareness one time per permit term to Public Works field staff and Police.
- Operates a Kelso stormwater hotline and participates in operation of the Longview/Kelso stormwater hotline.
- Encourages the public to report illicit discharges, spills, or other stormwater-related issues using the online Stormwater Incident Report at <http://www.kelso.gov/stormwater-incident-report>.
- Tracks illicit discharge reports and responses.

### 2.3.3 Planned Activities

Planned activities for 2015 include:

- Continue ongoing activities listed above, including enforcing KMC 13.11, responding to illicit discharges and spills, educating the public about the hazards of IDDE through educational enforcement, and providing the public ways to report illicit discharges and spills, including two hotlines and an online incident report.
- Map any new public (City-operated) stormwater treatment and flow control facilities constructed in 2014.
- Map discharge points.
- Perform the field work necessary (catch basin reconnaissance) to address the backlog of 100 to 150 existing catch basins that are not documented in the GIS.
- Train municipal field crews, including Public Works and Police, in IDDE awareness.
- Obtain additional training in field investigation, tracing, and follow-up for the Senior Stormwater Engineer.
- Create new standard operating procedures in the Kelso IDDE manual for indicator sampling of physical and chemical parameters.
- Select subset of outfalls to screen.
- Follow indicator sampling procedures, when required, in response to illicit discharges discovered during field screening.

## 2.4 Controlling Runoff from Development, Redevelopment, and Construction Sites

The City's stormwater regulatory program currently implements local standards for temporary erosion control and permanent stormwater control on most development, redevelopment, and construction projects, while applying state standards to those projects greater than one acre in size.

During this permit term the City plans to update its regulatory program, including adopting a new stormwater ordinance and updating the Kelso Engineering Design Manual (KEDM) in accordance with Permit requirements. Furthermore, the City plans to incorporate Low Impact Development

(LID) into the new stormwater ordinance, development codes, and the KEDM.. Community Development carries out this program.

Note: the Permit includes Section S5.C.4.g for watershed-scale stormwater planning. None of these requirements apply to the City of Kelso, so they are not listed below.

## 2.4.1 Permit Requirements

Section S5.C.4 requires the following:

- Implement and enforce a program to reduce pollutants in stormwater runoff that enters the MS4 from new development, redevelopment and construction site activities.
- Implement an ordinance with necessary legal authority to require development, redevelopment, and construction applications submitted after June 30, 2017 to control runoff according to the minimum technical requirements in either the 2014 Ecology Stormwater Management Manual for Western Washington, or an equivalent Manual approved by Ecology.
- Include a permitting process with site plan review, inspection, and enforcement capability to all sites that meet the minimum thresholds in Appendix 1 of the City's Permit, including the following components:
  - Review all stormwater site plans.
  - Inspect, prior to clearing and construction, all permitted development sites that have high potential for sediment transport.
  - Inspect all permitted development sites during construction to verify proper installation of erosion and sediment controls.
  - Inspect all permitted development sites upon completion of construction, and prior to final approval or occupancy, to ensure proper installation of permanent stormwater facilities. Verify that a maintenance plan is complete and responsibility for maintenance is assigned.
  - An enforcement strategy to respond to issues of non-compliance with above-noted components.
- By June 30, 2017, adopt regulations that include provisions to verify adequate long-term operations and maintenance of regulated stormwater treatment and flow control facilities, including the following components:
  - Implement an ordinance that requires development applications to identify party responsible for maintenance, requires inspection of facilities, and establishes enforcement procedures.
  - Establish maintenance standards at least as protective as those contained in the SWMMWW.
  - Annual inspection of regulated treatment and flow control facilities.
  - Inspection of all regulated permanent treatment and flow control BMPs/facilities and catch basins in new residential developments every six months until 90% of the lots are constructed or until the site is fully stabilized.
  - Perform maintenance within timelines established in the Permit.
  - Keep records of inspections and enforcement actions.

- Make available copies of the Notice of Intent (NOI) for Construction Activity and copies of the NOI for Industrial Activity to representatives of proposed new development and redevelopment.
- Train staff on the new codes, standards, processes and procedures.
- Adopt LID code-related requirements by June 30, 2017 to make LID the preferred and commonly-used approach to site development using a process similar to that described in *Integrating LID into Local Codes: A Guidebook for Local Governments* (Puget Sound Partnership, 2012).
- Summarize the results of the LID integration and revision process by March 31, 2018.

#### 2.4.2 Existing Programs and Activities

Kelso's activities in this area are both completed and ongoing.

##### Completed Activities

- Adopted Ordinance 10-3727 in 2010, which implemented Ecology's stormwater and erosion control guidelines for sites over one acre that meet thresholds established in Appendix 1 of the 2007 Permit and continued to enforce local standards for other sites. Codified as KMC 13.09 – Stormwater Management.
- Updated KEDM in 2010 to meet requirements.

##### Ongoing Activities

- Enforce existing local stormwater and erosion control codes for development, redevelopment, and construction sites that meet local thresholds.
- Enforce stormwater and erosion control regulations using Ecology's 2005 SWMMWW for sites over one acre that meet thresholds established in Appendix 1.
- Review site plans and grading permit applications.
- Perform site inspections before, during, and after construction on regulated sites.
- Make NOIs available at City Hall.
- Maintain Certified Erosion and Sediment Control Lead (CESCL) certification for two staff.

#### 2.4.3 Planned Activities

Planned activities for 2015 include:

- Continue review of development, redevelopment, and construction sites using local thresholds for sites under one acre and using thresholds established in Appendix 1 of the 2007 Permit for sites over one acre.
- Continue inspecting regulated sites before, during, and after construction.
- Begin the process to update stormwater standards in accordance with Appendix 1 and the SWMMWW, including incorporation of LID standards in City development codes.
- Attend additional training in LID for the Senior Stormwater Engineer.

### 2.5 Municipal Operations and Maintenance (O&M)

The Public Works Department operates the MS4 and City properties, including streets, rights-of-way, parks, and municipal buildings. Employees follow procedures to reduce stormwater impacts from City operations. During the Permit term, the City plans to update its maintenance standards,

increase frequency of catch basin inspection, and implement a catch basin repair and replacement program.

### 2.5.1 Permit Requirements

Section S5.C.5 requires the following:

- Develop and implement an operations and maintenance (O&M) program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- By June 30, 2017, establish and adopt maintenance standards for components of the municipal separate stormwater system that are at least as protective as those specified in Volume V of the SWMMWW.
- Conduct annual inspections of City-operated stormwater treatment and flow control and treatment BMPs/facilities, and conduct required maintenance within permit-established deadlines.
- Spot checks of potentially damaged permanent stormwater treatment and flow control BMPs/facilities after major storm events and system-wide inspection if spot checks indicate widespread damage. Then conduct required maintenance within permit-established deadlines.
- Inspect all City-operated catch basins and inlets at least once by August 1, 2017 and then every two years thereafter.
- Implement practices, policies, and procedures to reduce stormwater impacts associated with runoff from municipal operation and maintenance activities including but not limited to streets, parking lots, roads, highways, buildings, parks, open space and maintenance yards owned or maintained by the City.
- Implement an ongoing training program for staff whose job functions may impact stormwater quality. Document the training program.
- Implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards and material storage facilities owned or operated by the City that are not covered by an Industrial Stormwater General Permit.
- Maintain records of inspections and maintenance or repair activities.

### 2.5.2 Existing Programs and Activities

Kelso's activities in this area are both completed and ongoing.

#### Completed Activities

- Developed and adopted maintenance standards equivalent to the 2005 SWMMWW for City-operated facilities in 2010.

#### Ongoing Activities

- Annual inspection of four City-operated permanent stormwater treatment and flow control facilities.
- Annual cleaning of two stormwater facilities, as required based on inspection results.
- Consistently spot check stormwater facilities and flood-prone areas of the conveyance system after rain storms larger than the 24-hour, 10-year storm event.
- Completed system-wide catch basin cleaning in 2012.

- Inspected 20% of catch basins in 2013; cleaned catch basins as required based on inspection results.
- Routine street sweeping.
- Cleaned 2,300 feet of storm pipe in 2012.
- Clean ditches and culverts as needed.
- Follow City of Kelso *Municipal Stormwater O&M Program 2015* for operation of stormwater facilities, streets, parks and buildings owned or operated by the City.
- Follow City of Kelso *Nutrient, Integrated Pest Management and Herbicide Plan 2015* to guide the use of nutrients and chemicals on City-operated properties and rights-of-way.
- Follow protocols for spills response on City streets and properties in the City of Kelso *Illicit Discharge Detection and Elimination (IDDE) Program 2015*.
- Train Public Works Operations and Parks staff on operational source control BMPs for the maintenance yard, City street and property operations, and City parks operations.
- Maintains a SWPPP for the Public Works maintenance yard; conducts quarterly inspections.

### 2.5.3 Planned Activities

Planned activities for 2015 include:

- Inspect four permanent stormwater treatment and flow control facilities.
- Spot check facilities and conveyances for damage and flooding as needed after storms.
- Increase frequency of street sweeping.
- Implement a catch basin structural repair and replacement program.
  - Repair or replace approximately six catch basins in 2015.
- Train Public Works and Parks employees on operational source control BMPs for the maintenance yard, City street and property operations, and City parks operations.
- Inspect maintenance yard for proper application of BMPs to document conformity with the SWPPP; revise SWPPP as needed based on conditions.

## 2.6 NPDES Program Administration

The City's NPDES compliance program requires administration to develop plans and schedules, administer contracts, maintain tracking systems, process payments, and prepare reports.

### 2.6.1 Planned Activities

Planned activities for 2015 include:

- Close out contract with consultant for assistance with permit compliance planning.
- Implement new NPDES time tracking procedures for Community Development and Public Works.
- Learn the new online reporting tool for annual reports.
- Submit the 2014 Annual Report and attachments, including the 2015 SWMP.
- Submit the annual permit fee.
- Submit required payments for regional monitoring activities (see Chapter 3).
- Update the SWMP for 2016 activities.
- Maintain records of NPDES activities for each permit component.

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### 3. STORMWATER MONITORING

Stormwater monitoring requirements are given in Section S8 of the Permit. The basic requirements for stormwater monitoring include the following:

- Providing Ecology with any stormwater-related monitoring or studies conducted by or on behalf of the City.
- Study the effectiveness of the SWMP, either through contributing to Ecology's established regional effort or by conducting stormwater discharge monitoring.
- Pay into a collective fund to conduct source identification and diagnostic monitoring, which will implement the Source Identification Information Repository (SIDIR).

City of Kelso has chosen to pay into the regional effort for effectiveness monitoring. The City will remit payments to Ecology annually through 2017 for effectiveness monitoring and the SIDIR.