



# **STORM WATER MANAGEMENT PLAN**

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## INTRODUCTION

The City of Coeur d'Alene was issued a discharge permit by EPA, effective January 1, 2009. The permit allows the City to discharge storm water into Lake Coeur d'Alene and the Spokane River with certain requirements and restrictions. The permit covers all areas within the Coeur d'Alene Urbanized Area served by the municipal separate storm sewer system (MS4) owned or operated by the City.

In order to fulfill the requirements of that permit, the City has developing and implementing a Storm Water Management Program (SWMP) that is designed to reduce the discharge of pollutants from the municipal storm sewer system to the maximum practicable, and to protect the water quality of Lake Coeur d'Alene and the Spokane River. The SWMP includes Best Management Practices (BMP's), system design, engineering methods, and other provisions appropriate to control discharge of pollutants from the storm sewer system.

The SWMP activities and actions are identified in the minimum control measures and monitoring measures outlined in this document. The goal of the SWMP is to provide the following;

- BMP's that are selected, implemented, maintained, and updated to ensure, to the maximum extent practicable, that storm water discharges do not cause or contribute to an exceedance of State water quality standards, as described in IDAPA 58.01.02; and
- Measurable goals, including interim milestones, for each BMP. The City will define how SWMP actions are targeted to control the discharge of pollutants of concern, and evaluate the effectiveness of those actions.

An annual review of the SWMP implementation will be conducted by the City and a report submitted to EPA and IDEQ. The annual review is due February 15<sup>th</sup> of every year, beginning in 2010.

## PUBLIC EDUCATION AND OUTREACH

The City of Coeur d'Alene has developed and implemented a public education and outreach program. The different program components are customized to educate target groups within the community about the impacts of storm water discharges on local water bodies and the steps that citizens and businesses can take to reduce pollutants in storm water runoff.

Key components of this program include the following;

- Research and develop educational and outreach partnerships with other local, state and private agencies
- Placing educational advertisements in the local newspaper
- Periodic press releases highlighting relevant storm water prevention activities
- Providing flyers and brochures to the public
- Distributing educational materials to the local schools
- Providing pollution prevention presentations to elementary schools
- Placing TV and radio public service announcements
- Showing educational videos on the Cities public television channel
- Making all education materials available on the City's website

Education and outreach have targeted the following audiences and subjects.

### 1) General Public

- Impacts of storm water discharges into local water bodies
- Impacts from impervious surfaces
- Best management practices (BMP's) and environmental stewardship actions relating to pet waste, vehicle maintenance, and application of pesticides, herbicides, and fertilizers.

### 2) Businesses

- BMP's for use and storage of chemicals, hazardous cleaning supplies, carwashes and waste
- Impacts of illicit discharges

### 3) Developers, Engineers, Contractors.

- Standards for storm water and erosion control plans
- Low impact development techniques
- Maintenance of BMP's

Public education and outreach activities, such as the type and amount of materials distributed, the number and nature of complaints, will be tracked and documented in the annual report.

## PUBLIC INVOLVEMENT AND PARTICIPATION

Public involvement in storm water management can provide a sense of ownership and responsibility for the health of the watershed. The City's SWMP includes ongoing opportunities for public involvement through stewardship programs, environmental activities, and other similar activities. These programs and activities target the general public and include the following;

### Volunteer Opportunities

Organize and promote an Adopt a Street

Promotion of Litter Pickup Day

Public Forums on SWMP activities, open house and stormwater workshops

Maintaining a telephone hotline and tracking complaints

Organize and conduct a storm drain stenciling program and track results

In addition, the City will make the SWMP, annual reports, and all other submittals required by the discharge permit available on its website. Data such as the number of groups participating and the number of events, how many road miles in the program, pounds of debris collected, number of complaints received and action taken, and the number of forums conducted and attendance, is tracked and documented in the annual report.

## ILLICIT DISCHARGE, DETECTION, AND ELIMINATION

Illicit discharge, detection and elimination (IDDE) is an important part of the overall SWMP and is a requirement of the discharge permit. The goal of IDDE is to detect, remove and prevent illicit connections, discharges, and improper disposal, including spills, into the storm water system, thereby reducing pollutant discharge. Our IDDE program contains the following elements.

### **Storm water collection system inventory and mapping.**

The City continually updates the map of the storm water drainage system. This includes all the City owned and operated storm sewers, culverts, ditches, and other conveyances, inlets, outfalls (including diameter and latitude and longitude), connection points with other systems, and all City maintenance and storage facilities. The map is available in digital format.

### **Prohibition of non-storm water discharges.**

The City has adopted an ordinance that prohibits non-storm water discharges into the storm water collection system. The ordinance includes enforcement procedures and penalties for violations. It lists the types of discharges that are permitted and which are not.

### **Discharge detection and elimination program.**

The City has developed a program to detect and eliminate illicit discharges into the storm water conveyance system. The program has several components including the following;

- Procedures for detection, source identification, and removal of illicit discharges
- Training for City staff on proper response to reports of illicit discharges
- Procedures for addressing illegal dumping into the storm water system
- Prioritizing reports of illegal dumping and spills
- Procedures for response to spills
- Use of “city track” database management system to track actions related to IDDE program

### **Public Education.**

Informing and educating the public about the hazards associated with illegal discharges is another component of the IDDE program. This includes public employees, businesses, students and the general public. The City is continually developing public service announcements, press releases, flyers, and other methods to inform the public.

### **Dry weather outfall screening.**

Screening of the outfalls during periods of dry weather is another component of the IDDE program. This will facilitate detection of non-storm water discharges. Field tests for selected parameters will be performed on outfall discharges. Because these tests are simple indicators of illicit discharges, it is not necessary to follow the same rigorous procedures as the storm water sampling. Our outfalls are screened annually. Any illicit discharges will be investigated within 15 days of detection and action taken by the City to eliminate the discharge within 45 days of detection.

**Inventory of industrial discharges.**

Industrial facilities that discharge into the storm water collection system or into Lake Coeur d' Alene or the Spokane river are required to obtain a separate Industrial Discharge Permit from the EPA. As part of the IDDE program, these facilities have been inventoried and the status of their permits verified. This information was forwarded to the EPA in the Annual Report.

The effectiveness of the program is measured by collecting and tracking the data on the each portion (i.e. number of illegal connections removed, complaints received, type and number of materials distributed, etc.) and documenting these in the annual report.

## **CONSTRUCTION SITE STORM WATER RUNOFF CONTROL**

The City of Coeur d'Alene has developed a program to reduce the discharge of polluted storm water runoff from construction sites. The program is applicable to all construction sites that disturb one acre or more, or less than one acre if they are a part of larger common plan of development. The program also includes municipal projects and public works projects.

In addition to the City's requirements, construction site operators are required to satisfy the requirements of EPA's Construction General Permit. That information has been distributed to developers and contractors. City public works projects are also required to comply with the requirements of EPA's Construction General Permit. These records are kept on file at the City and are available to the public.

Control of erosion, sediment, and waste construction products on construction sites is a key element of the construction site runoff program. Therefore, the City has adopted and implemented an ordinance requiring construction site operators to implement measures to control these elements at their construction sites. These requirements have been published and distributed to the appropriate building permit applicants.

Storm water management plans are currently required for all land disturbing building permits. These plans are reviewed and approved as a condition of issuance of the permits. All required erosion and sediment controls will be included on the storm water management plans and reviewed and approved by City staff. In addition, these plans will be made available to the public for input.

Inspection of construction sites are performed at least once per construction season to ensure placement and proper functioning of required erosion control elements. Our city track database program allows us to receive and track public complaints related to storm water.

As a part of the public education element of the SWMP, at least one training session will be held for local contractors, engineers, and architects to review the requirements for erosion and sediment control and Best Management Practices.

Data such as number of reviews, permits, inspections, violations, and enforcement actions is tracked and documented in the annual report.

## **POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

The City's Storm water Management Ordinance sets forth strict requirements for post construction storm water management in new development and we are currently developing standards and requirements for redevelopment projects. The purpose of these requirements is to reduce the amount of pollutants discharged from private developments.

The following are the highlights of the ordinance requirements.

- All new development is required to retain storm water runoff on-site, treat the runoff with approved BMP's and then discharge it to a shallow injection well.
- Grassed swales are the only allowed treatment at this time. This is controlled by Idaho Department of Water Resources who has jurisdiction over shallow injection wells over the aquifer.
- Owners are required to operate and maintain their BMP's.
- Each development is required to submit a storm water management plan for review and approval by the Engineering Department, prior to issuance of a building or site development permit.
- Prior to issuance of a Certificate of Occupancy, each development is inspected by the City and the Project Engineers are required to submit a letter of conformance to the plans and specifications.

The number of plan reviews, certificates of occupancy, existing connections removed, and impervious area removed, will be tracked and documented in the annual report.

## **POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS**

Many of the maintenance activities performed by the City have a direct or indirect impact on the water quality for storm water runoff covered under our discharge permit. The City has an evolving maintenance and operation plan that addresses processes and procedures meant to minimize the impact of our maintenance operations on water quality. These include;

- The use of sand and road de-icers
- Fleet maintenance and vehicle washing operations
- Street cleaning and maintenance repairs
- Grounds, Park, and open space maintenance operations
- Building maintenance
- Storm water system maintenance
- Snow disposal site operation and maintenance
- Materials storage

In addition to identifying processes and procedures, there is a training component designed to familiarize the appropriate staff with these required maintenance procedures. Training is conducted annually.

Data such as the number and type of maintenance repairs completed, number of catch basins and manholes cleaned, tons of debris and dirt cleaned, road miles swept, and the amount and type of pesticide or herbicide applied, is tracked and documented in the annual report.

## **DISCHARGES TO LAKE COEUR D'ALENE, SPOKANE RIVER, AND ASSOCIATED TRIBUTARIES**

The City has established two outfall monitoring stations in order to assess whether the storm water system discharges and pollutants of concern, either directly or indirectly, into Lake Coeur d'Alene, the Spokane River, or any of their associated tributaries. One station samples discharges into Lake Coeur d'Alene and one samples discharges into the Spokane River. The City intends to add additional monitoring stations as funding allows. The EPA has established the pollutants of concern as metals (lead and zinc), nutrients (phosphorus, and nitrogen), sediment, dissolved oxygen, total polychlorinated biphenyls (PCB), and temperature. Samples are taken a minimum of four times a year, assuming the minimum flow criteria are met, with one sample collected during each of the following periods; March-April, May-June, July-August, and September-October. A Quality Assurance Plan outlining the sampling procedures and protocols has been developed and approved by the EPA and Idaho DEQ.