
MCM 3: Illicit Discharge Detection & Elimination

The Illicit Discharge Detection and Elimination (IDDE) Program is developed and managed by Environmental Division staff. Implementation of the IDDE Program is coordinated across Public Works and supported by Code Enforcement. The Public Works Director oversees all Public Works activities.

The City of Keizer has selected six Best Management Practices (BMPs) to comply with the requirements specified in the Illicit Discharge Detection and Elimination minimum control measure in Schedule A.3.c of the General Permit. The BMPs are shown in **Table 3**. The goals, strategies, measurable objectives, and implementation timelines for each BMP are described below.

TABLE 3. ILLICIT DISCHARGE DETECTION & ELIMINATION BMPs

ID	Best Practices
ID-1	Implement an Illicit Discharge Detection and Elimination Program
ID-2	Maintain a Map and Digital Inventory of the MS4
ID-3	Prohibit Illicit Discharges by Ordinance
ID-4	Maintain Enforcement Procedures
ID-5	Conduct Dry-Weather Inspections of Outfalls
ID-6	Provide IDDE Training to Program Staff

ID-1 Implement an Illicit Discharge Detection and Elimination Program

Goals

- Implement and enforce an Illicit Discharge Detection and Elimination Program to detect and eliminate illicit discharges into the MS4 on or before February 28, 2022.
- Track implementation and assess progress of the Illicit Discharge Detection and Elimination Program for annual reporting.

Strategy

The City will continue to implement its existing Illicit Discharge Detection and Elimination (IDDE) Program while developing updates to meet the new requirements in Schedule A.3.c. The existing program is implemented in accordance with the City's IDDE Plan. The IDDE Plan will be updated to reflect the new requirements of the General Permit and implemented on or before February 28, 2022. The updated IDDE Plan will describe the City's strategy for prohibiting illicit discharges, mechanisms for enforcement, complaint intake and response, spill response, detection and elimination of transient and chronic discharges, agency referrals, dry-weather screening, and staff training. In addition, the IDDE Plan will incorporate strategies that the City employs to comply with the illicit discharge requirements outlined in the TMDL Implementation Plan and the WPCF permit.

Staff will employ a variety of recordkeeping methods such as spreadsheets, documents, databases and GIS applications to track and document implementation of the IDDE Program. Staff will assess progress using the measurable objectives listed for each BMP.

Measurable Objectives

1. Continue to implement the existing IDDE Program while working to develop and implement the requirements of Schedule A.3.c.
2. Develop and implement a comprehensive plan that integrates all of the City's IDDE activities on or before February 28, 2022
3. Review the IDDE Plan annually and update as needed
4. Track implementation and assess progress of the IDDE Program annually using the measurable objectives defined for each BMP

Implementation Timeline

Year 1	– Continue to implement the existing IDDE Program
Year 2	– Develop a comprehensive IDDE Plan and tracking mechanism
Years 3-5	– Implement the IDDE Plan on or before February 28,2022
Annual	– Review the IDDE Plan and update as needed
Annual	– Track implementation and assess progress

ID-2 Maintain a Map and Digital Inventory of the MS4

Goals

- Maintain a current map of the MS4 that includes the location of outfalls, conveyance system, stormwater control locations, and chronic illicit discharges.
- Maintain an inventory of all known outfalls owned or operated by the City that includes a unique identifier, any geographic information necessary to locate these outfalls in the field, and the name(s) of the receiving water(s).
- Maintain an inventory of the MS4 collection system and all known structural stormwater controls that includes a unique identifier and any geographic information necessary to locate these features in the field.
- Delineate the MS4 by drainage basin, as appropriate, and identify the location and characteristics of any ongoing dry weather flows.
- Submit the MS4 map with the third Annual Report (Nov 2022).

Strategy

The Environmental & Technical Division develops, manages and operates the geographic information system (GIS) for the Public Works Department. Under the previous permit, staff developed maps and spatial inventories of stormwater assets within the MS4. The City will continue to maintain a current map of the MS4 and update the stormwater asset registry while working to meet additional requirements in Schedule A.3.c.ii.

Public Works added a full-time GIS Technician position in September 2019. The GIS Technician reports to the Environmental & Technical Division Manager and works closely with the Stormwater Division to maintain the stormwater asset registry through regularly scheduled updates. The map of the MS4 collection system includes pipes, open channels/ditches, detention basins, vegetated stormwater facilities, manholes, catch-basins, and outfalls. As required, each stormwater asset in the geodatabase includes a unique identifier and the necessary geographic information to locate

them in the field. The MS4 is delineated by drainage basin and will continue to be updated as new infrastructure is added and/or removed.

The City also maintains a spatial record of transient and chronic illicit discharges. Through past investigations and efforts, Keizer has successfully eliminated all known sources of chronic illicit discharges.

Keizer uses ArcGIS software from Environmental Systems Research Institute (ESRI) which supports shapefiles, feature classes, coverages, tables, databases and personal/file geodatabases.

Mapping and Data Standards:

Horizontal datum: NAD 83 HARN
 Project system: Lambert_Conformal_Conic
 Coordinate system: NAD_1983_HARN_StatePlane_Oregon_North_FIPS_3601_Feet_Intl
 Coordinate units: U.S. Survey Feet
 Accuracy standard: +/- 10 feet
 Vector import format: Arc Export E00 file, Shape file, File Geodatabase, Personal Geodatabase
 Raster import format: TIFF, BIL/BIP/BSQ, ESRI Grid, ERDAS Imagine
 Metadata: Federal Geographic Data Committee (FGDC), Metadata Content Standards
 Point data collection method: latitude-longitude degrees, minutes, seconds.

The City will provide the required MS4 maps with the third Annual Report. Otherwise, all pertinent maps and digital inventories will be made available to DEQ upon request.

Measurable Objectives

1. Maintain a current map of the MS4 each year that accurately represents the locations of outfalls, conveyances, stormwater controls, and chronic discharges
2. Update the outfall inventory annually (or as needed) to ensure accurate representation of all known outfall locations and their attributes
3. Update the stormwater asset registry annually (or as needed) to ensure accurate representation of all known conveyances and controls
4. Maintain the stormwater asset registry to support routine inspections, operations and maintenance of the stormwater system
5. Submit the MS4 Map to DEQ with the third Annual Report

Implementation Timeline

Years 1-5	– Continue to maintain the existing stormwater geodatabase through routine updates
Year 3	– Submit the MS4 Map to DEQ with the Annual Report (Nov 2022)
Annual	– Update the stormwater registry to represent current stormwater system asset locations and attributes

ID-3 Prohibit Illicit Discharges by Ordinance

Goals

- Prohibit non-stormwater discharges into the MS4 through enforcement of an ordinance to the extent allowable under state law on or before February 28, 2022.

- Define the range of illicit discharges it covers (see Schedule A.3.c.iii).

Strategy

The City Council adopted the Stormwater Discharge Control Ordinance #2009-585 by resolution in March 2009. The purpose and intent of this ordinance is *“...to protect and enhance the quality of waterways in a manner pursuant to and consistent with the Federal Clean Water Act, Oregon Revised Statutes, Oregon Administrative Rules, and the Oregon Department of Environmental Quality by reducing pollutants in stormwater discharges and by prohibiting non-stormwater discharges to the storm drain system.”*

Staff will evaluate the existing ordinance and make updates as needed to include allowable and non-allowable discharges defined in the General Permit on or before February 28, 2022.

Measurable Objectives

1. Evaluate the terms and conditions established in the Stormwater Discharge Control ordinance against the new requirements
2. Update the Stormwater Discharge Control ordinance as needed to include new definitions of allowable and non-allowable discharges
3. Provide training to program staff, city employees and the public as necessary to effectively enforce the terms of the ordinance

Implementation Timeline

Year 1	– Continue to prohibit illicit discharges through enforcement of the Stormwater Discharge Control ordinance
Year 2	– Evaluate the terms and conditions of the Stormwater Discharge Control ordinance – Revise the Stormwater Discharge Control ordinance to comply with the General Permit
Years 3-5	– Enforce the updated Stormwater Discharge Control ordinance

ID-4 Maintain Enforcement Procedures

Goal

- Implement and maintain a written escalating enforcement and response procedure that addresses repeat violations through progressively stricter responses as needed, to achieve compliance on or before February 28, 2022.

Strategy

The City will continue to implement its existing Illicit Discharge Enforcement Response Plan while developing new enforcement procedures to meet the requirements in Schedule A.3.c.iv. The existing Illicit Discharge Enforcement Response Plan (ERP) defines the types of non-compliance and establishes corrective action protocols for both illicit discharges and illicit connections with set timelines for achieving compliance. Factors for determining enforcement response include the amount and type of pollutant discharged. Staff will update the Illicit Discharge ERP to address

intent (whether the discharge was intentional or accidental) and to define progressively stricter responses for repeat violations.

In addition, staff will evaluate the Civil Infraction Ordinance (which is the primary means of enforcement) to ensure compatibility with escalating enforcement protocols. Enforcement updates will be made as necessary.

The Enforcement Response Plan will be submitted with the third Annual Report.

Measurable Objectives

1. Revise the existing Enforcement Response Plan to reflect escalating enforcement requirements
2. Evaluate the Civil Infraction ordinance to ensure compatibility with the Enforcement Response Plan

Implementation Timeline

Year 1	– Continue to implement the existing IDDE Enforcement Response Plan
Year 2	– Revise the IDDE Enforcement Response Plan – Evaluate the Civil Infraction ordinance
Year 3	– Submit the Enforcement Response Plan with the third Annual Report
Years 3-5	– Implement the updated Enforcement Response Plan on or before February 28, 2022
Annual	– Track illicit discharge enforcement actions

ID-5 Conduct Dry Weather Inspections of Outfalls

Goals

- Conduct dry weather inspections of at least 40% of MS4 outfalls on or before February 28, 2022 and an additional 20% of MS4 outfalls each year thereafter.
- Identify and document priority outfall locations and inspect them annually.

Strategy

The City will continue to implement its existing Dry-Weather Outfall Inspection Program while developing new activities to meet the requirements of Schedule A.3.c.vi. Through previous compliance efforts, all public outfalls have been inspected. Staff will therefore focus on identifying priority outfalls. At a minimum, the City will inspect 20% of MS4 outfalls each year, including all of the identified priority locations.

When possible, inspections will take place at an accessible location downstream of any source of suspected illegal or illicit activity. Priority locations will be identified through an analysis based on an equitable consideration of hydrological conditions, total drainage area of the location, population density of the location, traffic density, age of the structures or buildings in the area, history of the area, land use types, personnel safety, accessibility, historical complaints or other appropriate factors.

All dry-weather inspection activities will occur after an antecedent dry period of at least 72-hours and will document the following: general observations, inspection results and analysis, pollutant parameter action levels, and laboratory analysis (as described in Schedule A.3.c.vi.(D-G)).

Measurable Objectives

1. Continue to implement the existing Dry-Weather Outfall Inspection Program
2. Establish Field Inspection, Pollutant Parameter Action Levels and Analysis protocols
3. Identify and document priority outfall locations using the criteria outlined in Schedule A.3.c.vi.(C).
4. Update the field collection methods to document the general observations, inspection results, pollutant parameter action levels, and laboratory analyses.
5. Inspect at least 40% of the MS4 outfalls on or before February 28, 2022.
6. Inspect 20% of MS4 outfalls each year of the permit term including all priority outfalls
7. Track and document all program results for annual reporting

Implementation Timeline

Year 1	– Continue to implement the existing Dry-Weather Outfall Inspection Program
Year 2	– Establish field inspection, pollutant parameter action levels and analysis protocols; and update the field collection methods
Year 3	– Inspect at least 40% of the MS4 outfalls on or before February 28, 2022 – Submit pollutant parameter action Levels with the Annual Report
Years 3-5	– Implement the updated Dry-Weather Inspection Program, inspect at least 20% of MS4 outfalls (including priority outfalls).
Annual	– Track and report dry-weather outfall screening results

ID-6 Provide IDDE Training to Program Staff

Goals

- Provide training to all program staff at least once during the permit term.
- Ensure that all staff responsible for investigating and eliminating illicit discharges and illicit connections into the MS4 are appropriately trained to conduct such activities.
- Provide orientation and training to all new staff working to implement the IDDE program within 30 days of their assignment to this program.
- Provide follow-up training as procedures or technology utilized in this program change.

Strategy

Through previous compliance efforts, Environmental Division staff provided annual training to program staff on detection and elimination of illicit discharges. The City will continue to provide annual training while developing new training materials to meet the new requirements in Schedule A.3.C.vii.

On or before February 28, 2022, Environmental staff will update the existing training program and implement it to ensure that all persons responsible for investigating and eliminating illicit discharges and illicit connections are appropriately trained. The training program will target all staff directly responsible for conducting dry weather screening activities or responding to reports

of illicit discharges and spills. All Public Works staff will receive training at least once during the permit term with additional follow-up training provided as procedures or technology change. In addition, Environmental staff will create and implement a training module for all new staff working to implement the IDDE program within 30 days of their assignment to this program.

Illicit discharge trainings will be documented with sign-in sheets or other methods as appropriate. Results will be summarized in annual reports.

Measurable Objectives

1. Continue to provide illicit discharge detection and elimination training to program staff during the first two years of the permit term.
2. Update or develop new training materials to reflect current illicit discharge detection and elimination strategies
3. Provide training to all Public Works staff at least once during the permit term or as procedures or technology change
4. Provide training to new staff within 30 days of their assignment to the program

Implementation Timeline

Years 1-2	– Continue to provide illicit discharge detection and elimination training to program staff
Year 2	– Update/develop training materials
Years 3-5	– Implement updated training to all program staff (on or before February 28, 2022)
Annual	– Track and report all training provided and/or received by program staff