



Stormwater Management Program Document

National Pollutant Discharge Elimination System (NPDES)
Municipal Separate Storm Sewer System (MS4) Discharge Permit Number: 101348

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List of Abbreviations

BMP	Best Management Practice
CWA	Clean Water Act
CCSD#1	Clackamas County Service District #1
DEQ	Department of Environmental Quality
OLWS	Oak Lodge Water Services
DTD	Clackamas County Department of Land Use and Transportation
ESC	Erosion and Sediment Control
IDDE	Illicit Discharge Detention and Elimination
IGA	Intergovernmental Agreement
GI	Green Infrastructure
LID	Low Impact Development
NPDES	National Pollutant Discharge Elimination System
MEP	Maximum Extent Practicable
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
O&M	Operations and Maintenance
OERS	Oregon Emergency Response System
OLWS	Oak Lodge Water Services
SOP	Standard Operating Procedure
SWMP	Stormwater Management Program Document
TMDL	Total Maximum Daily Load
UIC	Underground Injection Control
WLA	Waste Load Allocations

Section 1 SWMP Overview

1.1 Introduction

Under the federal Clean Water Act (CWA) and Oregon Revised Statute 468B.050, Oregon Department of Environmental Quality (DEQ) has issued the Oak Lodge Water Services (OLWS) a renewed National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Phase I Discharge Permit, effective October 1, 2021.

This Stormwater Management Program Document (SWMP) describes activities related to implementation of the OLWS's NPDES MS4 Permit Schedule A. The SWMP contains best management practices (BMPs), which outline the specific tasks that OLWS will conduct to prevent and reduce stormwater pollution to the maximum extent practicable (MEP) to protect water quality and satisfy the requirements of the NPDES MS4 Permit and the CWA.

OLWS is a co-permittee on the Clackamas County NPDES MS4 Permit, along with 11 other agencies. The first permit (101348) was issued in 1995. A second permit was issued in 2005 after an appeal and a modification. A third permit was issued in 2012, expired in 2017 and went into administrative extension until a renewed permit was issued September 15th, 2021, with an effective date of October 1st, 2021, and an expiration date of September 30, 2026.

This current version of OLWS's SWMP was developed based on a review and evaluation of the OLWS's stormwater management program, including activities and accomplishments implemented during the previous permit term and during the administrative extension period. OLWS has used an adaptive management process to annually assess and modify, if necessary, the BMPs to achieve reductions in stormwater pollutants to the MEP through an evaluative process described in Section 2.8.

The MS4 permit Schedule B requires a monitoring program plan (Monitoring Plan) to assess local water quality and potential impacts to waterways and to evaluate the effectiveness of SWMP activities. Monitoring requirements includes the collection of water quality samples and analysis of environmental data. OLWS' Monitoring Plan requirements are covered in the Comprehensive Clackamas County NPDES MS4 Stormwater Monitoring Plan, which is available on the OLWS website.

1.2 Background

This section documents the permit coverage area and the relationship between the NPDES MS4 Permit, SWMP, and Total Maximum Daily Load (TMDL) obligations.

1.2.1 OLWS Overview

OLWS is located in Clackamas County, approximately 5 miles south of the City of Portland. OLWS is bound on the west by the Willamette River, which runs north-south along the OLWS boundary; on the north by the City of Milwaukie; on the south by the City of Gladstone; and, to the east by unincorporated Clackamas County (Clackamas County Service District #1 or CCSD#1).

OLWS provides water, sanitary sewer and stormwater management services to approximately 29,000 residents and covers a total of 6.5 square miles. OLWS serves a mature, primarily developed community, and most new development occurs as in-fill with a few small subdivisions and residential partitions. Land use is primarily residential, commercial, and industrial; with most commercial and industrial development located along the Oregon Highway 99-E corridor, which runs north-south and divides the OLWS almost in half. Residential land use is distributed throughout the OLWS, and there are also numerous areas of public use, including several parks and open space areas.

OLWS implements its stormwater management program within its jurisdictional boundary, but not within areas already encompassed within a city or Clackamas County Water Environment Services. Therefore, the area where the surface water program applies is 5.2 square miles. OLWS and Clackamas County Department of Transportation and Development (DTD) entered a Memorandum of Understanding (MOU) in 2013 to outline their cooperative working relationship for the purpose of Surface Water System Prevention and Emergency Maintenance for Clackamas County (County) transportation and MS4 Permit compliance by OLWS. DTD manages public roads and the stormwater collection system within the public right-of-way (ROW). The MOU defines responsibility for OLWS and DTD with respect to infrastructure (catch basins, storm lines, streets, and ditches) inspection and maintenance.

1.2.2 Coverage Area

OLWS is comprised of eight major watershed basins: Kellogg Creek, Courtney Springs, Milwaukie, North Boardman, Rinearson, River Forest, South Boardman, and Willamette River. Several watersheds cross multiple jurisdictions. The map in Figure 1-1 illustrates the area within the representative watersheds as well as the surrounding jurisdictions.

OLWS is in the Lower Willamette subbasin. Two major tributaries to the Willamette River run east-west through OLWS: River Forest Creek and Boardman Creek. The watersheds associated with these tributaries are located entirely within the OLWS boundary. The River Forest Creek watershed encompasses a 796-acre drainage area, and Boardman Creek encompasses a 1,312-acre drainage area. Other tributaries located in the OLWS include Courtney Springs and Rinearson Creek. The associated watersheds, or portions of watersheds, ultimately discharge to the Willamette River.

Stormwater in some areas of OLWS is under the jurisdiction of non-OLWS entities. Due to the unique nature of OLWS and its reliance on DTD for maintenance related activities within the county ROW, BMPs include reference to responsible agencies and departments. While OLWS's permit does not cover discharges from non-OLWS entities, the agencies share information and coordinate efforts to reduce stormwater pollutants.

The BMPs described within this SWMP are applied throughout the entire OLWS's urban services boundary. The programs operate on an OLWS-wide basis, working to reduce the discharge of pollutants to natural waterways to the maximum extent practicable.

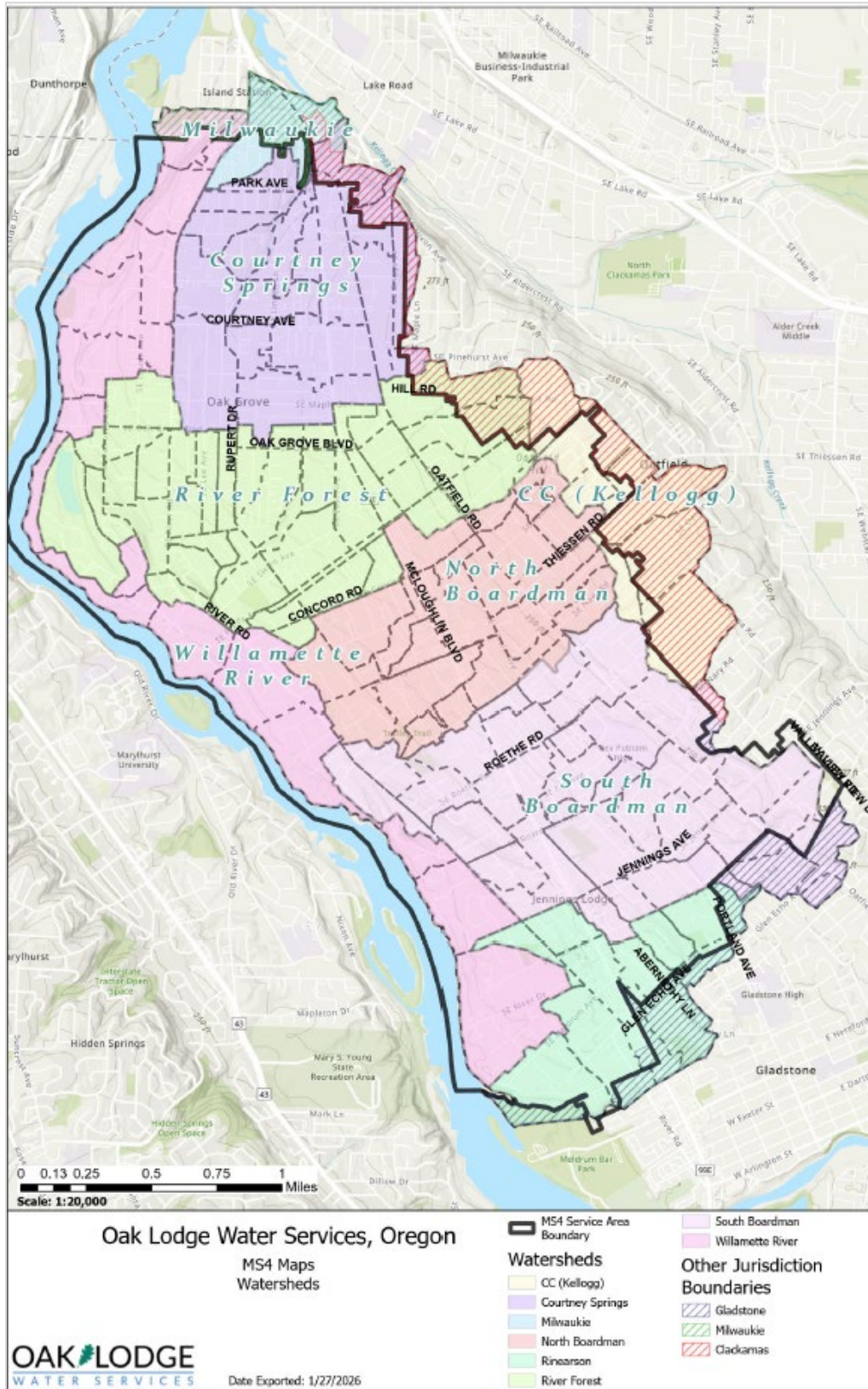


Figure 1-1. Watershed Map

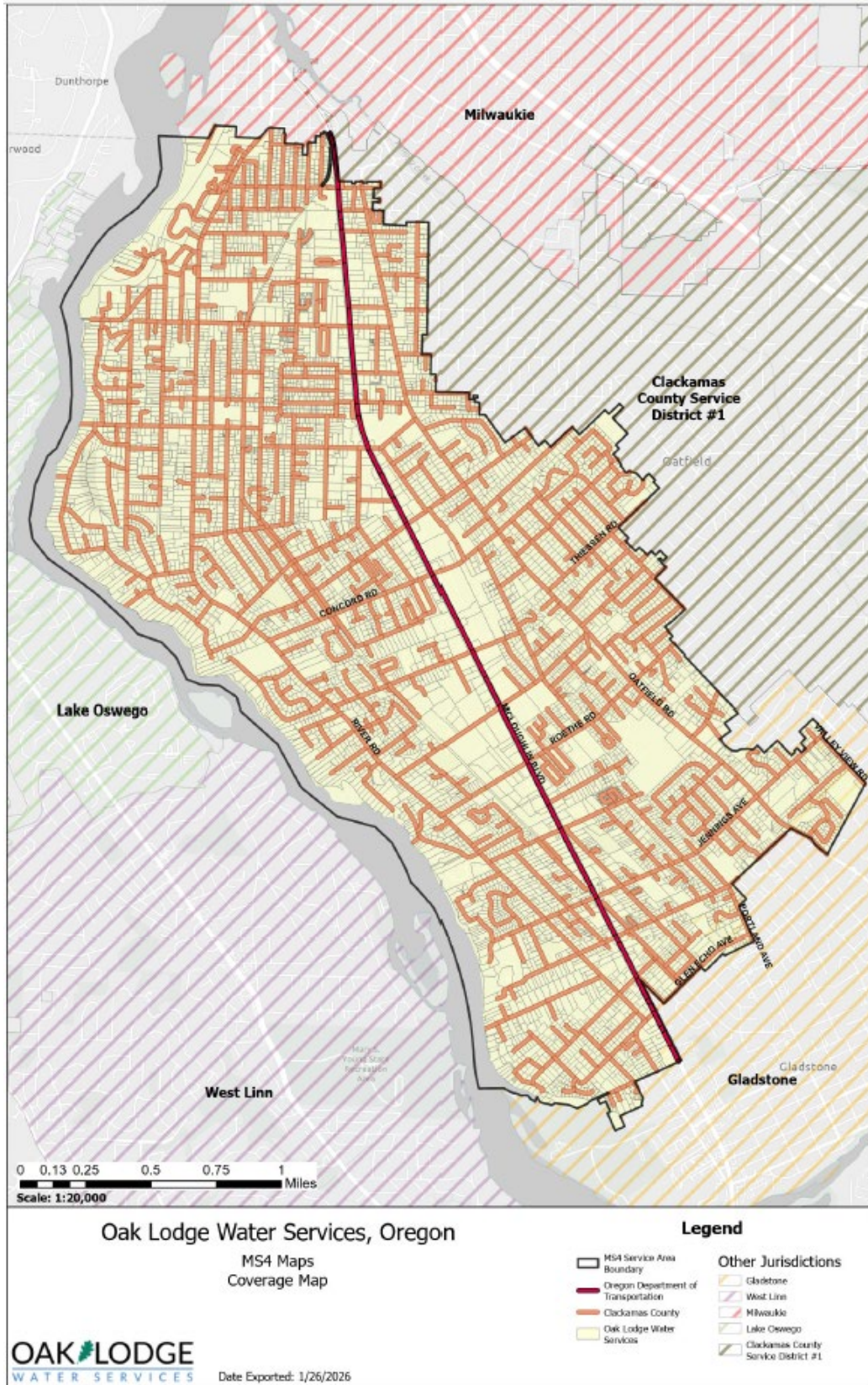


Figure 1-2. Coverage Map

1.2.3 Relationship to TMDLs

In addition to the NPDES MS4 Permit requirements, OLWS is subject to Total Maximum Daily Load (TMDL) regulations under the CWA. TMDLs serve as plans for restoring impaired or polluted waters. They identify the maximum amount of a specific pollutant that a body of water can receive while still meeting water quality standards. In Oregon, DEQ identifies load allocations (LAs) for nonpoint sources of pollution and waste load allocations (WLAs) for point sources. Municipal stormwater discharges are regulated as point sources if they are covered by a NPDES MS4 permit.

The OLWS is a designated management agency for the following TMDLs for municipal stormwater:

- Bacteria (E. coli)
- Mercury in the Willamette Basin
- Willamette Subbasins Temperature

Point sources of pollutants and associated WLAs are regulated under the NPDES permitting program and nonpoint sources are managed by TMDL implementation Plans. As OLWS implements their NPDES MS4 permit jurisdiction-wide, the NPDES MS4 permit addresses OLWS's TMDL obligations under Schedule D.3, which states:

“DEQ incorporated performance measures in Schedule A.3.c, d, e, and f to address water quality impairments and EPA-approved or issued TMDL allocations issued to date. Compliance with the permit’s terms and conditions is presumed to be in compliance with TMDL Waste Load Allocations (WLAs) issued before the effective date of this permit...”

Clackamas Group Phase I NPDES MS4 Permit, Schedule D.3.a

This SWMP is OLWS's plan to control pollutant runoff to address TMDL WLAs for bacteria and total mercury (TSS as a surrogate). To facilitate addressing this requirement, each BMP outlined in this SWMP includes reference to the targeted TMDL pollutants addressed with implementation of BMPs. In addition, Schedule D.3.c of the NPDES MS4 permit requires OLWS to conduct a TMDL pollutant load reduction evaluation, and Schedule D.3.d requires OLWS to establish pollution load reduction benchmarks for relevant TMDL pollutants in conjunction with the NPDES MS4 Permit renewal application.

The SWMP covers point sources of pollutants and associated WLAs. OLWS conducts activities to address non-point source TMDL pollutants. OLWS's TMDL Implementation Plan addresses pollution reduction strategies specific for total bacteria, total mercury, and temperature. The TMDL Implementation Plan complements the SWMP.

1.3 Stormwater Program Overview

The activities outlined in this SWMP impact and are implemented by multiple OLWS departments. This section provides an overview of the participating departments and OLWS's organizational structure as well as an outline of the SWMP organization in relation to Phase I NPDES MS4 Permit requirements.

1.3.1 Stormwater Program Organization

Stormwater program activities in OLWS are implemented by staff in many departments. The Technical Services department is the lead group responsible for planning and tracking activities related to this SWMP. Field Operation staff and the Finance Department are also involved with the program.

1.3.2 Stormwater Program Partners

As in previous permit terms, several activities related to meeting specific permit requirements are conducted by another jurisdiction on behalf of OLWS through IGAs and MOUs. These partners include Clackamas County Department of Transportation and Development, the City of Milwaukie, and the City of Gladstone.

1.3.3 SWMP Organization

The SWMP is organized into the major stormwater program categories that correspond to the Schedule A.3 control measures per the NPDES MS4 permit.

Within each stormwater program category, this SWMP outlines best management practices (BMPs) to address the NPDES MS4 Permit requirements to reduce the discharge of pollutants to the maximum extent practicable. The BMPs are organized with numbering and titles based on the program categories. The BMPs listed in this summary are only those that address the explicit requirements of the SWMP as described in Schedule A.3 of the 2021 NPDES MS4 Permit. Additional activities within the OLWS's stormwater program that do not specifically align with permit requirements may not be included in this document.

The BMPs include measurable goals and tracking measures that will be used to report progress to DEQ on an annual basis. The reporting period is July 1 through June 30 of each year, with annual reports on activities due to DEQ by December 1 each year.

1.3.4 Legal Authority

The MS4 permit requires co-permittees to adopt, update and maintain “adequate legal authority through ordinance(s), code(s), interagency agreement(s), contract(s), and/or other mechanisms to control pollutant discharges into and discharges from its MS4 and to implement and enforce the conditions of the permit, to the extent allowable pursuant to the respective authority granted under state law.” OLWS maintains legal authority to implement and enforce the SWMP strategies to control pollution discharges into and from the MS4 through our Rules and Regulations. OLWS has jurisdictional authority over the wastewater boundary excluding areas within CCDTD and ODOT jurisdiction. The Rules and Regulations listed below either directly address explicit MS4 permit requirements for legal authority or provide support to OLWS SWMP strategies.

Erosion Control/Surface Water Management Permits– Under Section 10.3, OLWS issues Erosion Control/Surface Water Management Permits within its jurisdictional area. All construction activities affecting areas 500 square feet but less than five (5) acres within the jurisdictional area shall obtain an Erosion Control/Surface Water Management Permit. For Sensitive areas, Construction activities, vegetation removal, or streambank restoration affecting areas 250 square feet or greater within the undisturbed buffer, sensitive areas, or riparian areas must obtain an Erosion Control/Surface Water Management Permit.

Discharge to Stormwater System – Under Section 10.10, An Erosion Control/Surface Water Management Permit is required to discharge or drain to any stormwater system facility in the District. Discharge to Creeks or Drainageways. No storm or roof drains are permitted to drain directly into creeks or drainageways or encroach into buffer areas. Development shall provide an approved water quality facility prior to any discharge from the site to a storm drain system, creek, or other drainageway. Under Section 10.11, OLWS requires all new developments and re-developments to “provide on-site water quality facilities, as required by the District. Water quality facilities shall be designed to capture and treat the first 1-inch of stormwater runoff from a 24-hour storm event. Acceptable systems are outlined in Section 10.12 and Low Impact Development and Green Infrastructure (LID/GI) facilities are prioritized. Any development that requests connection to the existing Clackamas County storm sewer system requires county approval

Planning and Zoning - Planning and Zoning is under the authority of Clackamas County. In the Clackamas County Comprehensive Plan Title 13, Chapter 7, Clackamas County recognizes that OLWS has responsibility for operating, planning, and regulating some surface water management systems. The County has a policy to coordinate the review of development applications with OLWS, for proposals within OLWS jurisdiction, and to

ensure that approval is not granted in the absence of adequate sanitary sewer facilities or a mechanism to provide them concurrently with development. Additionally, per Clackamas County Zoning and Development Ordinance Section 1006.08(C), approval of a development shall be granted only if the applicant provides a preliminary statement of feasibility from the surface water management regulatory authority.

1.4 SWMP Document Reference Library

Stormwater program implementation requires numerous codes, ordinances, policies, procedures, guidance manuals, checklists, forms, mapping, and other related documents. Throughout this SWMP the relevant documents (reference documents) are noted within each program category or BMP. The referenced documents have been compiled into an MS4 Program Reference Library that can be found on the OLWS website <https://www.oaklodgewaterservices.org/watershed-protection>.

Section 2 SWMP Control Measures

The following sections detail the BMPs applicable to the Schedule A.3 Stormwater Management Program Control Measures. The control measures being addressed are separated into the following categories:

- A. Public Education and Outreach (Section 2.1)
- B. Public Involvement and Participation (Section 2.2)
- C. Illicit Discharge Detection and Elimination (Section 2.3)
- D. Construction Site Runoff Control (Section 2.4)
- E. Post-Construction Site Runoff for New Development and Redevelopment (Section 2.5)
- F. Pollution Prevention and Good Housekeeping for Municipal Operations (Section 2.6)
- G. Industrial and Commercial Facilities (Section 2.7)

BMP information, included in each respective category, identify which of OLWS's BMPs correspond to the individual components of the Schedule A.3 permit requirements to meet the stormwater management program control measures. Measurable goals and tracking measures will be evaluated annually to assess the impact of the BMPs and to inform future education and outreach activities.

2.1 Public Education and Outreach

Public education and outreach are an integral component of a successful stormwater pollution prevention program. The goal is to reduce or change behaviors and practices by the public and the business community that cause or contribute to adverse stormwater impacts on receiving waters. Increasing public knowledge on local water quality issues is key to obtaining public support and ownership for stormwater programs. OLWS partners with multiple agencies and non-profits to support public outreach and experiential education focused on stormwater, as well as maintains separate public outreach efforts.

The permit requires the education and outreach strategy to identify pollutants of concern, the priority audiences, specific education and activities, the entity responsible for implementation, and be designed to address pollution from municipal stormwater. OLWS has identified the following:

- Pollutants of concern for OLWS are total mercury, bacteria (E.coli) and temperature.
- Priority audiences are residential, commercial, and industrial property owners and tenants.
- Specific education and/or activities are detailed in Section 2.1.1 Public Education to Reduce Discharges of Pollutants in Stormwater
- OLWS is responsible for implementation of local education and activities and supports more regional items that are implemented by other agencies and organizations.
- OLWS Public Education and Outreach is designed to address pollution reduction from private property and reduce the amount entering the public stormwater system.

2.1.1 Public Education to Reduce Discharges of Pollutants in Stormwater

OLWS continues to implement their public education strategy aimed at reducing the discharge of pollutants associated with a variety of activities including but not limited to:

1. The reduction of application of pesticides, herbicides and fertilizers by citizens.
2. Illicit discharges and public reporting to notify OLWS of unallowable waste materials in the storm drainage system. The OLWS website allows citizens to report incidents directly via a 24-hour emergency hotline.
3. OLWS programs available for residents to improve water quality.
4. Proper disposal of waste oil and household hazardous waste.

OLWS utilizes various education and outreach partnerships and mechanisms including bi-monthly newsletters as bill inserts, presentations and outreach to schools, direct mailings, informational signs, and the OLWS website to promote public awareness of water quality issues related to the above-mentioned practices. Key audiences reflected in the public education strategy document include but are not limited to:

- General public (e.g., renters, homeowners, homeowner associations, youth, and other groups)
- Local elected officials, land use planners, engineers, developers, and/or employees of the co-permittees responsible for implementing the SWMP, as appropriate
- Construction site operators
- Businesses (including industrial and commercial facilities)

OLWS is an active partner and participant with other organizations, both as a member of Oregon ACWA and as other campaign partnership opportunities arise. Our current partnerships include:

Clackamas County Water Education Team (CCWET). CCWET is a consortium of educators dedicated to promoting hands-on exploration of the local watershed. CCWET provides in-school presentations, resources for teachers, and field trip opportunities.

Clean Rivers Coalition. OLWS participates in activities for the statewide Clean Rivers Coalition. The coalition uses funds from participating partners to work within communities and across stakeholders to deliver water awareness and behavior change campaigns including the recently implemented Follow The Water campaign.

Regional Coalition for Clean Rivers and Streams. The Regional Coalition for Clean Rivers and Streams (Coalition) is a partnership of public agencies in the Portland-Vancouver metropolitan area that is dedicated to educating the public about the impact of stormwater runoff pollution on the health of our rivers, streams, and groundwater—all of which are sources of our drinking water. Through the Coalition, OLWS works with North Clackamas Parks and Recreation district to provide waste bags for dogs in our service area.

Backyard Habitat Certification Program with Portland Audubon and Columbia Land Trust. OLWS partners with the Backyard Habitat Certification Program (BHCP) to support urban gardeners in their efforts to create natural backyard habitats. This includes working with homeowners to find stormwater solutions in their yards that mimic nature: allowing runoff to soak into the ground to be filtered.

Television Campaign. OLWS participates and contributes to the development and delivery of the *Clean Water, It's Our Future* campaign with a group of regional clean water partners. The campaign comprises a series of public service announcements (PSAs), social media posts, and website content focusing on practical advice for implementing practices that are protective of water. The PSAs air during local televised news segments, and complementary information is posted on KPTV (FOX 12)'s community webpages and shared via social media posts.

OLWS also conducts outreach to schools, businesses and property owners within the OLWS boundary, both directly and through partnerships with several local non-profit providers including:

Ecology in Classrooms and Outdoors (ECO) and Aves Compartidas. ECO and Aves Compartidas programming engage students across Oak Grove Elementary, View Acres Elementary, Candy Lane Elementary, and Riverside Elementary. Indoor and outdoor lessons are provided and the Aves Compartidas programming provide the activities to Spanish-speaking classrooms.

North Clackamas Watershed Council (NCWC). NCWC hosts riparian restoration workshops on topics including wildlife coexistence, invasive species management, and long-term maintenance. The Streamside Stewards Program is for private property owners seeking to improve watershed health in their backyard and includes 48 property owners in the Oak Lodge service area.

Pollution Prevention Resource Center (PPRC) Eco-Logical Business Program (EcoBiz). EcoBiz is a voluntary, third party verified certification for businesses and public agencies that offers technical assistance and outreach to automotive businesses.

Clackamas Community College Environmental Learning Center (CCC ELC). The ELC provides Livestream episodes to K-5 students focusing on wetland ecology, wildlife, and watershed health which include student activity sheets to engage students in the episode content. Field trips to the CCC ELC are also offered for students to visit the wetland and forest ecosystem.

Storm Drain Cleaning Assistance Program (SCAP). The Storm Drain Cleaning Assistance Program helps businesses maintain their parking lot drains at a discounted price, removing contaminants and

preventing flooding. Each year, we send reminders to local businesses in spring and fall, reminding them to maintain their drains to prevent flooding and protect local water quality.

To aid in public education related to proper disposal of waste materials, OLWS implements a catch basin stenciling program. Efforts vary by year based on volunteer and staff participation.

2.1.2 Erosion Control Training Opportunities

OLWS provides a link to the *Erosion Prevention and Sediment Control Planning and Design Manual* to engineers, contractors, and the public, which includes BMPs for sediment control and erosion prevention applicable to local and state (1200-C) permitting needs. Additional information is provided upon request, in conjunction with plan review activities.

Additional training and certification opportunities are communicated to construction site operators when available.

2.1.3 OLWS Employee Training

OLWS provides a variety of training opportunities for OLWS staff on topics associated with stormwater quality. Training sessions are provided to educate OLWS staff and crews on appropriate erosion control measures, proper spill response procedures, safe work practices, and record keeping. Training sessions are also used to present training type materials related to stormwater quality and the MS4 NPDES permit requirements.

Staff also attend local trainings and conferences including the Oregon ACWA Stormwater Summit, Clean Rivers Coalition, Clackamas County Water Education Team, and the Clackamas County Water Environment Short School. Staff attend Clackamas co-permittee meetings to further engage in collective efforts related to education, monitoring, and NPDES requirements.

Additional staff training is provided for:

- Illicit Discharge Detection and Elimination
- Construction Runoff Control
- Post-Construction Site Runoff for New Development and Redevelopment
- Pollution Prevention and Good Housekeeping for Municipal Operations
- Commercial and Industrial Facilities

2.1.4 Public Education and Outreach Tracking Metrics

The following is a list of the reporting metrics and related goals, where applicable, for Public Education and Outreach:

1. Track the number, types, and topics of public educational materials dispersed to the public annually, with the goal to update information periodically to reflect new educational campaigns implemented and promote educational information related to pollutant discharge through newsletters, brochures, signage and/or bill inserts. A minimum of one bill insert (or equivalent) will be distributed annually.
2. Track the number and type of education and outreach provided to private landowners with stormwater management facilities.
3. Track coordinated public outreach activities with local co-permittees.
4. Record the number of catch basins stenciled each year, with the goal to have all catch basins stenciled.

5. Track methods and tools to notify construction site operators of erosion control requirements and training opportunities by maintaining a link to the Clackamas County Erosion Prevention and Sediment Control Planning and Design Manual and posting guidance for developers and engineers on OLWS's website.
6. Track the number of staff obtaining training by activity annually with the goal to attend relevant stormwater management training based on need and availability.
7. Estimate the equivalent annual training hours provided internally and externally with the goal to participate in Clackamas co-permittee meetings and other advisory committee meetings facilitated by local agencies.

2.2 Public Involvement and Participation

The public provides valuable input and assistance to OLWS' stormwater pollution prevention program. The goal of the public involvement is to effectively engage a diverse cross-section of people who can participate in stormwater pollution prevention activities. The public involvement efforts are closely tied with the public education and outreach efforts.

The MS4 permit specifies that the strategy promotes information and actions to:

- Maintain a publicly accessible website to provide all relevant SWMP information to the public
- Participate in stewardship opportunities over the permit term to foster participation by the public

2.2.1 Publicly Accessible Website

OLWS will provide opportunity for public participation in the development, implementation, and modification of OLWS's stormwater management program.

SWMP revisions, monitoring plan updates, and referenced SOPs and other required documentation will be provided to the public in advance of submittal to DEQ for opportunity to comment via OLWS's website. Comments on the documents will be collected and considered; responses to comments will be provided upon request.

Annual reports will be posted on OLWS's website for public viewing.

Information to call or electronically notify OLWS staff of any suspected illicit discharge will be readily available on the website. See Section 2.3 for more information.

OLWS' SWMP Reference Library is available on the OLWS website to help provide public access to the relevant references noted within the SWMP. A click counter will be incorporated into the OLWS website to determine how many times the SWMP is opened/ viewed.

2.2.2 Healthy Watersheds Committee

In addition to stewardship opportunities available in Section 2.1.1, OLWS has assembled a stakeholder subcommittee which meets as needed to facilitate ongoing public input related to surface water and stormwater management issued and projects. The Healthy Watersheds Committee participates in the adaptive management process, advises on fiscal matters, and assists in prioritizing resources.

2.2.3 Public Involvement and Participation Tracking Metrics

The following is a list of the reporting metrics and related goals, where applicable, for Public Involvement and Participation:

1. Keep a count of the number of comments/questions received from the public on documents distributed for the 30-day public review.
2. Conduct an annual review of the website and document revised content and links as needed.
3. Report on Healthy Watersheds Committee activities annually.

2.3 Illicit Discharge Detection and Elimination

An illicit discharge is defined in EPA's stormwater regulations as any discharge to an MS4 that is not composed entirely of stormwater unless exempt by the permit. Stormwater is defined as the portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels, or pipes into a defined surface water channel or a constructed infiltration facility. Illegal discharges to the storm sewer from industrial facilities, commercial businesses, and residents can be a significant source of water pollution. Deteriorating piping in the sanitary sewer and storm drain systems may also be a source of pollution if sanitary sewage seeps into the stormwater system.

The goal of the Illicit Discharge Detection and Elimination (IDDE) Program is to detect and eliminate illegal discharges and illicit connections to the storm drain system. OLWS accomplishes this implementation of ordinances and enforcement procedures, MS4 mapping, a dry weather screening program, a spill response program, and staff training.

Additional information on the IDDE program can be found in the IDDE SOP, Spill and Illicit Discharge Enforcement Response Plan, Design and Construction Standards, and Rules and Regulations.

2.3.1 Implement the Illicit Discharges Elimination Program

OLWS' current Rules and Regulations and Design and Construction Standards describe activities which are prohibited with respect to discharge to the public storm water system, including illicit discharges. OLWS has the authority to conduct appropriate response procedures and enforce against responsible parties per OLWS's Rules and Regulations, Section 11 and as described in OLWS's Spill and Illicit Discharge Enforcement Response Plan in the Illicit Discharge Detection and Elimination Standard Operating Procedure (IDDE SOP).

OLWS partners with Clackamas County for code enforcement procedures, as outlined in Section 11.5 of the Rules and Regulations, which outline the enforcement as applicable to the violation class. The violation classes (I, II, and III) are detailed in Section 11.4 of the Rules and Regulations.

The Spill and Illicit Discharge Enforcement Response Plan, including procedures and timeframes, are documented in Appendix C of the OLWS's Illicit Discharge Detection and Elimination Standard Operating Procedure (SOP). In accordance with the SOP, all citizen complaints and staff observations regarding a possible illicit connection will be investigated. Citizen complaints can be submitted online through the OLWS website, in writing using the Spill and Illicit Discharge Response Form, or by contacting Oak Lodge Water Services at our 24-hour emergency response line (503) 654-7765. OLWS will continue to implement a public education and outreach program to explain illicit connections, effects on surface water, and process for correction.

Additionally, the OLWS utilizes the planning process and connection inspections to help provide assurance that cross-connections in development and redevelopment do not occur. OLWS staff trained in Oregon Plumbing Code witness the installation and testing of sanitary sewer laterals to avoid cross connections with the storm system and address illicit discharge. OLWS personnel inspect storm sewer piping from water quality and water quantity facilities to confirm proper connection to the municipal storm sewer.

2.3.2 Conduct Annual Dry Weather Field Screening

OLWS conducts illicit discharge inspections, monitoring, and investigations annually during dry-weather conditions (typically between August and October) in accordance with the OLWS IDDE SOP. OLWS has identified five (5) high priority inspection locations within its service area. The IDDE SOP lists and maps those high priority inspection locations by drainage basin and contributing land use type. OLWS maintains a map of dry weather field screening locations. OLWS does not currently have chronic illicit discharge locations, but locations may be added if identified.

Regular training for field personnel is essential for safe field practices. Trained OLWS personnel conduct the inspections and complete data inspection forms, which are kept on file at the OLWS. Dry weather flows are inspected for a variety of visual characteristics, and sources of flows are characterized as either permissible or non-permissible.

If non-permissible discharges are suspected, sampling, analysis, and upstream investigation are conducted as per the IDDE SOP.

2.3.3 Implement the Spill Response Program

OLWS responds to all spills reported by the public or observed by OLWS staff in accordance with OLWS's Spill and Illicit Discharges Enforcement Response Plan (Enforcement Response Plan).

For non-hazardous or minor spills, OLWS staff will assess and respond. Mitigation measures include application of absorbent pads and booms to prevent discharges from entering the stormwater conveyance system and to dispose of all contained materials. Select OLWS vehicles are equipped with containment materials and the Spill and Illicit Discharge Response Form which outlines the procedures for collecting information pertaining to a spill. When a spill is reported, the vehicles can respond promptly. If necessary, the OLWS Operations staff will report the incident to the Oregon Emergency Response System (OERS) and/or to Oregon DEQ.

For chemical or hazardous waste spills with OLWS, Clackamas County Fire OLWS No. 1 Hazardous Materials Team responds. Generally, all emergency calls reporting a spill are forwarded to the Fire Department. Procedures for response are outlined in the Fire District's Response Protocols.

OLWS maintains records of spill containment activities. The file contains a description of the spill including date, suspected material, source, cause response, and any resultant water quality problems. OLWS will report on these activities in the annual report.

2.3.4 MS4 Map

OLWS maintains a stormwater asset inventory in GIS. Applicable assets include stormwater conveyance system features (i.e., pipes, catch basins, pollution control manholes), public and private water quality facilities, industrial stormwater permit locations, outfall locations, and dry-weather field screening monitoring locations. Mapping is used to aid in facility inspections, maintenance activities, and enforcement response. If mapping discrepancies are observed, maps are updated accordingly.

Select features are available on the publicly available mapping on the OLWS website include outfalls, drywells, open channels, dry-weather field screening locations, and pipe/network layer. Online mapping will be updated to include the location and drainage area of new public and private water quality facilities as they are constructed.

2.3.5 Illicit Discharge Detection and Elimination Tracking Metrics

The following is a list of the reporting metrics and related goals, where applicable, for Illicit Discharge Detection and Elimination:

1. Maintain the Illicit Discharge Detection and Elimination SOP and Enforcement Response Plan for consistency with current practice.
2. Investigate all suspected non-permissible discharges. Track in Lucity (OLWS database system) the number, location, resolution, and enforcement activities related to any identified illicit discharge.
3. Conduct and track annual inspections at high priority locations. Summarize inspection results.
4. Track activities related to MS4 mapping and digital inventory, including the location and drainage area of new water quality facilities, as applicable.

2.4 Construction Site Runoff Control

Construction projects often involve the removal of vegetation and excavation of soils. When vegetation is removed velocity from stormwater runoff typically increases and disturbed soils can be carried offsite to storm inlets or receiving waters. Soil particles can transport nutrients to waterways, contribute to increases in stream temperature, reduce channel capacity, and have negative impacts to aquatic habitat. Other potential pollutant causing activities conducted at construction sites, include materials storage, fueling, and vehicle and equipment use. Staging areas and equipment use to lead to soil compaction further increasing stormwater runoff from the site. A robust and enforceable construction site runoff control program is a vital piece in reducing pollution in stormwater runoff.

The goal of the construction site runoff control program is to prevent sediment from leaving construction sites through the implementation of properly selected and installed BMPs. OLWS maintains a 1200-CN permit from DEQ to regulate construction sites up to 5-acres. OLWS implements the Clackamas County Erosion Prevention and Sediment Control Planning and Design Manual as well as provisions OLWS's Rules and Regulations and Design and Construction Standards. Education is provided for both municipal staff and members of the design/engineering/construction community. Sections 1 and 11 of OLWS Rules and Regulations provides OLWS with the legal authority to enforce erosion prevention and sediment control on construction sites. Construction site runoff controls are accomplished through regulatory requirements, plan review and permitting, construction site inspections, enforcement procedures, training, education, inspections, and tracking.

2.4.1 Erosion Control Ordinances

OLWS administers erosion prevention and sediment control requirements in accordance with OLWS' Rules and Regulations, Section 10 and OLWS's Design and Construction Standards, Section 2.8. These sections detail the policies, procedures, and enforcement mechanisms related to the OLWS' issuance of Erosion Control/Surface Water Management Permits. Construction activities that affect 500 SF or more, or 250 SF or more within the undisturbed buffer, sensitive areas, or riparian areas, must obtain an Erosion Control/Surface Water Management Permit.

OLWS has adopted the Clackamas County Erosion Prevention and Sediment Control Planning and Design Manual for technical specifications regarding erosion control plan submittal requirements and recommended erosion control measures. The document also includes measures related to good housekeeping and addressing non-stormwater related waste. This document is periodically updated and includes suggested structural and non-structural erosion control BMPs.

OLWS is an agent to DEQ to implement 1200-CN permits, which cover sites between one and five acres. Local permits (i.e., an Erosion Control/Surface Water Management Permit) are also issued to

these size sites. 1200-C permits will be required as issued by DEQ and consistent with the requirements of DEQ's 1200-C Guidance Manual. OLWS reviews the 1200-C permit as obtained from the applicant during plan review.

During the plan review process, new and redevelopment will be assessed for compliance with OLWS' erosion control standards and provisions outlined in the Design and Construction Standards and Clackamas County Erosion Prevention and Sediment Control Planning and Design Manual using an internal review checklist. OLWS' written approval of erosion control plans and specifications is required prior to erosion control facility construction and installation. OLWS requires verification that a DEQ-issued 1200-C permit was obtained from the applicant during the plan review process and issues local ESCL permits for individual child lots.

2.4.2 Erosion Control Construction Site Inspections

OLWS conducts a minimum of three (3) inspections during construction activities at all sites requiring an OLWS Erosion Control/Surface Water Management Permit. Inspections are conducted to ensure proper implementation of erosion control measures.

An initial site inspection is conducted to assess the location of erosion control facility installations and the potential for offsite discharge of soil and debris. A final inspection is performed, and the Permit closed when the excavation and grading is finished at the site and the soil has been stabilized to a point where erosion potential is negligible. A minimum of one (1), interim inspection is conducted during a period of high construction activity, ideally after a storm event, or a maximum of three weeks from the previous inspection to ensure erosion control measures and facilities are being appropriately used and maintained.

OLWS staff fills out an initial inspection form through Accela during the initial site inspection and populates an electronic erosion control log with information including project contact information, project size, dates of approved erosion control plan, inspections, complaints, and deficiencies as identified during additional erosion control inspections. Accela is accessible by DEQ and is a database that maintains all inspection records, including OLWS inspections of 1200-C sites. After the inspections are complete, the site contractor/superintendent is notified via email that an inspection was conducted and requesting any needed information.

Enforcement is conducted in conjunction with Section 11 of OLWS's *Rules and Regulations*. For sites that are less than five acres with an initial erosion control violation or where ineffective erosion control is observed, a Notice of Non-Compliance is initially issued, which includes a written description of the requirements for repair and implement a time frame for compliance. If not resolved within the required time frame, a Stop Work Order is issued, and upon approval of a revised erosion control plan to the OLWS, the contractor shall immediately implement additional facilities and techniques of the revised plan. The OLWS may require the installation of interim erosion control measures prior to submittal of the revised plan.

For sites holding a 1200-C permit, if erosion control violations or ineffective erosion control is observed, OLWS will notify DEQ and enforcement will occur in accordance with the 1200-C permit provisions.

2.4.3 Construction Site Runoff Control Tracking Metrics

The following is a list of the reporting metrics and related goals, where applicable, for Construction Site Runoff Control:

- 1 Report any updates or modifications to OLWS's Rules and Regulations and the OLWS's Design and Construction Standards related to erosion and sediment control policies, procedures, and enforcement over the permit term with the goal for consistency with permit requirements and current practices.

- 2 Record the number of OLWS Erosion Control/ Surface Water Management Permits issued annually.
- 3 Report and post updated guidance or checklists developed to support erosion control plan development or reviews.
- 4 Record the number of erosion control inspections conducted annually in accordance with Accela.
- 5 Report the number of construction sites where enforcement provisions per OLWS's Rules and Regulations were issued annually.

2.5 Post-Construction Site Runoff for New Development and Redevelopment

Stormwater runoff from new development and redevelopment of urban areas impacts the quality and quantity of stormwater discharges. Stormwater that flows through developed areas has the potential to carry pollutants such as sediment, nutrients, hydrocarbons, and litter to water bodies degrading the water quality. Degraded water quality negatively impacts aquatic habitats and threatens human uses. Increases in impervious area associated with development decreases the amount of stormwater that can percolate into the ground which increases the flow rate and quantity of stormwater discharged to receiving waters. An increase to the quantity and flow rate of stormwater discharge can cause stream bank scouring, channel incising, and downstream flooding, which could lead to a loss of aquatic habitats and damage to property.

2.5.1 Post-Construction Site Runoff Controls

OLWS reviews new and redevelopment for compliance with OLWS's *Rules and Regulations*, Section 10 and the OLWS's *Design and Construction Standards (DCS)*, Section 2. The Rules and Regulations and standards detail the policies and requirements related to conveyance, stormwater quantity control, infiltration, and water quality control. Development activities that affect 1,000 SF or more of new and redeveloped impervious surface must implement post-construction stormwater management. Recorded operations and maintenance agreements are required for onsite facilities and are submitted before permit issuance.

OLWS's Design and Construction Standards outline the design of stormwater facilities. Acceptable water quality facilities prioritize low impact development and green infrastructure, which include vegetative facilities promoting infiltration.

OLWS uses Accela and an internal review checklist for design submittals in accordance with requirements outlined in the DCS to review development applications. The required submittal includes completed inspection form, narrative, stormwater drainage report, infiltration/ geotechnical testing, and facility design calculations and details. Plan reviewers use the checklist to document the technical feasibility and site constraints related to onsite management of stormwater runoff as well as downstream analysis needs/ requirements and respective treatment and flow control facility sizing.

2.5.2 Long-Term Operation and Maintenance

OLWS currently maintains a private water quality facility inventory using GIS. OLWS requires privately owned commercial and residential facilities to submit a stormwater maintenance agreement for their water quality and quantity stormwater facilities. Private facility owners receive outreach information and are subject to periodic inspection to ensure proper maintenance and performance.

All stormwater controls with stormwater maintenance agreements are included in the MS4 map. OLWS distributes annual letters to property owners, reminding them of their annual maintenance

obligations. OLWS will conduct annual onsite inspections at 20% of the private stormwater facilities and conduct enforcement in conjunction with OLWS' Rules and Regulations, Section 11.

2.5.3 Post-Construction Site Runoff for New Development and Redevelopment Tracking Metrics

The following is a list of the reporting metrics and related goals, where applicable, for Post-Construction Site Runoff for New Development and Redevelopment:

1. Track the number of development applications reviewed and approved for compliance with the stormwater regulations.
2. Track the number, type, and drainage area of stormwater facilities installed to address post-construction requirements.
3. Track the number of letters distributed to private stormwater facility owners annually.
4. Track the number of onsite private stormwater quality facility inspections conducted annually.

2.6 Pollution Prevention and Good Housekeeping for Municipal Operations

The goal of the pollution prevention program is to reduce discharge of pollutants to receiving waters by properly operating and maintaining OLWS facilities using good housekeeping BMPs. Municipal operations include a wide variety of activities conducted to maintain OLWS-owned and operated property and facilities. These activities can lead to pollutants-- such as sediment, chemicals from pesticide, nutrients from fertilizers, and litter-- reaching the MS4 system and receiving waters. OLWS maintains an MOU with Clackamas County regarding stormwater infrastructure in the right-of-way.

2.6.1 Street Sweeping and Maintenance for Public Streets

OLWS maintains a memorandum of understanding (MOU) with Clackamas County, implemented through the Department of Transportation and Land Development (DTD) to conduct street sweeping of publicly owned, major arterial and curbed streets within the OLWS boundary. Oregon Department of Transportation (ODOT) is solely responsible for maintenance and operation of the state-owned Highway 99E which bisects OLWS. Private roads are considered owned and managed by the private property owners.

Street sweeping is conducted approximately twice per year by Clackamas County, in accordance with conditions and processes identified in the MOU. The County increases this frequency during heavy leaf shedding season, after major construction, after winter deicing activities, and at other times when circumstances dictate the need to minimize the discharge of stormwater pollutants to the MS4.

Road maintenance and repair work including roadside ditch maintenance is performed by the County and generally scheduled and conducted during the dry season, when possible, to minimize polluted discharges from entering the stormwater conveyance system. Roadside ditch inspections are conducted in conjunction with sweeping activities and per conditions and processes in the MOU. Any required grading activities will meet requirements as stated in the erosion control regulations.

Through the MOU, Clackamas County is responsible for documentation of sweeping and ditch maintenance activities to fulfill the OLWS's annual reporting obligations.

2.6.2 Minimize Water Quality Impacts Associated with Landscape Management Practices

OLWS minimizes water quality impacts associated with pest management activities on public properties, specifically at OLWS's pump stations and at the WWTP, by conforming to provisions of the Clackamas County IPM Program. Pest management and vegetation management efforts are generally contracted out to a third-party firm who manually removes vegetation. In cases where OLWS staff are applying pesticides, OLWS operations staff use commercially available products or contract with a licensed applicator. Contracted chemical applicators are licensed and certified.

The OLWS maintains copies of all Material Safety Data Sheets (MSDS), to be made available upon request.

2.6.3 Coordinate with the Local Fire Department to Minimize Pollutant Discharge from Firefighting Training Activities

The main firefighting "Training Center" is in Clackamas, but minor training activities are held at local fire stations. OLWS has one local fire station, but the type of training activities conducted at the fire stations would not be expected to impact stormwater.

2.6.4 Flood Management and Water Quality Projects

OLWS assesses flood control, transportation, and other infrastructure projects during planning stages in order to identify and mitigate potential negative impacts on or to enhance benefits for the water quality of receiving water bodies within our boundary.

OLWS works with North Clackamas Watershed Council and Clackamas County Department of Transportation and Development to identify potential flood control, transportation, or other infrastructure projects that could be feasible.

2.6.5 Public Stormwater System Cleaning and Maintenance

Stormwater conveyance systems include storm pipe, culverts, catch basins, pollution control manholes, public water quality facilities, and open channel ditches. OLWS maintains a memorandum of understanding (MOU) with Clackamas County, implemented through the Department of Transportation and Land Development (DTD) to conduct maintenance on the stormwater conveyance system owned by Clackamas County, specifically pipes, catch basins, and pollution control manholes in accordance with frequencies and schedules outlined in the MOU.

OLWS inspects approximately 20% of the public stormwater pipes, catch basins, and pollution control manholes annually, consistent with the street sweeping schedule. OLWS inspects at least 20% of water quality facilities annually in accordance with the OLWS Vegetated Stormwater Facility Inspection Standard Operating Procedure (SOP). Facilities are inspected for accumulated sediment and debris, indication of illegal dumping and disposal in the facility, and any broken or non-functioning structures in need of repair and/or replacement.

Maintenance is conducted concurrent with system inspections and includes the removal of sediment, trash, and debris, as necessary. Established maintenance thresholds are as follows: catch basins and pollution control manhole sumps will be vactored when the sump has eight inches or more of dirt/sediment/trash accumulation; detention pipes will be vactored out when more than 20% of the volume is taken up with accumulated sediment; material disposal for public storm system cleaning is put into a wet decant facility, located on OLWS property.

Per the MOU, OLWS responds to routine service needs and routes service requests to DTD if they require emergency response.

OLWS uses Lucy, a database management tool, for tracking and work orders of scheduled maintenance activities.

2.6.6 Winter Weather Management

Clackamas County DTD conducts winter weather maintenance on County roads within OLWS. CC DTD implements a Snow and Ice Response Plan, which is reviewed and updated regularly. The Snow and Ice Plan addresses how snow removal, sanding, and chemical application is implemented to meet specific service level priorities. Additional winter weather response includes:

- Road maintenance priorities – identification of high, medium, and low priority routes; regional and local areas are divided into zones and detailed maps and spreadsheets outline exactly what roads need to be plowed/treated in order of priority.
- Preparation and operation activities – outlines stockpiling, ice prevention, snow plowing, snow/ice removal, and clean-up.
- Education and outreach – outlines general best practices for the public during winter weather and DTD contact information.
- Summary of material storage – stockpiling of equipment and materials occurs at 18 sites throughout the county.

2.6.7 Pollution Prevention for Operations

OLWS operates a water distribution system, wastewater collection system, and maintains a surface water system. The operation and maintenance of these systems include storing and managing vehicles, materials, and waste related to stormwater facility and infrastructure management. Currently, storage of vehicles and transport of municipal waste (associated with wet decant operations) occurs at the OLWS Water Reclamation Facility. Runoff (including decant water) from the Water Reclamation Facility is piped directly into the treatment plant for treatment prior to discharge.

OLWS will be developing an Operations Pollution Prevention Plan to define stormwater pollution prevention procedures to reduce the impact of stormwater runoff from district properties and associated with select OLWS field operations including water line flushing, litter management, and routine pipe and meter replacement.

2.6.8 Pollution Prevention and Good Housekeeping for Municipal Operations Tracking Metrics

The following is a list of the reporting metrics and related goals, where applicable, for Pollution Prevention and Good Housekeeping for Municipal Operations:

1. Track the number of miles swept per year.
2. Track the length of ditches maintained annually.
3. Record updates to the MOU, as applicable
4. Track any policy and/or procedural changes associated with pest management activities within OLWS
5. Track contacts made with Clackamas County Fire District #1.
6. Track the implementation status of stormwater projects or public infrastructure projects implemented each year and discuss the added benefit (water quality, habitat restoration, etc.) of each project.
7. Track the number of catch basins, pollution control manholes, and water quality facilities inspected and maintained annually.
8. Track the volume of debris removed during catch basin/ pollution control manhole maintenance.

9. Document updates, as applicable to the OLWS' SOP for stormwater assets.
10. Document updates, as applicable to the OLWS Vegetated Stormwater Facility Inspection SOP for stormwater assets.
11. Track the number of winter weather events, quantities and locations of material used on County roads within OLWS.
12. Report status of development of the Operations Pollution Prevention Strategy.

2.7 Industrial and Commercial Facilities

OLWS' stormwater management program tracks industrial and commercial facilities to reduce pollutants in stormwater discharges to the MS4. These facilities include sites subject to the DEQ-issued 1200-Z industrial stormwater NPDES general permit, as well as commercial and industrial properties that potentially contribute pollutants to the MS4. OLWS does not have any hazardous waste treatment, disposal and recovery facilities; industrial facilities subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986; or facilities subject to Section 313 of the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11023;

2.7.1 Screen Existing and New Industrial Facilities

The need to obtain an industrial stormwater permit is based on onsite activities and the applicable Standard Industrial Classification (SIC) and/or North American Industrial Classification System (NAICS) codes related to the 1200-series NPDES permit.

Industrial facility screening activities are outlined in OLWS' Industrial/Commercial Stormwater Inspection Program Standard Operating Procedure (SOP). OLWS continuously reviews new and redevelopment activities related to the need for a property owner to obtain an industrial stormwater permit during the Industrial Users Permit issuance process. OLWS relies on Clackamas County for land use review, development review, and issuance of building permits. OLWS is notified of permitting activities by the County. The OLWS issues Utility Connection permits if a business is changing owners or conducting upgrades to the facility.

Annually, in conjunction with BMP 2.7.2: Address High Pollutant Source Facilities, OLWS will review their existing database of commercial accounts within the district boundaries, to determine whether existing facilities may be subject to an industrial stormwater NPDES permit.

If a facility is identified during the permit process or in conjunction with review of the commercial accounts database that would be subject to an industrial stormwater NPDES permit, the facility and DEQ will be notified within 30 days.

OLWS maintains a GIS layer of all facilities subject to the 1200-Z permit and will update as new facilities are identified.

2.7.2 Address High Pollutant Source Facilities

Industrial facility screening activities are outlined in the OLWS' Industrial/Commercial Stormwater Inspection Program Standard Operating Procedure (SOP).

OLWS maintains a list of industrial and commercial facilities with the potential to discharge a substantial pollutant load to the MS4. Identification of a high priority facility is based on citizen complaints, results of past inspections, the *Industrial Users Survey*, and other sources. The list is updated annually and maintained by OLWS' Pollution Prevention Specialist.

Annually at a minimum, inspections (windshield or onsite) will be conducted. Inspections of identified high priority facilities will occur only for facilities with discharges to the municipal storm sewer system. Facilities with a discharge through a private system directly to a surface water body will be the responsibility of Oregon DEQ. Inspection forms will be filled out, documenting the results of each

inspection. As needed, technical support will be provided to property owners to improve water quality.

Annually, the OLWS will review their existing database of commercial accounts within the OLWS limits, to determine any new businesses or facilities that may warrant inspection or outreach in conjunction with this BMP.

2.7.3 Industrial and Commercial Facilities Tracking Metrics

The following is a list of the reporting metrics and related goals, where applicable, for Industrial and Commercial Facilities:

- 1 Track the number of existing or new facilities identified by OLWS that are subject to a stormwater industrial NPDES during the permit term.
- 2 Track updates to the inventory of high pollutant source facilities.
- 3 Track the number of inspections performed annually and any enforcement or technical assistance provided.

2.8 Monitoring and Reporting

OLWS is required to conduct monitoring that includes the collection and analysis of stormwater, instream surface water and macroinvertebrate samples. The monitoring requirements and objectives are outlined in Schedule B of the MS4 permit. OLWS participates in a joint monitoring plan with other Clackamas co-permittees. This joint monitoring plan (i.e., the Comprehensive Clackamas County NPDES MS4 Stormwater Monitoring Plan or CCCSMP) was updated to address the 2021 permit requirements and submitted to DEQ as required with the submittal of this SWMP. The Monitoring Plan describes monitoring objectives, strategy, and procedures for the collection and analysis of stormwater, instream, and macroinvertebrate samples. Objectives of the monitoring program include the evaluation of pollution sources, characterization of stormwater runoff quality, assessment of water quality trends, and assessment of the effectiveness of our stormwater programs. The Monitoring Plan strategy includes monitoring locations, sampling frequencies, pollutant parameters, analytical methods, quality control procedures, staffing resources, and a summary of field operating procedures. Monitoring data is submitted to DEQ annually on December 1.

In accordance with the NPDES MS4 permit requirements, OLWS also submits annual reports to DEQ to evaluate OLWS' progress towards implementing the SWMP control measures and associated BMPs. Annual reports are compiled using the annual report format provided by DEQ. The tracking measures outlined for each BMP are used to assess the effectiveness of the BMPs and inform future priorities and actions.

Records of data and information used in the development and implementation of the SWMP are retained by OLWS for 5 years or for the permit term, whichever is longer. Annual reports are posted on the OLWS' website and are made available to the public and to DEQ upon request.



Stormwater Management Program Document

2026 Summary of changes:

Section 1.2.2 – Coverage Area

- updated Watershed Map to show MS4 Service Area Boundary
- Added Jurisdiction Coverage Map

Section 1.2.3 – Relationship to TMDLs

- Added Willamette Subbasins Temperature
- Removed text “Schedule D.3.b also requires OLWS to conduct and submit a mercury minimization assessment with the annual report due December 1, 2022.”

Section 1.3.1 – Stormwater Program Organization

- Revised text since Engineering, Planning/Development Services, GIS, and Communication/Outreach are the Technical Services Department.
- Added the Finance Department as a department involved in the stormwater program

Section 1.3.2 - Stormwater Program Partners

- Included partner names of the other jurisdictions that have IGAs and MOUs with OLWS.

1.3.3 - SWMP Organization

- Removed Table 1.1 Stormwater Program Organizational Categories and removed the BMP Naming Abbreviations from the SWMP document. The document uses the Category Title and section numbering instead.

1.3.4 – SWMP Development

- Removed section

1.3.4 - Legal Authority

- New section

1.4 – SWMP Document Reference Library

- Updated URL

Section 2 – SWMP Control Measures

- Added section numbers
- Added text “Measurable goals and tracking measures will be evaluated annually to assess the impact of the BMPs and to inform future education and outreach activities.”
- Table format was changed to text format
- Moved the BMP Tracking Measures from individual sections into new Tracking Metrics sections for each Category Title.

2.1 – Public Education and Outreach

- Added text to first paragraph “The goal is to reduce or change behaviors and practices by the public and the business community that cause or contribute to adverse stormwater impacts on receiving waters.”
- Added second paragraph and bullet points:

The permit requires the education and outreach strategy to identify pollutants of concern, the priority audiences, specific education and activities, the entity responsible for implementation, and be designed to address pollution from municipal stormwater. OLWS has identified the following:

- Pollutants of concern for OLWS are total mercury, bacteria (E.coli) and temperature.
- Priority audiences are residential, commercial, and industrial property owners and tenants.
- Specific education and/or activities are detailed in Section 2.1.1 Public Education to Reduce Discharges of Pollutants in Stormwater
- OLWS is responsible for implementation of local education and activities and supports more regional items that are implemented by other agencies and organizations.
- OLWS Public Education and Outreach is designed to address pollution reduction from private property and reduce the amount entering the public stormwater system.

2.1.1 – Public Education to Reduce

- Added text:

Our current partnerships include:

Clackamas County Water Education Team (CCWET). CCWET is a consortium of educators dedicated to promoting hands-on exploration of the local watershed. CCWET provides in-school presentations, resources for teachers, and field trip opportunities.

Clean Rivers Coalition. OLWS participates in activities for the statewide Clean Rivers Coalition. The coalition uses funds from participating partners to work within communities and across stakeholders to deliver water awareness and behavior change campaigns including the recently implemented Follow The Water campaign.

Regional Coalition for Clean Rivers and Streams. The Regional Coalition for Clean Rivers and Streams (Coalition) is a partnership of public agencies in the Portland-Vancouver metropolitan area that is dedicated to educating the public about the impact of stormwater runoff pollution on the health of our rivers, streams, and groundwater—all of which are sources of our drinking water. Through the Coalition, OLWS works with North Clackamas Parks and Recreation district to provide waste bags for dogs in our service area.

Backyard Habitat Certification Program with Portland Audubon and Columbia Land Trust. OLWS partners with the Backyard Habitat Certification Program (BHCP) to support urban gardeners in their efforts to create natural backyard habitats. This includes working with homeowners to find stormwater solutions in their yards that mimic nature: allowing runoff to soak into the ground to be filtered.

Television Campaign. OLWS participates and contributes to the development and delivery of the Clean Water, It's Our Future campaign with a group of regional clean water partners. The campaign comprises a series of public service announcements (PSAs), social media posts, and website content focusing on practical advice for implementing practices that are protective of water. The PSAs air during local televised news segments, and complementary information is posted on KPTV (FOX 12)'s community webpages and shared via social media posts.

- Added text:

. . . including:

Ecology in Classrooms and Outdoors (ECO) and Aves Compartidas. ECO and Aves Compartidas programming engage students across Oak Grove Elementary,

View Acres Elementary, Candy Lane Elementary, and Riverside Elementary. Indoor and outdoor lessons are provided and the Aves Compartidas programming provide the activities to Spanish-speaking classrooms.

North Clackamas Watershed Council (NCWC). NCWC hosts riparian restoration workshops on topics including wildlife coexistence, invasive species management, and long-term maintenance. The Streamside Stewards Program is for private property owners seeking to improve watershed health in their backyard and includes 48 property owners in the Oak Lodge service area.

Pollution Prevention Resource Center (PPRC) Eco-Logical Business Program (EcoBiz). EcoBiz is a voluntary, third party verified certification for businesses and public agencies that offers technical assistance and outreach to automotive businesses.

Clackamas Community College Environmental Learning Center (CCC ELC). The ELC provides Livestream episodes to K-5 students focusing on wetland ecology, wildlife, and watershed health which include student activity sheets to engage students in the episode content. Field trips to the CCC ELC are also offered for students to visit the wetland and forest ecosystem.

Storm Drain Cleaning Assistance Program (SCAP). The Storm Drain Cleaning Assistance Program helps businesses maintain their parking lot drains at a discounted price, removing contaminants and preventing flooding. Each year, we send reminders to local businesses in spring and fall, reminding them to maintain their drains to prevent flooding and protect local water quality.

Section 2.2 – Public Involvement and Participation

- Added text:

The MS4 permit specifies that the strategy promotes information and actions to:

- Maintain a publicly accessible website to provide all relevant SWMP information to the public
- Participate in stewardship opportunities over the permit term to foster participation by the public,

Section 2.2.1 - Publicly Accessible Website

- Added text: “Information to call or electronically notify OLWS staff of any suspected illicit discharge will be readily available on the website. See Section 2.3 for more information.”

Section 2.3.1 - Implement the Illicit Discharges Elimination Program

- Added text:
 - “Rules and Regulations and”
 - “in the Illicit Discharge Detection and Elimination Standard Operating Procedure (IDDE SOP).”
 - “OLWS partners with Clackamas County for code enforcement procedures, as outlined in Section 11.5 of the Rules and Regulations,”
 - “Citizen complaints can be submitted online through the OLWS website, in writing using the Spill and Illicit Discharge Response Form, or by contacting Oak Lodge Water Services at our 24-hour emergency response line (503) 654-7765.”

Section 2.3.2 Conduct Annual Dry Weather Field Screening

- Added new first sentence in second paragraph “Regular training for field personnel is essential for safe field practices.”

Section 2.3.4 MS4 Maps

- Moved from Category F Pollution Prevention and Good Housekeeping for Municipal Operations BMPs to Category C Illicit Discharge Detection and Elimination because Modified Permit (May 5, 2023) lists requirements for the MS4 maps.

Section 2.3.5 - Illicit Discharge Detection and Elimination Tracking Metrics

- Consolidated two tracking measures into one tracking metrics:
 - Original text:
 - Track updates made to the online GIS mapping annually.
 - Record the location and drainage area of new public and private water quality facilities added to the GIS system inventory annually as applicable.
 - Revised text:
 - Track activities related to MS4 mapping and digital inventory, including the location and drainage area of new water quality facilities, as applicable.
- Removed tracking measure “Track the status of developing an asset management database” because it was completed

Section 2.5.2 – Long-Term Operation and Maintenance

- Added new first sentence to second paragraph: “All stormwater controls with stormwater maintenance agreements are included in the MS4 map.”

2.6.4 - Flood Management and Water Quality Projects

- Completely revised this section. First paragraph copied the wording directly from the permit. Second paragraph is specific to OLWS.

2.8 Monitoring and Reporting

- Removed “(December 1, 2022)” from sentence: “This joint monitoring plan (i.e., the Comprehensive Clackamas County NPDES MS4 Stormwater Monitoring Plan or CCCSMP) was updated to address the 2021 permit requirements and submitted to DEQ as required with the submittal of this SWMP ~~(December 1, 2022).~~”
- Removed “new” from sentence: “The ~~new~~ Monitoring Plan describes monitoring objectives, strategy, and procedures for the collection and analysis of stormwater, instream, and macroinvertebrate samples.”
- Removed “both new and existing” and “updated” from the sentence: “The Monitoring Plan strategy includes ~~both new and existing~~ monitoring locations, sampling frequencies, ~~updated~~ pollutant parameters, analytical methods, quality control procedures, staffing resources, and a summary of field operating procedures.”
- Removed “Beginning in 2023, the” and changed “will be” to “are” from the sentence: “~~Beginning in 2023, the~~ annual reports [are] compiled using the annual report form provided by DEQ.
- Removed reference to BMP table and changed will be to are”: “The tracking measures outlined [for] each BMP ~~table~~ [are] used to assess the effectiveness of the BMPs and inform future priorities and actions.”
- Changed “will be” to “are” from the sentence: “Records of data and information used in the development and implementation of the SWMP [are] retained by OLWS for 5 years or for the permit term, whichever is longer.”