



TMDL Implementation Plan



Prepared For:
Oregon Department of Environmental Quality
Total Maximum Daily Load Program

Prepared By:
Oregon Department of Transportation
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- Appendix A: TMDLs listing ODOT as DMA
- Appendix B: ODOT’s Stormwater Management Program Document
- Appendix C: ODOT’s Statewide IVM Plan

Acronyms and Abbreviations

BMPs	Best Management Practices
BOD	Biochemical Oxygen on Demand
CWA	Clean Water Act
CRPA	Culvert Repair Programmatic Agreement
DDT	dichloro-diphenyl-trichloroethane
DEQ	Department of Environmental Quality
DMAs	designated management agencies.
EPA	Environmental Protection Agency
FAHP	Federal Aid Highway Programmatic
LAs	load allocations
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
NPS	Non-point Source
ODOT	Oregon Department of Transportation
PCB	polychlorinated biphenyl
SMPD	Stormwater Management Program Document
TIP	TMDL Implementation Plan
TMDL	Total Maximum Daily Load
TSS	total suspended solids
WLAs	waste load allocations
WPCF	Water Pollution Control Facility
WQMP	Water Quality Management Plan
UIC	Underground Injection Control

1.0 Introduction

The Oregon Department of Transportation (ODOT) has worked with Department of Environmental Quality (DEQ) to implement a statewide Total Maximum Daily Load (TMDL) Compliance Plan since 2001. Historically, ODOT has used a statewide approach to address specific pollutants rather than specific watersheds. The intent of this statewide approach is to provide consistency in ODOT's highway management practices in all TMDL watersheds and to eliminate duplicative paperwork and staff time in developing and reporting on multiple TMDL implementation plans.

ODOT's National Pollutant Discharge Elimination System (NPDES) Phase I Individual Municipal Separate Storm Sewer System (MS4) Permit, effective September 1, 2020, requires an updated statewide TMDL Implementation Plan (TIP). ODOT has been identified as a Designated Management Agency (DMA) in the TMDLs listed in Appendix A. ODOT's MS4 permit addresses the stormwater related TMDL pollutants (ODOT's [MS4 Permit](#) Schedule D.2.iii.). For TMDL pollutants not addressed through its permit, ODOT developed this TMDL implementation plan to address TMDL pollutants associated with impacts to riparian areas within ODOT's rights-of-way from road-related construction activities. Table 1 lists the TMDL pollutants and whether they are addressed through MS4 permit performance measures or nonpoint source management strategies described in this TIP.

This TIP will update ODOT's existing statewide Compliance Plan in accordance with OAR 340-042-0080. ODOT's intention is to develop a statewide plan that covers all existing TMDLs where ODOT is named as a DMA. Future TMDLs that list ODOT as a DMA will be added to this statewide plan and it will be updated pursuant to timelines required by new TMDL orders that are issued. The TIP includes a summary of stormwater managements strategies to provide an overview of ODOT's overall program to meet TMDL requirements and describes nonpoint source management strategies to address TMDL pollutants.

Table 1. TMDL Pollutants

TMDL Pollutants	MS4 Permit Performance Measures	Nonpoint Source Management Strategies
Bacteria	yes	yes
Dissolved oxygen, biochemical oxygen demand	yes	yes
pH	yes	yes
Nutrients (nitrogen or phosphorus)	yes	yes
Biological criteria	yes	yes
Ammonia	yes	no
Chlorophyll A	yes	yes
Nuisance algae/aquatic weeds/macrophytes/phytoplankton	yes	yes
Sediment	yes	yes
Volatile solids	yes	no
Total phosphorus	yes	yes
Habitat (not a pollutant parameter)	N/A	N/A
Flow (not a pollutant parameter)	N/A	N/A
Mercury	yes	yes
DDT	yes	yes
Dieldrin	yes	yes
Lead	yes	yes
Dioxin	yes	no
PCBs	yes	yes

2.0 ODOT's Jurisdiction and Authority

ODOT is required to operate and maintain the state highway system in compliance with state and federal environmental regulations. ODOT also requires that any work completed by other entities on ODOT owned and/or operated roads, maintenance yards, rest areas, and other facilities located in the ODOT right-of-way follow all state and federal regulations. ODOT's jurisdiction and authority is limited to actions related to the construction, reconstruction, improvement, repair, maintenance, operation and use of public highways, roads, streets, and roadside rest areas owned and operated by ODOT. ODOT is not a municipality, land use or natural resource management agency and, as such, cannot enact ordinances or other regulatory mechanisms.

ODOT exercises authority over work completed in its right-of-way through the permitting regulations in Oregon Revised Statutes 374.305 to 374.330, which require written permission from the Oregon Department of Transportation to place or construct facilities on highway right-of-way. Facilities include any "approach road, structure, pipeline, ditch, cable or wire, or any other facility, thing or appurtenance." Written permission is also required prior to the substantial alteration of any such facility and prior to any change in the manner of its use. ORS 374.320 allows ODOT to take action if permit requirements are not met. This includes removal, repair, or elimination of hazards if necessary, and billing the permit holder for the cost, but ODOT does not have authority to enforce regulations outside of its own. ODOT refers enforcement actions outside of its jurisdictional authority to the appropriate agency.

2.1 Municipal Separate Storm Sewer System (MS4) Phase I Permit Coverage Area

ODOT's MS4 permit applies to the geographic area encompassing the municipal separate storm sewer system associated with ODOT owned and/or operated roads, maintenance yards, rest areas, and other facilities located in ODOT highway right-of-way that discharge stormwater to surface waters of the state.

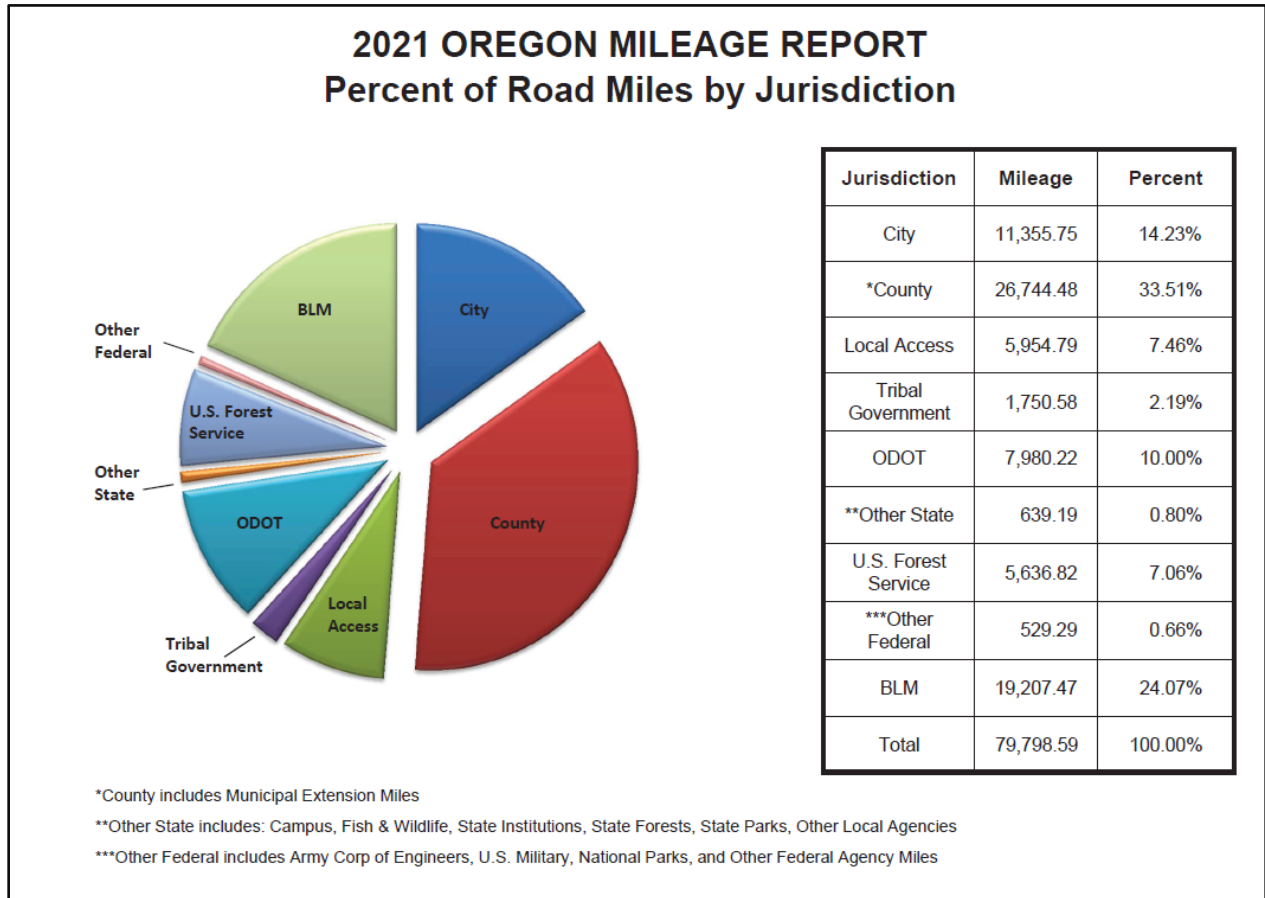
Figure 1. ODOT Highway System, MS4 Coverage Area



2.2 ODOT's Area of Responsibility

ODOT's portion of road miles of Oregon's State Highway System mileage is approximately 7,980 miles, or 10% of public roads. ODOT is responsible for an estimated 50,000 acres of roadside vegetation. The remaining portion of ODOT's area of responsibility consists of maintenance yards, rest areas, and other facilities located outside of the highway right-of-way. The ODOT [TransGIS](#) map has a Maintenance and Facilities layer which shows the locations of maintenance stations, facilities, and leased buildings. ODOT's Mileage Report is available from the [Road Assets and Mileage Program](#). Figure 2 shows ODOT's percent of road miles from its most recent report.

Figure 2. ODOT Percent of Road Miles



OAR 340-042-0080 (4)(a)(A)

Identify the management strategies the DMA or other responsible person will use to achieve load allocations and reduce pollutant loading

3.0 Stormwater Management Strategies

ODOT is required to comply with regulatory programs to manage pollutants associated with the operation, construction, and maintenance of ODOT roads, highways, and bridges. TMDL pollutants associated with stormwater runoff are managed through the regulatory programs and permits listed below. ODOT incorporates water quality protection into project planning, development, construction and operation and maintenance of the state and federal transportation system.

3.1 Municipal Separate Storm Sewer System (MS4) Phase I Individual Permit

DEQ incorporated performance measures in ODOT's MS4 permit to address TMDLs associated with stormwater. Compliance with the MS4 permit terms and conditions is presumed to comply with TMDL wasteload allocations at the time the permit was issued ([MS4 Permit](#), Schedule D.2.iii.). ODOT addresses TMDL pollutants through stormwater pollutant reduction best management practices (BMPs) to achieve the performance measures included in ODOT's MS4 permit. ODOT's Stormwater Management Program Document (SMPD), attached as Exhibit B, discusses specific BMPs implemented to address the TMDL pollutants with MS4 permit performance measures listed in Table 1.

3.2 1200-CA Stormwater General Discharge Permit

ODOT is comprised of five (5) geographic regions. Each region was issued an updated [1200-CA](#) NPDES Stormwater General Discharge Permit in 2022. These regional permits cover stormwater discharges from construction activities performed by ODOT that have a potential to discharge to surface waters or conveyance systems that discharge to waters of the state. TMDLs are addressed in the 1200-CA through a natural buffer zone requirement.

3.3 401 Dredge & Fill Certifications

Section 401 of the Clean Water Act grants states and tribal governments the authority to review and approve, condition, or deny proposed projects, actions and activities directly affecting waters of the United States. In Oregon, DEQ is responsible for issuance of most Section 401 water quality certifications. The certification states that the discharge will comply with the CWA and applicable state law, including state water quality standards. Oregon's water quality standards specify the designated uses of a waterbody (e.g., for water supply or recreation), pollutant limits necessary to protect the designated use (in the form of numeric or narrative criteria), and policies to ensure that existing water uses will not be degraded by pollutant discharges.

3.4 Underground Injection Control (UIC) Permit

ODOT was issued a statewide Water Pollution Control Facilities (WPCF) Underground Injection Control (UIC) permit in 2017. The UIC permit covers stormwater discharged below the ground surface through infiltration. The UIC permit requires source control measures including operational and structural best management practices (BMPs) to reduce pollutants prior to infiltration. UIC discharges are not subject to TMDLs but can have a positive impact on surface water quality through stormwater infiltration as it reduces the quantity of stormwater runoff discharges to surface water and the pretreatment BMPs used prior to infiltration prevent pollutant transfer through groundwater to surface water interactions.

3.5 Federal Aid Highway Programmatic (FAHP)

Oregon's Federal-Aid Highway Programmatic ([FAHP](#)) covers most federally funded transportation projects that affect aquatic species listed on the federal threatened and endangered species list by the National Marine Fisheries Service (NMFS) and terrestrial and aquatic species administered by the U.S. Fish and Wildlife Service (USFWS). The FAHP is a statewide ESA Section 7 consultation and Magnuson Stevens Act (MSA) consultation with the NMFS and the USFWS. The FAHP programmatic includes all geographic areas in Oregon where transportation projects directly or indirectly affect ESA-listed species. This includes projects with riparian impacts and in-water work, such as culvert or bridge replacements, and projects that affect the quality and amount of stormwater runoff into waterways with ESA-listed species. The FAHP includes requirements for reporting, environmental inspections, monitoring, design standards and mitigation. The location and current phase of all projects implemented under the FAHP programmatic are available on [TransGIS](#).

4.0 Nonpoint Source Management Strategies

Nonpoint source (NPS) water pollution is surface overland runoff that comes from sources in the environment that are difficult to identify. Generally, NPS pollution results from precipitation, atmospheric deposition, land runoff, infiltration, drainage, seepage, or hydrologic modification. TMDL pollutants associated with impacts to riparian areas within ODOT's rights-of-way from road-related construction activities are managed through the regulatory programs listed below.

4.1 Wetlands and Riparian Areas

Wetland specialists work to ensure wetlands and water resources are identified during project development and that measures are taken to avoid and minimize impacts to the environment. ODOT limits wetland losses by reducing the footprint of highway design projects to the extent feasible. In some cases, where safety or function would not be compromised, ODOT seeks exceptions to federal highway design standards to minimize its impacts. This includes activities like adding guardrail to steepen roadway embankments that would normally require a shallow slope. Unavoidable impacts caused by ODOT construction or maintenance projects are mitigated per state and federal regulations through U.S. Army Corps of Engineers (Corps) and/or Department of State Lands (DSL) permits. ODOT replaces lost riparian habitat by replanting trees and shrubs that have been affected by projects and removes invasive weeds from these areas.

4.2 Integrated Vegetation Management

ODOT manages more than 50,000 acres of roadside vegetation. Highway rights-of-way must accommodate a variety of conflicting demands, including vehicle recovery zones, weed control, erosion and sediment controls including storm water detention and treatment, surface and sub-surface drainage, wetlands, fish protection, habitat mitigation, habitat protection for rare or endangered species, scenic quality, resource stewardship, bikeways and pathways, traffic devices, utilities, signing and sound barriers. ODOT manages vegetation along the highway right of way primarily for safety for motorists, pedestrians, and cyclists and for the protection of the road structure and highway features, in addition to compliance with legal obligations. Oregon Revised Statute 634.650–665 requires ODOT to implement integrated pest management practices when performing the agency’s duties related to pest control. ODOT’s Statewide IVM Plan is included as Appendix C.

4.3 Fish Passage

The Oregon Department of Transportation (ODOT) and the Oregon Department of Fish and Wildlife (ODFW) renewed the Culvert Repair Programmatic Agreement (CRPA) project in 2022. The CRPA allows ODOT to make specific short-term repairs to culverts without having to meet full fish passage criteria at the repair location which enables ODOT to make critical repairs of aging culverts in a cost-effective manner, while providing a benefit to native migratory fish (NMF) over the status quo by improving fish passage at each site repaired. Through this program, ODOT replaces undersized culverts with bridges or larger culverts that simulate natural stream channels. This allows for natural stream functions to occur. Fish passage improvements at culvert repair locations use a combination of reducing jump heights, increasing water depths, and decreasing water velocities across the range of stream discharges when NMF migrate. ODOT incorporates large wood and vegetation into streambank stabilization projects to the extent possible. This may involve the use of riprap with root wads and willow stakes and incorporation of soil with herbaceous vegetation. Incorporation of these natural elements provides habitat for fish and aquatic/terrestrial invertebrates, as well as promoting stream temperature regulation and nutrient processing. The CRPA and associated annual reports can be found on ODOT’s [Fish Passage](#) webpage. ODOT will track and report fish passage projects by HUC8 as part of this TIP.

4.4 Tree Management

Transportation safety considerations for tree management have the potential to conflict with roadside riparian vegetation management strategies. Trees are the single most commonly struck objects in roadside crashes. ODOT’s tree management activities are designed to eliminate hazard trees, restore sight distance, minimize, or remove shading that may cause icy conditions, control, or prevent slope failure, remove fire danger or fire impacted trees, reduce snowdrift accumulation near roadways and to maintain a clear zone along the roadway. A Clear Zone is an unobstructed, traversable roadside area that allows a driver to stop safely, or regain control of a vehicle that has left the roadway (US Dept of Transportation Federal Highway Administration, [2021](#)). ODOT’s Highway Design Manual, [Part 400 Roadside Design](#) follows the AASHTO Roadside Design Guide clear zone guidance procedures to determine the correct clear zone distance. The Oregon Roadway Departure Implementation Plan Update 2009-2015 [Final Report](#) (2017)

includes tree countermeasures be considered in locations that meet threshold levels to minimize the severity of crashes that occur when vehicles leave the roadway. Guidance on tree management for maintenance operations is included in the Routine [Road Maintenance Water Quality and Habitat Guide, Best Management Practices \(2020\)](#) and activity 133 Brush Cutting, in the ODOT Maintenance Guide. If it is necessary for ODOT to remove a shade tree in a riparian area, two seedlings are planted in that same watershed for every shade tree over 12” that was removed. ODOT will track and report riparian tree planting projects by HUC8 as part of this TIP.

OAR 340-042-0080 (4)(a)(B)

Provide a timeline for implementing management strategies and a schedule for completing measurable milestones

5.0 TMDL Implementation and Timeline

Effective upon approval, annual reports will begin in 2024. As indicated in the previous sections, ODOT implements numerous TMDL pollutant management strategies under its NPDES, WPCF, Corps and DSL permits, Section 401 Water Quality Certifications and the FAHP which have separate tracking and reporting requirements. Table 2 lists the additional strategies ODOT will implement to supplement its existing programs to reduce TMDL pollutants.

Table 2. TMDL Pollutant Management Strategies

POLLUTANT TMDL	POLLUTANT SOURCES	STRATEGY	ACTIONS	TIMELINE	MEASURE
<i>Pollutant(s) addressed by the TMDL(s).</i>	<i>Roads, bare ground, logging practices, etc.</i>	<i>What agency is doing and will do to reduce pollution from this source.</i>	<i>Specific implementation actions to implement strategies.</i>	<i>Beginning and end dates of strategy or actions, including any milestones.</i>	<i>Demonstrate implementation or completion of the strategy or actions.</i>
Bacteria; Dissolved oxygen, biochemical oxygen demand; pH; Nutrients (nitrogen or phosphorus); Biological criteria; Chlorophyll A; Nuisance algae / aquatic weeds / macrophytes / phytoplankton; Sediment; Total phosphorus; Mercury; DDT; Dieldrin; Lead; PCBs	Roads, bare ground, sediments deposited during runoff events, high water temperatures, excessive solar radiation, near-stream vegetation removal, channel reconfiguration and instream flow loss	Riparian tree planting.	Plant two seedlings in same watershed for every shade tree over 12" that was removed.	Replanting riparian shade trees at a rate of 2:1 is an ongoing strategy. ODOT will report HUC8 information for these projects beginning in 2024.	Assess impacts to TMDL watersheds through collection and reporting of riparian tree planting projects by HUC8.
		Promote stream temperature regulation and nutrient processing through fish passage projects.	Replace undersized culverts with bridges or larger culverts under the Culvert Repair Programmatic Agreement.	The Culvert Repair Programmatic Agreement is an ongoing strategy. ODOT will report HUC8 information for these projects beginning in 2024.	Assess impacts to TMDL watersheds through collection and reporting of fish passage projects by HUC8.

OAR 340-042-0080(4)(a)(C)

Provide for performance monitoring with a plan for periodic review and revision of the implementation plan

6.0 Performance Monitoring and Periodic Review

ODOT's first annual report for this TIP is due on September 30, 2024, with its Year Five Report due in 2028. Each time a TMDL is issued that lists ODOT as a DMA, this TIP will be reviewed and amended pursuant to the requirements timelines in each order. The reporting schedule for additional TMDLs added will be incorporated into ODOT's existing 5-year schedule.

OAR 340-042-0080(4)(a)(D)

To the extent required by ORS 197.180 and OAR chapter 340, division 18, provide evidence of compliance with applicable statewide land use requirements

7.0 Land Use Compliance

DEQ has advised that new guidance indicates DMAs are no longer required to demonstrate compliance with land use.

OAR 340-042-0080(4)(a)(E)

Provide any other analyses or information specified in the WQMP

8.0 WQMP Specific Requirements

No additional specific requirements were identified. ODOT will include WQMP specific requirements in Table 2, TMDL Pollutant Management Strategies as appropriate.

Appendix A

TMDL Water Quality Management Plan	Impairment/Pollutant	Waste Load Allocation, Load Allocation or Both?
Grande Ronde - Lower	Bacteria	LA
Grande Ronde - Upper	Dissolved Oxygen	LA
Grande Ronde - Upper	pH	LA
Grande Ronde - Upper	Nutrients	LA
John Day	Bacteria	LA
John Day	Dissolved Oxygen	LA
John Day	Biological Criterion	LA
Klamath - Upper Klamath & Lost River	Dissolved Oxygen	LA
Klamath - Upper Klamath & Lost River	pH	LA
Klamath - Upper Klamath & Lost River	Ammonia Toxicity	LA
Klamath - Upper Klamath & Lost River	Chlorophyll-a	LA
Snake River/Hells Canyon	Bacteria	LA
Snake River/Hells Canyon	Nutrients, Nuisance Algae and Dissolved Oxygen	LA
Snake River/Hells Canyon	Pesticides	LA
Snake River/Hells Canyon	pH	LA
Snake River/Hells Canyon	Sediment	LA
Umatilla	Sediment	LA
Umatilla	Aquatic Weeds, Algae, and pH	LA
Umatilla	Nitrate	LA
Umatilla	Ammonia	LA
Umatilla	Bacteria	LA
Willow Creek	pH	LA
Willow Creek	Bacteria	LA
North Coast -Lower Columbia-Youngs, Lower Columbia-Clatskanie, Necanicum and Nehalem	Bacteria	LA
Sandy	Dissolved Oxygen	LA
Sandy	Bacteria	LA
Wilson-Trask-Nestucca	Bacteria	LA
Wilson-Trask-Nestucca	Sediment	LA
Tillamook	Bacteria	LA*
Tualatin	Bacteria	LA
Tualatin	Volatile Solids and Ammonia	LA
Tualatin	Total Phosphorus (pH and Chlorophyll-a)	LA

Appendix A

TMDL Water Quality Management Plan	Impairment/Pollutant	Waste Load Allocation, Load Allocation or Both?
Rogue - Illinois (Upper and Lower Sucker Creek)	Habitat	LA
Rogue - Illinois (Upper and Lower Sucker Creek)	Flow	LA
Rogue	Bacteria	LA
Rogue -Middle (Bear Creek)	Sediment	LA
Rogue -Middle (Bear Creek)	Bacteria	LA
South Coast - Coos Tenmile	Aquatic Weeds (Macrophytes)	LA
South Coast - Coos Tenmile	Phytoplankton (floating algae)	LA
South Coast - Coos Tenmile	Chlorophyll-a	LA
South Coast - Coos Tenmile	pH	LA
Umpqua	Dissolved Oxygen	LA
Umpqua	Nutrients (Nitrogen and Phosphorus)	LA
Umpqua	Bacteria	LA
Umpqua	Sediment	LA
Umpqua Little River	pH	LA
Umpqua Little River	Sediment	LA
Willamette	Bacteria	WLA (2006)
Willamette	Mercury	WLA (2006)/WLA (2019)
Lower Willamette	Bacteria	WLA
Lower Willamette	Mercury	WLA
Lower Willamette	DDT/Deildrin	WLA
Columbia Slough	BOD (to address DO impairments)	WLA
Columbia Slough	pH/Nutrients	LA
Columbia Slough	Bacteria	LA
Columbia Slough	Lead	LA
Columbia Slough	DDT/Deildrin/dioxin, PCBs (via TSS reductions)	LA

*listed as "other partners" under Action 19

Municipal Separate Stormwater System (MS4)
Stormwater Management Program Document



Prepared for the Oregon Department of Environmental Quality
Submitted by the Oregon Department of Transportation
June 1, 2023

ABOUT THIS DOCUMENT

The Stormwater Management Program Document (“SMPD”) was drafted as a requirement of ODOT’s MS4 permit, DEQ File No. 101822, issued on August 11, 2020. The SMPD outlines how ODOT meets the requirements of the MS4 permit through project development, construction, and maintenance.

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1.0 ODOT's Responsibilities

1.1 Coordinate With Other Public Entities

ODOT may, at its discretion, elect to work with or delegate implementation of one or more SMP control measures to another entity. Under such an agreement, ODOT would be responsible for compliance with any permit conditions that another entity fails to implement.

1.2 Maintain Adequate Legal Authority

This section provides information on ODOT's legal authority to oversee its storm system. ODOT has also included in this section spending restrictions as defined in the Oregon State Constitution, which may limit some of ODOT's MS4 program activities.

- State statutes and regulations that give ODOT the legal authority to control illicit discharges to its storm system are identified in Section 2.3.1.
- The following is a summary of MS4 legal authority requirements as stated in 40 CFR 122.26 (d)(2)(i) and the state statutes that enable ODOT to address them. ODOT has different legal authority as a state agency compared to a local municipality, but has addressed the 40 CFR municipal legal authority requirements as listed.

Control through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from sites of industrial activity.

Primary authority to control introduction of pollutants to the ODOT storm sewer system and to control quality of storm water discharge is found in ORS 374.305 to 374.330. These statutes require written permission from the Oregon Department of Transportation to place or construct facilities on highway right of way. Facilities include any "approach road, structure, pipeline, ditch, cable or wire, or any other facility, thing or appurtenance." Written permission is also required prior to the substantial alteration of any such facility and prior to any change in the manner of its use. This requirement applies to any storm sewer or storm connection on ODOT right of way.

ORS 374.305 to 374.330 also reference ODOT's ability to issue a facility permit. A facility permit can be conditioned upon compliance and have attached applicable standards for storm water quality and requirements for control or removal of pollutants. The current administrative rules adopted to regulate permits for miscellaneous utility connections are found in Oregon Administrative Rules (OAR) Chapter 734, Division 55.

The contracting authority set forth above and ORS 283.110 allows ODOT to enter into an interagency agreement with the Department of Environmental Quality to exercise its authorities under ORS 468B.

Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer.

ODOT has limited legal authority to prohibit illicit discharges and may only prohibit these discharges if they originate on ODOT property. This authority can be exercised through the permitting regulations of ORS 374.305 to 374.330. ORS 374.320 allows ODOT to take action if permit requirements are not met. This includes removal, repair or elimination of hazards if necessary, and billing the permit holder for the cost. ORS 374.307 allows ODOT to remove facilities constructed without permit authority. Violation of these statutes and the administrative rules under OAR 734-55, constitute citable offenses as a misdemeanor under ORS 374.990.

ORS 377.650 to 377.655 provide for removal actions if personal property is left or displayed on state highway. Such personal property is found to be a public nuisance under ORS 377.650. Discharge into the storm sewer system can be found to be a public nuisance and abated or enjoined by ODOT through this rule.

Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water.

Many discharge actions on highway rights of way are regulated through administrative rules. Prohibited activities on highway right of way are covered under OAR 734-20-095. OAR 734-20-145 covers removal of spilled loads and wrecked vehicles and OAR 734-20-150 addresses closure of highways.

Runoff that originates from property abutting ODOT right of way and then flows into the ODOT storm system is generally not regulated by ODOT due to its jurisdictional limitations. In such cases, ODOT's procedure is to first attempt to persuade the landowner or responsible party to stop the discharge, and if unsuccessful in that effort, refer the matter to DEQ or applicable MS4-permitted entity.

Control through interagency agreements among other public entities the contribution of pollutants from one portion of the municipal system to another portion of the municipal system.

ODOT has broad interagency contracting authority found under ORS 366.556 to 366.576, ORS 190.110 and 190.240 and ORS 283.110. Under these authorities, agreements may be executed under which ODOT and other public entities may coordinate stormwater management strategies and infrastructure.

Require compliance with conditions in ordinances, permits contracts or orders; and carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.

ODOT is able to exercise control over the permits it issues under ORS 374.305. Permits may be canceled if there is noncompliance with permit conditions. Permits may also require indemnification and public liability insurance from permit holders in order to cover any costs associated with permit non-compliance.

The above statutes allow ODOT the authority to carry out inspections, surveillance, or monitoring as needed to determine compliance with permit conditions (including locating pollutant discharges to the ODOT system).

ODOT has authority to regulate discharges originating within ODOT right of way. ODOT does not have legal authority to regulate illegal discharges that originate outside of its right of way or jurisdiction. ODOT must accept up-gradient stormwater discharges consistent with Oregon Drainage Law.

Article IX, Section 3A of the Oregon Constitution limits the use of revenue from gas and motor vehicle taxes.

These taxes shall be used "...exclusively for the construction, reconstruction, improvement, repair, maintenance, operation and use of public highways, roads, streets, and roadside rest areas in this state..."

2.0 Stormwater Management Program (SMP) Control Measures

ODOT will continue to implement all existing SMP control measures, and will begin to revise its SMP control measures, as needed, in order to implement new control measure components.

2.1 Public Education and Outreach

ODOT will continue to implement an education and outreach program to inform agency staff and the public about the potential impacts of stormwater on water quality around the state. Additionally, ODOT will explore new pathways to disseminate stormwater information to a broader audience, including the use of social media platforms.

2.1.1 Education and Outreach Program

ODOT's public education and outreach program includes educational efforts targeting the three audiences listed in Schedule A.3.a.iv. The goal of the education and outreach program is to inform agency staff, stakeholders, and the public of the impact of stormwater on water resources and to identify potential pathways to reduce those impacts at work, while traveling on state highways, and at home.

2.1.2 Stormwater Education Activities

ODOT will continue to provide educational messages, trainings or activities through printed and/or electronic materials, social media platforms, or other relevant educational events or workshops at least twice per year.

Table 2.1: Public Education and Outreach Implementation Schedule

Program Deliverables	Target Implementation Date
Develop a Social Media Strategy to Disseminate Stormwater Information	June 1, 2024
Pursue opportunities to partner with local jurisdictions, as available	Ongoing

2.2 Public Involvement and Participation

ODOT will continue to implement the components described in Schedule A.3.b.ii-iii. New components will be implemented according to the dates identified in Table 2.2. If a component is deemed unfeasible, justification will be provided in the subsequent MS4 Annual Report and ODOT will consult with DEQ, as necessary.

2.2.1 Publicly Accessible Website

ODOT will continue to maintain a publicly accessible website with information on ODOT’s stormwater programs. The website will include guidance and technical information, Illicit Discharge Detection and Elimination (IDDE) reporting, the SMPD, stormwater staff contact information, and educational materials.

2.2.2 Public Involvement Opportunities

Public involvement opportunities are often provided or engaged at the local level. ODOT provides the following statewide opportunities:

Table 2.2: Public Involvement and Participation Implementation Schedule

Program Deliverables	Target Implementation Date
Pursue opportunities to partner with local jurisdictions, as available	Ongoing
Update ODOT’s Stormwater Website	June 1, 2023

2.3 Illicit Discharge Detection and Elimination (IDDE)

ODOT will continue to implement the agency’s current IDDE program while exploring opportunities to improve reporting pathways. ODOT will develop a formalized internal IDDE tracking and reporting plan and will update the Stormwater website with information on how to identify and report an illicit discharge, as outlined in Table 2.3.

2.3.1 Regulatory Mechanisms

ODOT's general authority to maintain the state highway system is detailed in Section 1.2 above.

Regulations regarding the placement or construction of facilities (including pipes and ditches) on state highway right of way are defined under ORS 374.305 through 374.330. Criminal penalty for violation of these rules is defined under ORS 374.990. Removal, prevention and/or repair of these facilities are defined under ORS 374.307, 374.320, and 366.455.

Rules allowing ODOT to use its authority under ORS 374.305 for the placement or construction of facilities including pipes and ditches are provided in OAR 734-55. Additional authority is provided in ORS 377.650 to 377.655.

These regulations give ODOT the authority to control what facilities are placed within state-owned right of way. Any connection to ODOT's MS4 that has not received a permit could be subject to removal, per the statutes and rules outlined above; however, an illicit discharge may enter the system through a natural flow path for which ODOT does not have the authority to regulate. In these circumstances, ODOT relies on other local, state, and federal agencies with the statutory authority to regulate such discharges.

2.3.2 Spill Response and Abandoned Waste

Emergency spill response procedures, objectives, and policies are detailed in existing ODOT manuals such as the [EMS Manual](#), [HazMat Program Manual](#), and the [ODOT First Responder Guide to Highway Incident Response](#).

Spill response requirements are also identified in other state and federal permits currently held by ODOT, including WCPF Permit #UIC-103167.

HazMat Groups in each Region have different spill response responsibilities. In Regions 1 and 3, Region HazMat staff provide on-call assistance that responds to highways spills around the clock. In Regions 2, 4, and 5, Region HazMat staff are called for assistance at the discretion of the District Manager if a large spill requires ongoing cleanup and the District needs technical assistance to determine whether cleanup is appropriate and protective of ODOT property and the environment.

ODOT maintenance workers, litter crews, and others who work within ODOT right-of-way occasionally find abandoned waste that may or may not be identifiable. Region HazMat staff provide technical assistance in these circumstances, including the facilitation of testing and proper disposal.

2.3.3 Response to Complaints or Reports

Illicit discharges to the ODOT's MS4 are identified through Road Patrols, Water Quality Facility Inspections or public complaints. Minor illicit discharges identified in the field can often be corrected upon discovery. ODOT investigates reports of illicit discharges as soon as practicable, but no later than 5 working days after notification, unless there is a threat to human health, welfare, or the environment. For discharges, including spills, that constitute a threat to human health, welfare, or the environment, ODOT will respond within 24 hours. Spills, or other illicit discharges, that may endanger human health or the environment are reported in accordance with all applicable federal and state laws, including notification to the Oregon Emergency Response System.

2.3.3.1 Notification of Other Authorities

ODOT does not have legal authority over activities outside of ODOT right of way. Correcting illicit discharges may involve jurisdictional authority issues. ODOT involves other agencies as appropriate to correct illicit discharges, often referring unauthorized discharges that enter ODOT's system to DEQ. ODOT will continue to work collaboratively with other MS4 permittees to identify opportunities to improve communication between agencies in regard to IDDE. If an illicit discharge originates outside the ODOT's right of way, ODOT will notify the appropriate jurisdictional authority within five working days of becoming aware of the illicit discharge.

2.3.3.2 Complaint Tracking

ODOT will maintain a complaint tracking system for all illicit discharge complaints received. The information will be kept according to the records retention requirements in the permit and is available for review upon request. The tracking system documents the following:

- Date the complaint was received;
- Staff responding to the complaint;
- Date the investigation was initiated;
- The jurisdictional authority to whom the complaint was referred to, as applicable;
- The outcome of any ODOT staff investigation; and,
- Corrective action(s) taken to eliminate the illicit discharge, as applicable.

Complaint tracking information will be summarized in each MS4 Annual Report.

2.3.4 ODOT Road Patrol

ODOT inspects ditches and other stormwater facilities through routine road patrols. Road patrols are conducted by ODOT maintenance workers as drive by inspections of highway features to ensure there are no immediate problems or concerns impacting highway operations. ODOT road patrol is conducted frequently; daily in high-traffic or resource concern areas. Drainage ditch and/or illicit discharge issues discovered during road patrols are either addressed immediately by maintenance staff or are reported to the IDDE coordinator (currently the Clean Water Program Coordinator in Maintenance and Operations).

2.3.5 Illicit Discharge Detection and Elimination Training and Education

HazMat and other ODOT staff responsible for responding to spills and other hazardous materials that may be encountered within the state highway right of way receive specialized training to maintain certifications. ODOT maintenance crews receive training about IDDE and how to respond to a complaint through internal stormwater training, including Blue Book and EMS training classes.

Table 2.3: Illicit Discharge Detection and Elimination Implementation Schedule

Program Deliverables	Target Implementation Date
Evaluate methods to track illicit discharges by basin	June 1, 2025

2.4 Construction Site Runoff Control

ODOT will continue to implement a construction site runoff control program to reduce the discharge of pollutants from construction sites. ODOT will continue to evaluate the existing training program to ensure ongoing compliance with all applicable standards. [ODOT's Erosion Control Manual](#) provides ODOT staff and contractors with best management practices in erosion and sediment control for personnel involved in the design and construction and maintenance of ODOT construction projects. The Construction Section's [Environmental Construction Inspector Certification](#) course, for Agency inspectors and [Erosion and Sediment Control Manager Certification course, for contractor erosion and sediment control leads](#) are detailed on ODOT's website.

2.4.1 Compliance with other NPDES permits

Stormwater discharges from ODOT construction sites is regulated through the requirements of the ODOT's five regional NPDES 1200-CA permit registrations. The Oregon Standard Specifications for Construction is a contract document and enforcement tool in requiring contractor compliance with the NPDES 1200-CA. The 00280 Section of the Specifications, regarding erosion and sediment control is written to support the 1200-CA Permit. Similarly, the ODOT Erosion Control Manual provides guidance on compliance with the Permit and ODOT's consultant Scope of Work template provides consultants an outline for developing Erosion and Sediment Control Plans that satisfy the Permit's requirements. These documents will be updated to reflect the revised 1200-CA permit requirements as soon as the Permit's final language is provided.

2.4.1.1 NPDES 1200-CA Compliance Strategy

ODOT construction projects having one or more acres of ground disturbance are currently controlled by regional 1200-CA permits. The [1200-CA](#) permit was reissued by DEQ in 2022. ODOT has Standard Drawings and Details available in Environmental and Hydraulics Engineering Section's [Erosion and Sediment Guidance Materials](#). ODOT's [Standard Specifications](#), Section 00280, detail the ESCP's minimum requirements for all Project Sites and conditions.

Contractors are required to designate an Erosion and Sediment Control Manager (ESCM) who is trained and certified to lead the project's erosion and sediment control work. ODOT's specifications require that the contractor comply with the NPDES 1200-CA permit, all other applicable permits, and all federal, state and local laws, rules and regulations. If contractors are not compliant, ODOT will require the work be performed before payment will be provided. ODOT's [Standard Specifications](#), Section 00140, Scope of Work, detail the remedies available to ODOT if the contract requirements are not met.

ODOT is committed to maintaining a "trusted partner" relationship with all regulatory agencies. In that context, when permit violations occur, ODOT self-reports to the appropriate regulatory agency. In the event that a contractor's ESCM is not performing all required duties, that ESCM may be removed from the project. If the ESCM withholds information or falsifies a monitoring report, then their certification will be permanently revoked.

2.4.2 ODOT Erosion Control Policy in addition to 1200-CA Requirements

[ODOT Technical Advisory GE 12-01\(A\)](#) outlines a process to provide appropriate erosion control for all construction projects having the potential to cause erosion, including those construction projects not subject to the 1200-CA. This process utilizes Section 00280 of ODOT's Standard Specifications and Boilerplate Special Provisions to apply the appropriate erosion and sediment control requirements based on risk of erosion and quantity of ground disturbance. The Technical Advisory groups projects into three categories listed below:

1. No Risk – These are construction projects that do not involve any ground disturbance. Erosion control is not required.
2. Low Risk – These are projects that involve less than one acre of ground disturbance and do not exhibit high risk erosion factors such as:
 - a. Proximity to a wetland or waterway within 100 feet;
 - b. Erodible soils or disturbance of steep slopes;
 - c. Wet season construction and soil disturbance;
 - d. Multiple construction season schedule;
 - e. Probability that the area of ground disturbance will increase to an area greater than one acre; and
 - f. Stringent local requirements that affect the ESCP and monitoring requirements.

These small projects still require that plans address erosion prevention, runoff control and sediment control but they do not require an Erosion and Sediment Control Manager certified by ODOT. ESC inspections are done by Agency inspectors. Frequency varies based on potential risk factors such as forecasted weather, proximity to water, etc.

3. High Risk – These are construction projects having one or more acres of ground disturbance – and thus subject to 1200-CA permit conditions – or construction projects having less than one acre of ground disturbance when high risk erosion factors (listed above) are present. Erosion and sediment control requirements of the 1200-CA are applied to these projects. Inspection frequency for high risk sites are mandated by

contract at once per week on active sites, every two weeks for inactive sites and within 24 hours of rainfall events of 1/2" in a 24 hour period.

2.4.3 Construction Runoff Control for Maintenance Activities

Routine maintenance activities that cause ground disturbance are guided by the [Blue Book](#). Stormwater management best management practices (BMPs) that apply to all maintenance activities are described. BMPs related to specific maintenance activities are also included as appropriate in those sections.

2.4.4 Additional Permits

Construction site runoff is also managed by adhering to requirements set by other permits, including:

- Clean Water Act (CWA) Section 404 permits;
- CWA Section 401 water quality certifications (WQCs); and
- Oregon Department of State Land's (DSL's) Oregon Removal/Fill Permit.

These permits and certifications regulate in-water work and sediment entering Waters of the State and Waters of the United States. Conditioned biological opinions, including ODOT's Federal Aid Highway Programmatic biological opinions (FAHP).

The FAHP biological opinions issued by National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) provide take coverage under the Endangered Species Act (ESA) and the Magnuson-Stevens Act for federally-funded projects. Protecting threatened or endangered fish requires that ODOT prevent pollution from our projects or facilities from impacting the aquatic habitats of these species. Most rivers in the state provide potential habitat for endangered species and sediment is considered a pollutant, so control of construction site runoff is integral with the FAHP.

2.4.5 Construction Runoff Control Training and Education

ODOT will ensure that all staff responsible for ESCP reviews, site inspections, and enforcement of ODOT's requirements are trained or otherwise qualified to conduct such activities.

ODOT's [Environmental Construction Inspector Certification course](#) provides inspectors with practical knowledge and standard industry practices for conducting inspections. Inspectors gain an understanding of their responsibilities to verify compliance with project requirements as well as mandates set forth by ODOT or the federal government, or both. The Inspector Certification is valid for five years.

ODOT's [Erosion and Sediment Control Manager Certification](#) course that provides contractor's ESC managers with an understanding of the 1200-CA permit requirements and practical knowledge of standard industry practices for performing erosion and sediment control management activities on ODOT projects. Participants must pass a test to receive ESCM

certification. Certification is required to perform ESCP reviews and inspections. The ESCM is valid for five years, ensuring training will occur at least once during the permit term.

Table 2.4: Construction Site Runoff Control Implementation Schedule

Program Deliverables	Target Implementation Date
Complete internal agency rollout of 1200-CA permit changes.	June 1, 2023

2.5 Post-Construction Site Runoff Control

ODOT will continue to implement a post-construction site runoff control program to reduce discharges of pollutants from existing transportation infrastructure. ODOT will continue to evaluate the existing training program to ensure ongoing compliance with all applicable standards.

2.5.1 Other Regulatory Mechanisms

In addition to the MS4 permit, post-construction stormwater management is required by the following regulatory mechanisms:

2.5.1.1 CWA Section 401 WQCs

Individual projects that entail discharges of fill material into waters of the United States frequently require WQCs under CWA Section 401. For most projects that involve the development or redevelopment of impervious surfaces, the WQC requires preparation of a stormwater management plan documenting that the project’s design includes all available and reasonable BMPs necessary for the project to meet state water quality standards.

2.5.1.2 Endangered Species Act & Magnuson-Stevens Fishery Conservation & Management Act

Highway projects that are likely to affect listed species have take authorization under one or more biological opinions (BOs). The specific BO(s) applicable depends on whether the project conforms to the limits of programmatic BOs, the species affected, whether a US Army Corps of Engineers permit is required, and whether the project is federally funded. These regulatory mechanisms specify that projects with certain triggering features (including development and redevelopment of impervious surfaces) include all available and reasonable best management practices necessary to minimize impacts to protected species. These include:

- FAHP BO (NMFS);
- FAHP BO (USFWS);
- Programmatic BO to Standard Local Operating Procedures for Stormwater, Transportation or Utilities; and,
- Individual project BOs.

2.5.1.3 Routine Road Maintenance Water Quality and Habitat Guide (“The Blue Book”)

The Blue Book, which is developed and maintained by ODOT in consultation with NMFS and DEQ, specifies BMPs to be used when carrying out myriad maintenance activities that could otherwise have a deleterious effect on water quality and other environmental resources. Use of the BMPs described in the Blue Book ensures that ODOT’s Routine Road Maintenance Program is exempt from ESA take provisions, and that the Program is adequate to protect and conserve listed fish. The maintenance activities described in the Blue Book include both maintenance of installed post-construction stormwater BMPs, as well as stormwater management principles generally.

2.5.1.4 Local ordinances and permits

ODOT projects are subject to city, county, and special district ordinances and permits, which may impose additional post-construction stormwater management requirements.

2.5.1.5 CWA Section 404 and DSL’s Oregon Removal/Fill permits

Typically, CWA Section 404 and state removal/fill permits do not directly regulate stormwater management. However, occasionally a project’s stormwater management features are part of the range of activities proposed as mitigation for aquatic impacts. When approved by the issuance of a CWA Section 404 or removal/fill permit, implementation of the mitigation plan—including stormwater management BMPs—becomes a condition of the permit.

2.5.2 Prioritization of Low Impact Development Requirements

Preference of low-impact development (LID) stormwater management techniques is a core principle of ODOT’s post-construction stormwater management program. LID techniques are required to be considered in the previously-described regulatory instruments, and has consequently been prioritized as part of ODOT’s BMP selection practices since 2008. LID principles—including mimicking natural hydrology, preserving natural resources, and dispersing and infiltrating stormwater close to where it falls—are manifested not only in the referenced regulatory mechanisms, but also in the BMP selection tool first established by the Stormwater Action Team, an interagency cooperative through which ODOT’s modern stormwater program was established. This principle continues to be propagated in internal guidance we use routinely:

- **The Blue Book:** The Blue Book requires promoting sheet flow for stormwater wherever appropriate through such actions as corrective blading or grading.
- **Water Resources Specialist Manual:** This manual is used by project environmental staff to ensure that project designs conform to regulatory requirements, and specifies that BMPs are preferred which rely on infiltration as a primary pollutant removal mechanism (e.g., natural dispersion, bioslopes, infiltration basins, permeable pavement, etc.).
- **Hydraulics Manual:** This manual is used by ODOT hydraulics engineers to choose and design stormwater management system elements as part of highway project design. It specifies that LID BMPs should be evaluated for feasibility on all projects, and includes a section providing guidance on LID elements, prioritization, site suitability evaluation, and LID options.

2.5.3 Post-Construction Stormwater Management Requirements

ODOT is unique among Oregon MS4 permittees in that it has no regulatory authority to impose or enforce stormwater management requirements or technical standards on private property owners. ODOT does engage in analogous activities however, including:

- Performing reviews of plans for private development projects adjacent to highways that involve expanding or reconstructing highway surfaces (for example, to add a turn lane into a newly-constructed parking lot) to ensure that they include highway stormwater management features where appropriate.
- Reporting to regulatory authorities any third parties who are discovered to be discharging suspected pollutants to the public waters via ODOT's drainage infrastructure.

Additionally, for ODOT's own projects, ODOT implements site performance and treatment standards specified by the regulatory mechanisms described above, implements structural stormwater control design specifications through the Hydraulics Design Manual, and implements stormwater mitigation options on- and off-site where necessary.

2.5.4 Post-Construction Site Runoff Plan Review

As a non-regulatory agency, ODOT does not review the runoff plans of other entities, except as described in 2.5.3 above. However, for projects that affect stormwater, post-construction runoff is documented primarily through four types of documents, each having their own purposes, audiences, and review mechanisms:

Table 2.5.a: Post-Construction Site Runoff Plan Review

Document (prepared by)	Purpose	Audience	Review Mechanism
Hydraulics report (hydraulics engineer)	Documents design goals, engineering calculations, and solutions for projects with engineered BMPs	Project development team (PDT; internal) and project files	Peer reviewed by another engineer; input provided by water resources specialist in ODOT region environmental unit
Post-construction stormwater management plan (SWMP) (water resources specialist / permit coordinator)	Documents how project design meets 401 stormwater criteria	DEQ ¹	Peer reviewed by region environmental staff and water resources program leader; SWMPs for projects covered by individually-permitted projects are reviewed by DEQ as part of its WQC process.
FAHP stormwater report (water resources specialist / biologist)	Documents compliance with FAHP BOs	NMFS	Peer reviewed, then submitted to NMFS liaison; take is reported annually
Project development and construction plan sheets (project designers)	Design and communication tool during project development, then a construction tool	PDT, construction office, and contractor	Reviewed by entire PDT at several stages, finalized by specification engineer

¹ Most SWMPs—for projects approved under nationwide permits—are reviewed by the water resources program coordinator to ensure 401 compliance, and may occasionally be reviewed by DEQ to support 401 certification. DEQ is therefore considered the audience for all SWMPs.

2.5.5 Long-Term Operation and Maintenance (O&M)

ODOT's Hydraulics Program tracks stormwater facility assets, the operations and maintenance (O&M) manuals for each facility, and related program data. As of 2020, ODOT maintains more than 1,200 facilities statewide. Stormwater facilities include:

- Stormwater treatment facilities such as swales, ponds, filter strips, sedimentation basins, bioslopes, proprietary structures that use vaults and oversized manholes or tanks, and pretreatment manholes;
- Stormwater storage facilities such as ponds, tanks, and vaults;
- LID BMPs; and,
- Underground Injection Control (UIC) systems.

Each stormwater facility is assigned a unique drainage facility identification (DFI) number. The DFI number is used to link the stormwater facility with an O&M manual and with ODOT's asset management systems. ODOT's stormwater inventory is available through TransGIS, a web-based program accessible to the public.

Each stormwater facility is required to have a dedicated O&M manual that provides information about facility maintenance and operation. Copies of the facility manuals are distributed to the maintenance district where the facility is situated. Each manual includes:

- The facility type;
- How the facility operates;
- The inspection schedule;
- A list of required maintenance work;
- Waste material handling and contacts;
- Appendix A: A facility operational plan, profile and details; and,
- Appendix B: As-constructed facility plans and details.

In addition to assigning a DFI number, field markers are also installed at each facility site to help locate and identify the stormwater facility, and support asset management data collection. DFI field marker guidance is provided in the [ODOT Hydraulics Manual](#).

There are three types of markers used to identify ODOT facilities or alert maintenance crews of the location of stormwater facility maintenance areas. A Type S1 marker is used to indicate the start and end of stormwater facility maintenance areas. The purpose of the Type S2 marker is to display the facility drainage identification number.

Maintenance crews refer to the appropriate O&M manual using the ID number assigned to each facility. A Type S3 marker is used to stamp a drainage facility identification number onto the top of access covers of underground treatment and storage facilities that use vaults, oversized manholes, and tanks.

ODOT Maintenance Crews are generally responsible for the ongoing maintenance of these facilities as required in the facility O&M manuals and the maintenance tables provided in ODOT's Maintenance Guide. Facilities are inspected annually and necessary maintenance is completed as soon as practicable after discovery of a deficiency. These actions are documented on inspection forms which are entered into the Water Quality Facility Program database.

2.5.6 Training and Education

ODOT provides training and education as needed through a variety of means to employees who deal with post-construction stormwater management features.

Water resources specialists and biologists:

- Water resources specialist manual;
- Biology manual;
- FAHP User's guide;
- Direct organizational communication of urgent issues;
- Quarterly discipline meetings;
- Discipline leads providing formal training; and,
- Sharing information internally about additional training opportunities provided by outside providers.

Hydraulic engineers:

- Hydraulics Manual;
- ODOT Policies;
- Standard Construction Specifications;
- Standard Drawings;
- Standard Details;
- Qualified Products List;
- O&M manual templates;
- FAHP User's guide;
- Direct organizational communication of urgent issues;
- Monthly senior engineer discipline meetings;
- Quarterly statewide discipline meetings;
- Discipline leads providing formal training; and,
- Sharing information internally about additional training opportunities provided by outside providers.

Maintenance:

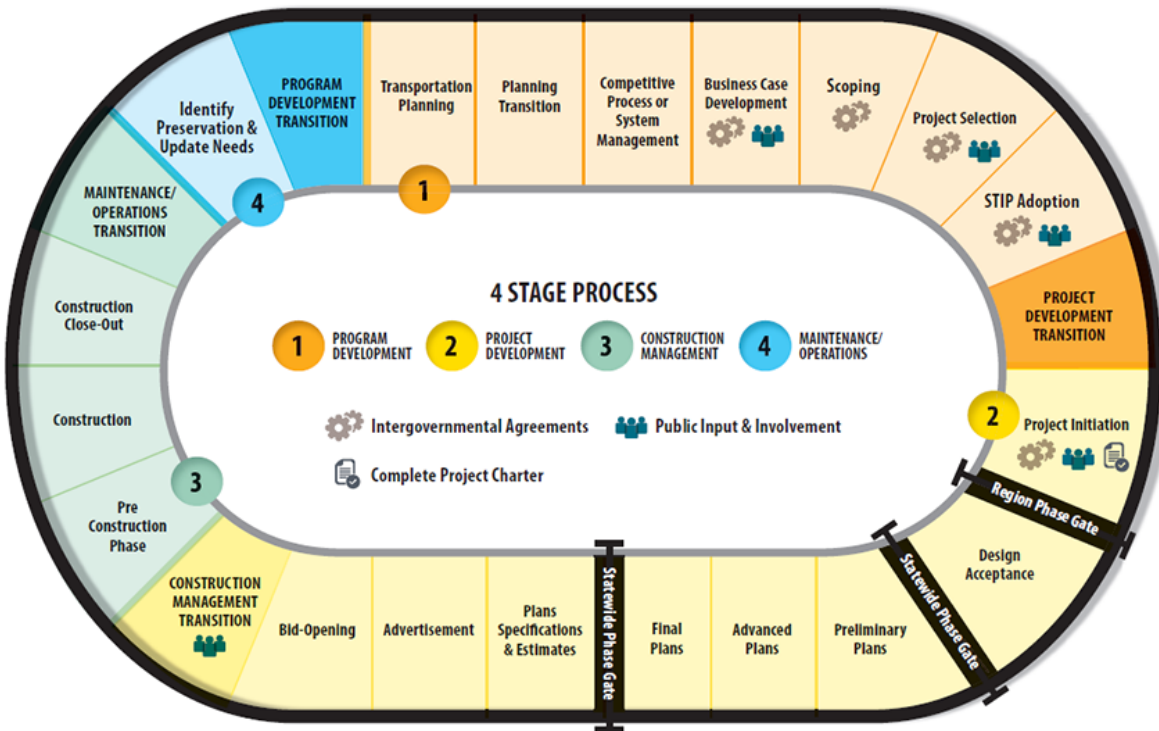
- Blue Book Training: The maintenance activities described in the Blue Book include both maintenance of installed post-construction stormwater BMPs, as well as stormwater management principles generally.
- Water Quality Facility Work Group: Maintenance staff, technical experts, and statewide program leads are part of a work group that meets to discuss treatment facilities, maintenance strategies, and emerging technologies.

Table 2.5.b: Post Construction Program Implementation Schedule

Program Deliverables	Target Implementation Date
Continue to Evaluate Innovative Stormwater Mitigation Options	Ongoing
Explore Opportunities to Improve Stormwater Treatment through the Project Delivery Process	Ongoing

The [Project Delivery Guide](#) explains the Project Delivery Process in detail. Stormwater is addressed from scoping through design and construction and, ultimately, handoff of constructed facilities to maintenance

TRANSPORTATION SYSTEM PROJECT LIFECYCLE



2.6 Pollution Prevention and Good Housekeeping

ODOT will continue to implement and adaptively manage the Environmental Management System (EMS) Program, Spill Prevention Control and Countermeasure (SPCC) Program, and other relevant programs to minimize potential impacts to stormwater generated on ODOT-owned facilities.

2.6.1 Operation and Maintenance Strategy for Existing Controls

Please see Section 2.5.5 above. The Operation and Maintenance Strategy for existing controls is the same as the Long-Term Operation and Maintenance Strategy for post-construction controls.

2.6.2 Environmental Management System Program

ODOT developed an Environmental Management System Program in 2004 to provide consistent direction and expectations for the storage, handling, and disposal of materials typically found at ODOT Maintenance Facilities. This program has continued to be implemented through [Highway Policy MAI-31](#), Environmental Management and Operations of Maintenance Compounds, and is updated every 5 years.

2.6.2 Integrated Vegetation Management Program

The ODOT Integrated Vegetation Management (IVM) program is required under Oregon statute ORS 634.660. The program develops agency guidance for managing noxious weeds, landscape plantings, roadside timber, and other vegetation issues associated with ODOT rights-of-way. Goals of the ODOT IVM program include encouraging self-sustaining vegetation and reducing the need for herbicides, fertilizers, and irrigation. ODOT continually explores new vegetation management practices, technologies, and partnerships to improve its IVM program. Specific actions to meet this requirement will be included in the annual report.

2.6.3 Litter control, including Adopt-a-Highway

ODOT cleans up litter and debris found along state highways using its own employees (permanent or temps), contractors, and volunteers. The litter control work is managed individually by District. The Adopt-A-Highway program provides an opportunity for volunteers to clean up litter and remove noxious weeds along state highways. Activities may also include graffiti removal and maintenance of existing landscaped areas. ODOT will explore opportunities to encourage participation in the Adopt-A-Highway program.

2.6.4 Material and waste disposal

ODOT has developed guidance for appropriate materials disposal and documentation. The guidance is outlined in the EMS Manual. Hard copy tracking logs are available upon request.

2.6.5 Spill Prevention Control and Countermeasure Program

Program elements are written in site-specific SPCC Plans that describe controls and procedures that have been implemented to prevent oil from reaching nearby waterbodies if a spill occurs. ODOT Maintenance yards that have aggregate storage of more than 1,320 gallons of oil or fuel in containers that are 55 gallons or larger, provided the facility is sited where a potential spill could impact navigable waterways (as defined in the Oil Pollution Act) have fully implemented the elements of the Plans.

2.6.6 Training and Education

Training and yard audit details for ODOT Maintenance Facilities are provided in the EMS Program Manual. Other training requirements are completed as part of Blue Book training.

Table 2.6: Pollution Prevention and Good Housekeeping Implementation Schedule

Program Deliverables	Target Implementation Date
Submit EMS Annual Report as part of the MS4 Annual Report	Annually

2.7 Winter Maintenance Program

ODOT will continue to implement the existing Winter Maintenance Program components while exploring opportunities to improve efficiency and limit impacts to receiving waters.

2.7.1 Winter Materials Management

ODOT will continue to store all winter maintenance products in compliance with the guidelines detailed in the EMS Program. Details about storage and training requirements for winter materials can be found in the EMS Program document.

2.7.2 Winter Maintenance Strategy

ODOT’s current Winter Maintenance Strategy includes phasing in the use of solid salt in keys areas, defining principles to guide further expansion, and evaluating and adaptively managing environmental best practices to reduce impacts to water quality. The 2019 Strategy and all subsequent Strategy updates can be found at <http://www.oregon.gov/ODOT> or by contacting ODOT’s Maintenance and Operations Branch – Environmental Section at (503) 986-3008.

2.7.3 Winter Maintenance Annual Report

ODOT will continue to produce a Winter Maintenance Annual Report which will be included as an appendix to the MS4 Annual Report. Data metrics may change over time due to availability and reporting, but will generally include information about the type and quantity of materials used by geographic area.

2.7.4 Training and Education

ODOT provides Winter Maintenance Training through two primary venues:

- Winter Maintenance Training for operators/applicators; and,
- EMS annual training and auditing relating to proper storage of winter maintenance materials.

Table 2.7: Winter Maintenance Program Implementation Schedule

Program Deliverables	Target Implementation Date
Provide copies of SPR 812	June 1, 2023
Continue to participate in ODOT and/or other research projects	Ongoing
Submit Winter Maintenance Annual Report as part of the MS4 Annual Report	Annually

2.8 Stormwater Retrofit Strategy

ODOT will initiate the development a Stormwater Retrofit Strategy during this permit cycle. This program will include prioritization methodology, screening criteria, and funding options.² A list of prioritized projects may be completed, if practicable, during this permit cycle.

2.8.1 Stormwater Retrofit Strategy Components and Objectives

The Stormwater Retrofit Strategy may address, but is not limited to, the following stormwater components:

- ODOT’s TMDL Implementation Plan;
- Existing Facility Maintenance and Replacement (including Flow Control Requirements);
- Inclusions of treatment of runoff emanating from contributing impervious areas that extend beyond a highway project’s stormwater trigger areas; and,
- Innovative stormwater mitigation alternatives that extend beyond project-by-project mitigation.

The components included in the Stormwater Retrofit Strategy will be determined during the program’s development. ODOT may solicit feedback from DEQ and other regulatory agencies during the development of the program, as appropriate.

2.8.2 Project Prioritization Methodology

ODOT will develop methodology to aid in the prioritization of projects that meet the objectives of the program. The resulting prioritized list will be used to assign funding, highlight potential cost-sharing opportunities with other MS4 permittees, and identify regional stormwater treatment needs.

2.8.3 Stormwater Retrofit Strategy Document

ODOT will develop a Stormwater Retrofit Strategy Document to capture the prioritization, rationale, and identification of project locations, including which program component(s) the project will address.

Table 2.8. Stormwater Retrofit Strategy Implementation Schedule

Program Deliverables	Implementation Date
Develop a statewide Stormwater Retrofit Strategy, including funding and prioritization methodology	June 1, 2024

² Some retrofit concepts may require review to determine consistency with the aforementioned Constitutional expenditure limits.

SCHEDULE B - MONITORING AND REPORTING REQUIREMENTS

1. Compliance Evaluation

ODOT will provide an annual evaluation of compliance as outlined in Schedule A and Schedule D as part of the MS4 Annual Report.

2. MS4 Annual Report

No later than June 1 each year, ODOT will submit an MS4 Annual Report to DEQ as specified in Table B.1 below. The reporting period for the MS4 Annual Report is from January 1 through December 31 of each year. Reporting periods for subsequent MS4 Annual Reports is specified in Table 2 below.

Table B.1. MS4 Annual Report Deadlines

MS4 Annual Report	Reporting Period	Due Date
1st Year Annual Report	January 1, 2020 - December 31, 2020	June 1, 2021
2nd Year Annual Report	January 1, 2021 - December 31, 2022	June 1, 2022
3rd Year Annual Report	January 1, 2022 - December 31, 2023	June 1, 2023
4th Year Annual Report	January 1, 2023 - December 31, 2024	June 1, 2024
5th Year Annual Report	January 1, 2024 - December 31, 2025	June 1, 2025

3. Monitoring Requirements

ODOT submitted its 2021 MS4 Monitoring Plan to DEQ on January 15, 2021. Results will be provided as they are received and reported on in the following annual report.

4. Submissions

ODOT will provide DEQ with one hard copy of the MS4 Annual Report until e-reporting is initiated and any supplemental information required by the due date in Table B.1, above.

Additionally, all Annual Reports, attachments, and other required submittals will be sent to DEQ by email.

5. Recordkeeping/Records Retention

ODOT will retain records and copies of all information pertinent to the requirements of the MS4 permit for a period of at least five years after the permit's expiration date.

SCHEDULE D - SPECIAL CONDITIONS

1. MS4 Data Compilation

Since 1999, ODOT has collected an array of stormwater data for permit compliance, litigation, and other program-specific needs. These data collection efforts have often fulfilled a singular requirement or need and have not been compiled into one database for evaluation.

2. Stormwater Data Compilation

During this permit term, ODOT will compile all available data relevant to the MS4, including characterization, research, mapping, and other applicable data sets. This data may include, but is not limited to, the following:

- All available outfall inventories that are within Phase 1 and II Communities completed since 1999;
- All available highway stormwater runoff characterization data collected by ODOT or consultants contracted by ODOT since 1999;
- All available monitoring data collected by ODOT or consultants contracted by ODOT since 1999; and,
- Other Relevant Stormwater Data collected by ODOT or consultants contracted by ODOT since 1999
- Other sources of data may include:
 - Water Quality Facility Program;
 - Winter Maintenance Program;
 - Integrated Vegetation Management Program;
 - EMS Program; and,
 - Data received from other MS4 permittees, DOTs, and state and federal agencies.

3. Stormwater Data Review and Gap Analysis

Upon completion of Schedule D.1.i., ODOT will develop a database (e.g., Excel spreadsheet or other), and/or GIS interface to be used to manage available ODOT stormwater data. This database will be used to conduct an evaluation and analysis of all known stormwater data to identify any data gaps. Data gaps may include geographic gaps (i.e., regional data needs) or subject area gaps (i.e., pollutant-specific data). A GIS interface may also be used to conduct spatial analyses and to display data points such as outfall locations. This analysis will be provided to DEQ no later than June 1, 2024.

4. Additional Data Collection

Upon completion of Schedule D.1.ii, ODOT may, in consultation with DEQ, elect to collect additional stormwater data necessary to close any identified data gaps. Data collection efforts may include, but are not limited to, the following:

- Research projects;
- Literature reviews;
- Partnerships with other permittees, DOTs, and/or other state and federal agencies;

- Computer modeling;
- Physical data collection; and,
- GIS analysis.

Table D.1: MS4 Data Compilation Implementation Schedule

Program Deliverables	Implementation Date
Identify Known Existing, Applicable Data Sets	June 1, 2022
Develop Database and/or GIS Platform for Data Management and Analysis	June 1, 2023
Input all Data into Database/Platform(s) and Conduct Data Gap Analysis	June 1, 2024

5. Total Maximum Daily Load (TMDL) Implementation Plan

ODOT and DEQ will work collaboratively to update ODOT’s most current TMDL Implementation Plan. Work to update this plan will commence during this permit term. ODOT will submit a draft plan to DEQ by June 1, 2023.

Summary of Changes to SMPD

Date	Section	Summary of Changes
7/26/2021	2.4 Construction Site Runoff Control	Corrected information about certification courses
7/26/2021	2.4.1 Compliance with other NPDES permits	Corrected references to 1200-C permits
7/26/2021	2.4.1.1 NPDES 1200-CA Compliance Strategy	Clarified responsibility for ESCP
7/26/2021	2.4.2 (2) ODOT Erosion Control Policy in addition to 1200-CA Requirements	Corrected information regarding development of ESCPs on projects that are not covered under the 1200-CA (less than 1 acre of disturbance)
7/26/2021	2.4.2 (3) ODOT Erosion Control Policy in addition to 1200-CA Requirements	Provided more detailed information regarding the frequency of inspections of high risk projects
7/26/2021	Schedule D.5	Added language regarding TMDL Implementation Plan
5/16/2022	1.2	Deleted "is a state agency and not a municipality"
5/16/2022	Table 2.1	Changed Target Implementation date for Social Media Strategy to from 2022 to 2023
5/16/2022	Table 2.4	Corrected references to 1200-C permits Added program deliverable: Update Erosion and Sediment Control Program elements of SMDP upon issuance of 1200-CA permit
5/20/2022	2.4.1	Modified paragraph: Stormwater discharges from ODOT construction sites are regulated through the requirements of the ODOT's five regional NPDES 1200-CA permit registrations. In 2021, ODOT has begun the process of negotiating conditions of the 1200-CA update for its construction sites. This document will be updated to reflect the 1200-CA permit requirements as soon as those permits are in effect. To: Stormwater discharges from ODOT construction sites is regulated through the requirements of the ODOT's five regional

		<p>NPDES 1200-CA permit registrations. The Oregon Standard Specifications for Construction is a contract document and enforcement tool in requiring contractor compliance with the NPDES 1200-CA. The 00280 Section of the Specifications, regarding erosion and sediment control is written to support the 1200-CA Permit. Similarly, the ODOT Erosion Control Manual provides guidance on compliance with the Permit and ODOT’s consultant Scope Of Work template provides consultants an outline for developing Erosion and Sediment Control Plans that satisfy the Permit’s requirements. These documents will be updated to reflect the revised 1200-CA permit requirements as soon as the Permit’s final language is provided.</p>
5/16/2022	2.4.3	Inserted “best management practices”
5/16/2022	2.4.4	Replaced “regulated” with “managed”
5/22/2022	2.4.5	<p>Modified paragraph: ODOT’s Environmental Construction Inspector Certification course provides inspectors with practical knowledge and standard industry practices for conducting inspections. Inspectors gain an understanding of their responsibilities to verify compliance with project requirements as well as mandates set forth by ODOT or the federal government, or both. The Inspector Certification is valid for five years</p> <p>To: ODOT’s Erosion and Sediment Control Manager Certification course that provides contractor’s ESC managers with an understanding of the 1200-CA permit requirements and practical knowledge of standard industry practices for performing erosion and sediment control management activities on ODOT projects. Participants must pass a test to receive ESCM certification. Certification is required to perform ESCP reviews and inspections. The ESCM is valid for five years, ensuring training will occur at least once during the permit term.</p>

5/16/2022	2.5.1.1	Deleted “best management practices” replaced with “BMPs”
5/16/2022	2.5.1.4	Modified sentence: Occasionally, ODOT projects may be subject to city, county, and special district ordinances and permits, which impose additional post-construction stormwater management requirements. To: ODOT projects are subject to city, county, and special district ordinances and permits, which may impose additional post-construction stormwater management requirements.
5/16/2022	2.5.2	The last bullet referring to PD-05 was removed. PD-05 is being updated. The current draft directs project delivery teams to use the two manuals already referenced in this section.
5/16/2022	2.5.4	Deleted “e.iv”
5/16/2022	Table 2.5.a	In the cell: “Post-construction stormwater management plan (SWMP)” deleted “biologist” and added “permit coordinator”
5/16/2022	Page 14, footnote 1	Modified sentence: Most SWMPs—for projects approved under nationwide permits—are reviewed by the water resources program coordinator to ensure 401 compliance, and may be subject to DEQ review to support 401 certification. DEQ is therefore considered the audience for all SWMPs. Most SWMPs—for projects approved under nationwide permits—are reviewed by the water resources program coordinator to ensure 401 compliance, and may occasionally be reviewed by DEQ to support 401 certification. DEQ is therefore considered the audience for all SWMPs.
5/16/2022	2.5.5	Deleted “best management practices” with “LID BMPs”

5/16/2022	2.6	Modified deliverable from “Analyze participation in the Adopt-A-Highway program” to “Analyze effectiveness of EMS training”
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8/9/22	1.2	<p>Changed:</p> <ul style="list-style-type: none"> State statutes and regulations that give ODOT the legal authority to control illicit discharges to its storm system are identified in Section A.3.c.ii.A. <p>to correct reference:</p> <ul style="list-style-type: none"> State statutes and regulations that give ODOT the legal authority to control illicit discharges to its storm system are identified in Section 2.3.1.
5/30/23	Table 2.1	Changed 2023 to 2024
5/30/23	2.2.1	Corrected misspelling of Publicly; removed “Update ODOT’s Stormwater Website”. This deliverable is complete.
5/30/23	Table 2.2	Deleted “Develop a Social Media Strategy to Disseminate Stormwater Information”. Duplicative of Table 2.1.
5/30/23	Table 2.2	Deleted “Identify strategies for encouraging participation in ODOT’s Adopt-A-Highway Program”. This deliverable is complete.
5/30/23	Table 2.2	Changed implementation date in “Update ODOT’s Stormwater Website” from 2022 to 2023. Another update was completed in 2023.
5/30/23	Table 2.3	Deleted completed deliverables and added “Evaluate methods to track illicit discharges by basin” and “June 1, 2025”.
5/30/23	2.4.1.1	Deleted large portions of the text relating to the 1200-CA permit and added a link to the final 1200-CA permit for reference.
5/30/23	Table 2.4	Deleted completed deliverables and added “Complete internal agency rollout of 1200-CA permit changes” and “June 1, 2023”.
5/30/23	Table 2.5b	Deleted completed deliverables and changed “June 1, 2023” to “Ongoing”.
5/30/23	Table 2.6	Deleted completed deliverable.
5/30/23	Table 2.7	Changed “Upon Completion to “June 1, 2023”.
5/30/23	Table 2.7	Deleted “Develop and implement a calibration manual for material application equipment”.
5/30.23	Schedule B.4.	Deleted “at MS4Stormwater@deq.state.or.us” and added “by email”.

ODOT Integrated Vegetation Management Statewide Plan

1.0 Introduction

Oregon Revised Statute, ORS 634.650 – 655 requires that the Oregon Department of Transportation practices Integrated Pest Management (IPM) when controlling pests. This Statewide IVM Plan outlines how ODOT meets IPM and other natural resource laws associated with vegetation management. It also includes best management practices for vegetation management activities. This plan is meant to be adaptive due to changes in resources (budget, equipment, labor and materials), laws (new rules and regulations), vegetation (new invasive plants, species shifts due to maintenance practices, or climate change) and policy (agency directives)

2.0 Background

ODOT is responsible for managing more than 50,000 acres of roadside vegetation, an area roughly equal to half the size of Oregon's state park system. The balance consists largely of areas managed and maintained for basic functions of transportation facilities such as safety, drainage or future expansion. These roadsides, which stretch out along approximately 9,000 miles of primary and secondary highways, also serve as the front yard for Oregon and many of its communities. Roadsides traverse a wide variety of landscapes including forests, deserts, wetlands, grasslands, agriculture, estuaries, urban areas, suburban areas, community gateways, scenic vistas and safety rest areas. These different landscapes enable residents and travelers alike to experience Oregon's broad cultural and environmental diversity.

As Oregon continues to grow and develop, highway rights-of-way need to accommodate an increasing variety of often-conflicting demands. These include such things as errant vehicle recovery areas, erosion and weed control, storm water detention and treatment, surface and sub-surface drainage, wetlands, fish protection, habitat mitigation, habitat protection for rare or endangered species, scenic quality, resource stewardship, bikeways and pathways, traffic devices, utilities, signing and sound barriers. In addition, for a number of roadside areas, special interest groups request special management techniques. Some can be accommodated and some can not. With these many different considerations, it is important to devise a set of consistent management tools to help the Department coordinate and balance its many roadside responsibilities.

ODOT manages vegetation along the highway right of way primarily for safety, both for motorists, pedestrians, and cyclists, for the protection of the road structure and highway features, for compliance with legal obligations and for good land stewardship. Based on this information unwanted vegetation can be defined as vegetation that obstructs safety features or creates unsafe conditions, limits sight distance, impedes drainage, increases fire hazards and compromises pavement and structure integrity. Unwanted vegetation also includes noxious and invasive weeds as well as hazard trees.

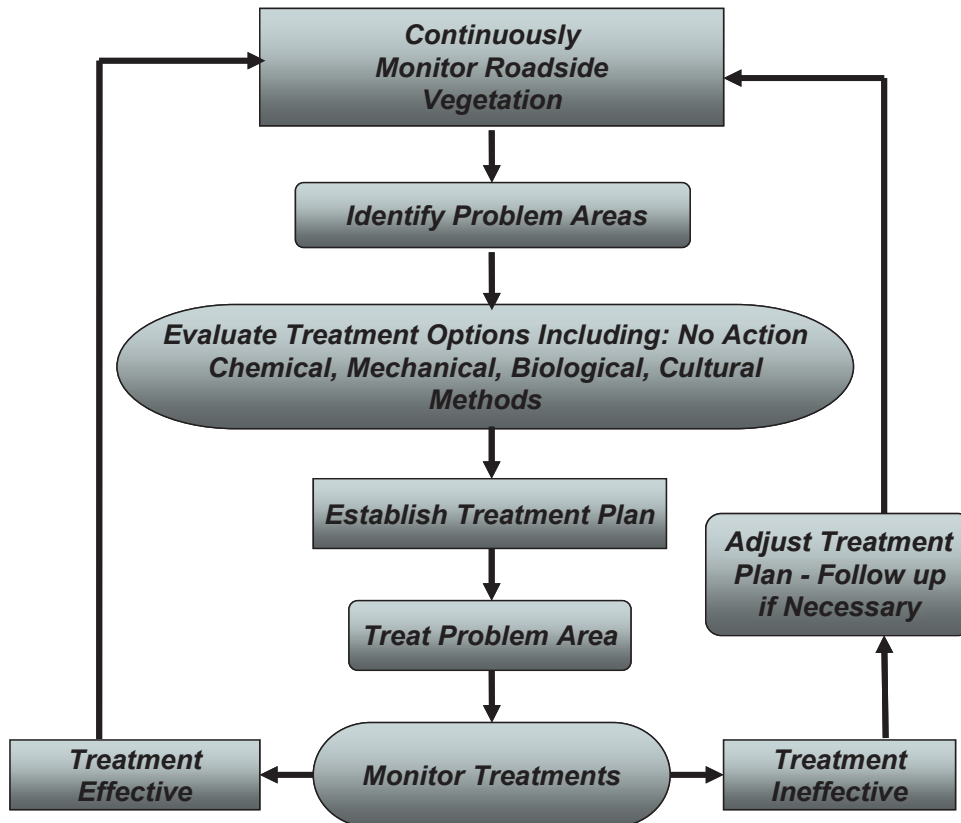
3.0 Integrated Vegetation Management

Oregon Revised Statute (ORS 634.650 – 665) requires ODOT to implement integrated pest management practices when carrying out the agency's duties related to pest control. The primary pest for ODOT is vegetation; therefore, integrated vegetation management (IVM) practices are implemented. In an economically and environmentally sound manner the IVM approach utilizes the following methods to control vegetation:

- Mechanical (mowing, shoulder blading)
- Cultural (reseeding, using weed free straw and mulch)
- Biological (introducing natural predators that control vegetation)
- Herbicide (residual and spot applications)

The elements of the IVM program include:

- Preventing unwanted vegetation problems
- Monitoring for the presence of unwanted vegetation
- Establishing thresholds that trigger treatments
- Establishing a treatment plan
- Applying treatments
- Evaluating the effects of treatments following up with additional treatments if necessary



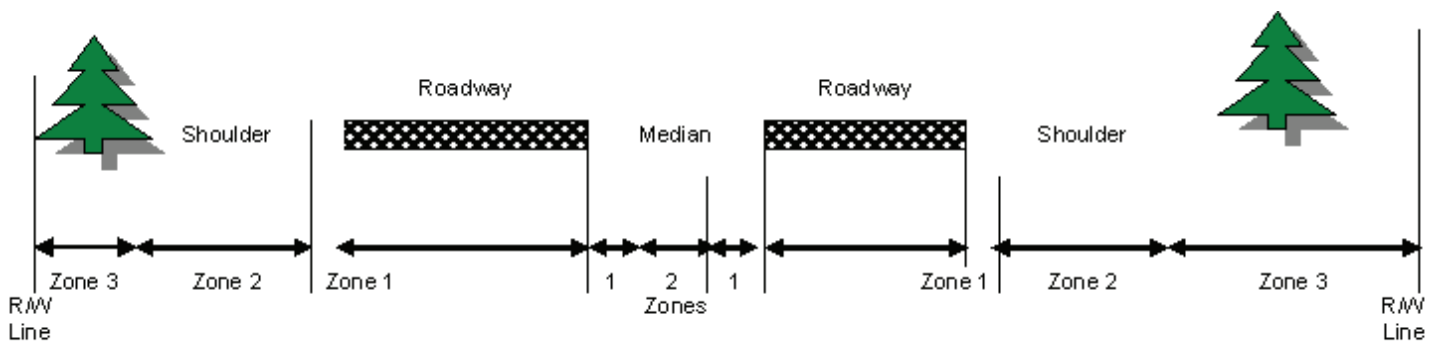
An Operational Notice (MAI 130-02) has been developed that outlines ODOT’s IVM program, and lists roles and responsibilities. See Reference A. To compliment the Statewide IVM Plan, each of the 14 ODOT maintenance districts prepares an annual IVM plan that describes the vegetation management activities that will take place on the ODOT right of way within that district. The annual update of IVM plans allows for a review of the program including changes in laws or policies, reports of successes and failures, updates in ownership changes, and reviews of management practices. A general IVM plan template has been developed to give guidance to maintenance personnel as well as to promote statewide consistency.

3.1 Prevention

Preventing the establishment of unwanted vegetation is the first line of defense in vegetation management and can be both effective and cost efficient. Prevention begins with project development. It is critical to put the right plants in the appropriate location. Features should be located so that pockets are not created that are difficult to maintain. Because this guidance document is aimed primarily at ODOT maintenance staff its focus is on maintenance activities. It is important, however that ODOT maintenance seek to provide input at the project level on proposed plans and how design or features might impact vegetation management. ODOT maintenance should also adopt methods to prevent the establishment of unwanted vegetation that include utilizing weed free seed, mulches, erosion control material and fill, establishing vegetation-free road shoulders, removing unwanted vegetation from stockpile sites and rock sources, cleaning equipment, and protecting existing vegetation. Proper construction design is crucial to insure that appropriate vegetation is planted in the appropriate location.

3.2 Establishing Treatment Levels

To help determine unwanted vegetation treatment levels, the roadside is dissected into management zones. For the operational roadway, ODOT has adopted the three-zone concept, similar to WSDOT. A roadside zone summary is provided in Reference B. Level of service is determined based on road classification in the ODOT publication “Desired Conditions of Maintenance Features on State Highways, September 2002”. Areas outside the operational roadway are managed on a case by case basis.



3.2.1 Zone 1 Drainage Zone

Zone 1 extends from the pavement to a maximum of eight feet on Interstates and six feet on Secondary highways. Zone 1 vegetation maintenance must not extend past the bottom of the ditch. Zone 1 vegetation is maintained to allow for proper surface drainage, to provide visibility and maintenance of roadside safety features, to prevent pavement breakup, to maximize sight distance, to prevent the establishment of noxious weeds. The desired condition for Zone 1 is little or no vegetation, no obstructions to features or sight distance, and no noxious weeds. Zone 1 vegetation maintenance activities include herbicide spraying, shoulder blading, mowing and ditch cleaning.

3.2.2 Zone 2 Surface Drainage Zone

Zone 2 extends from the edge of Zone 1 to four feet beyond the bottom of the ditch. Zone 2 may extend beyond four feet if operational needs determine additional area is needed. Zone 2 vegetation is maintained to provide for an unobstructed vehicle recovery area, to provide for maximum sight distance, to maintain the hydraulic capacity of ditches, to prevent the establishment of noxious weeds, to reduce the effects of erosion and to enhance visual qualities. The desired condition for Zone 2 is low growing grasses and shrubs, no obstructions to features or sight distance, no noxious weeds and no obstructions to drainage. Zone 2 vegetation maintenance activities include mowing, ditch cleaning, brush mowing, brush cutting by hand, and herbicide spray (selective herbicides only).

3.2.3 Zone 3 Maintenance Zone

Zone 3 extends from the edge of Zone 2 to the right of way boundary. Zone 3 vegetation is maintained to blend in to or screen adjacent surroundings. The desired condition for Zone 3 is no obstructions to features and sight distance, no hazard trees and no "A" listed noxious weeds and minimal "B" listed noxious weeds. Zone 3 maintenance activities include selective tree thinning, tree corridor plans, hazard tree removal, noxious weed control, Special Management Areas (SMAs) management, selective herbicide applications, right of way fence repair, and utility installation and repair.

3.2.4 Noxious Weed Management

ODOT is required to control any weeds designated as noxious by the state or the respective counties (ORS 569). The Oregon Department of Agriculture (ODA) has developed a Noxious Weed Classification and Policy that rates noxious weeds as either "A", "B" or "T" listed weeds. See Reference C. ODOT will control all "A" listed noxious weeds found on the right of way. ODOT will manage "B" and "T" listed noxious weeds on a case by case basis. In addition to the ODA Policy, County Weed Boards may establish noxious weed lists. County weed contacts are listed at:

http://www.oregon.gov/ODA/PLANT/WEEDS/county_contacts.shtml

3.2.5 Special Management Areas

ODOT has established the SMA program to protect State and Federal listed threatened and endangered (T&E) plant species identified on ODOT right of way. SMA's are marked with signs that instruct ODOT Maintenance Crews on allowable activities.

ODOT is in the process of creating a Habitat Conservation Program (HCP). The HCP is an agreement between US Fish and Wildlife, ODA and ODOT that outlines how ODOT State and Federal Listed Plant T&E plant species are managed along the right of ways.

3.2.6 Tree Management

Tree management activities are designed to eliminate hazard trees, restore sight distance, minimize or remove shading that may cause icy conditions, and control or prevent slope failure, remove fire danger or fire impacted trees, reduce snowdrift accumulation near roadways and to maintain a clear zone along the roadway. For further guidance on tree management refer to the 'Routine Road Maintenance Water Quality and Habitat Guide, Best Management Practices' (2009). For additional information and best management practices on tree management refer to activity 133 Brush Cutting, in the ODOT Maintenance Guide

3.2.7 Migratory Birds

The Migratory Bird Treaty Act of 1918 was developed to stop the indiscriminant killing and market hunting of migratory birds. Under the MBTA it is unlawful to possess, pursue, hunt, take, capture, kill, or attempt to take, capture or kill any migratory bird, any part, nest, or eggs of any such bird except as permitted in regulation. To provide guidance for the MBTA, ODOT has developed a Highway Division Directive (ENV 01-01) to provide guidance for maintenance personnel. The Highway Directive can be located in the ODOT Routine Road Maintenance, Water Quality and Habitat Guide, Best Management Practices (Rev. 2009), "Blue Book."

3.2.8 USDA Forest Service

State Directed Vegetation Management

State directed vegetation management activities, are funded by State funds and are not subject to NEPA requirements. This is for all activities, including herbicide use, within ODOT's right of way. The Memorandum of Understanding (MOU) defines the right of way as the highways surface, shoulders, structures and such traffic-control devices as are necessary for safe and efficient utilization of the highway. This also includes maintenance on properties leased by ODOT such as maintenance stations, housing compounds, stockpile and quarry sites and rest areas. For these scenarios, ODOT determines the types of herbicides that are applied. The MOU does, however, require that all herbicide applications are done in coordination with local Forest Service staff. A pesticide use permit (PUP) must be submitted at least one week ahead of scheduled applications.

Vegetation Treatments Beyond What is Needed for Maintenance

Vegetation activities beyond what is needed for maintenance (outside the right of way), including invasive plant and native plant management, must be consistent with Forest Service NEPA and Land Management Plan Standards. The status of Invasive Plant NEPA varies by Forest. This influences which herbicides are available. Forests that fall under the post-2005 NEPA generally have 10 herbicides available for use, and Forests that fall under the pre-2005 NEPA have three or four herbicides available.

Herbicide Use Guidelines Within USFS Boundaries

ODOT is responsible for:

- Coordinating with local USFS staff when applying herbicides within the forests. Coordination will help to determine whether NEPA is required, help identify any concerns, and to help with herbicide choices. Some herbicides have the potential to move off-site after application, so close cooperation with local USFS staff is very important.
- Submitting a pesticide use proposal (PUP) to the USFS Region 6 Pesticide Use Coordinator at least one week ahead of scheduled application (See attached form). More advanced notification is recommended. ODOT maintenance should meet with local Forest personnel and update PUPs annually prior to herbicide application season.
- Submitting an annual report outlining pesticide use by Sept 30 of each year. The ODOT Statewide IVM Coordinator will gather information and prepare the annual report.

4.0 Maintenance Activities

ODOT utilizes a variety of methods to manage vegetation including mechanical, cultural, chemical, and biological control. The selection of control method is dependent upon safety (both to the employee and the public), availability of resources (labor, equipment, materials, and budget) the environment (terrain, plant types, location) and regulatory requirements. Control methods may be utilized singularly or in combination. Specific instructions for vegetation management are listed under the Roadside and Vegetation section in the ODOT Maintenance Guide

4.1 Mechanical Control**Description**

Unwanted vegetation is managed using mechanical methods including Shoulder Blading (Activity 111), Mowing (Activity 130), Brush Mowing (Activity 132), and Brush Cutting by Hand (Activity 133).

Activity 111 – Shoulder Blading

Activity 111 involves blading and shaping unpaved shoulders to:

- Restore the proper cross section shape
- Correct drop-offs adjacent to the roadway surfacing
- Correct rutted shoulders
- Remove build-up of debris or unwanted vegetation
- Restore proper drainage on the shoulders

Best Management Practices

- Shoulder blade prior to the application of shoulder residual spray
- Follow BMP's listed in Habitat Guide and Migratory Bird Directive

Activity 130 – Mowing

Activity 130 involves machine mowing roadside vegetation, generally other than large brush or trees to:

Best Management Practices

- Mow to a minimum height of 6 inches
- Adjust mower heights to avoid scalping
- Avoid soil disruption, i.e., mowing slopes when soil is saturated
- Follow up brush cutting with herbicide applications
- Mow noxious weeds prior to seed set to prevent spreading
- To reduce brownout, mow brush that has been treated with herbicides (3-4 weeks)
- Follow BMP's listed in Habitat Guide and Migratory Bird Directive to avoid impacts to nesting birds. Prime nesting period is typically Feb. 15 to Sept. 15.

Activity 132 – Brush Mowing

Activity 132 involves machine mowing of roadside brush and small trees.

Best Management Practices

- Follow-up brush mowing with hand trimming
- Follow BMP's listed in Habitat Guide and Migratory Bird Directive to avoid impacts to nesting birds. Prime nesting period is typically Feb15th to Sept 15th

Activity 133 – Brush Cutting (Hand)

Activity 133 involves hand cutting, pruning and the removal of roadside brush and trees.

Best Management Practices

- Follow BMP's listed in Habitat Guide and Migratory Bird Directive to avoid impacts to nesting birds. Prime nesting period is typically Feb. 15 to Sept 15
- Develop corridor tree management plans that will define trees on an ODOT corridor that need to be removed based on health, location, species etc, develop a time line for removal (e.g., outside prime nesting season, typically Sept. 15 to Feb. 15); a mitigation plan that reflects appropriate conditions for the area; and a disposal plan.

4.2 Cultural Control

Description

Utilizing methods aimed at preventing the successful establishment of unwanted vegetation including:

Best Management Practices

- Always request weed-free seed and erosion control materials
- Clean equipment when working in areas where noxious weeds are present
- For appropriate seed blends contact the local REC or the Statewide IVM Coordinator

4.3 Biological Control

Description

The release of biological control agents (insects, mites, pathogens) that target specific plant species.

Best Management Practices

- Use only ODA approved biological control agents

- Coordinate with the ODA when releasing
- Fill out the ODA control release form
- Release biological control agents in areas that will not be disturbed
- Include release locations in District IVM Plans

4.4 Chemical Control

Description

Herbicides are applied to control unwanted vegetation. Typical herbicide applications include:

- Teams Activity 531 - Selective herbicides are applied to control specific noxious weeds. This is performed with the use of backpack sprayers, handguns and vehicle mounted spray booms.
- Teams Activity 532 – Selective herbicides are applied to control brush and unwanted vegetation other than noxious weeds. This is performed with the use of backpack sprayers, handguns and vehicle mounted spray booms.
- Teams Activity 535 - Residual, non-selective herbicides are applied to the road shoulder through vehicle mounted spray booms to specified widths (8 ft. maximum on Interstates and 6 ft. maximum on Secondary Highways).

Best Management Practices

- Licensing and Certification- Public employees who apply restricted use pesticides, consult in the use of restricted use pesticides, or apply any pesticide with motorized equipment are required by the ODA, to be licensed as public applicators. To become certified as a public pesticide applicator employees are required to pass the Laws and Safety exam and the Right of Way Category exam. The certification period lasts five years. To remain certified, the applicator must complete 40 ODA approved pesticide credit hours. A maximum of 15 recertification credits may be taken annually. In the event that the applicator does not receive enough credits, they will lose their certification and will have to retest.
- Choosing Herbicides
 - Carefully read EPA label instructions before purchase. Pay specific attention to precautionary statements, active ingredients, personal protective equipment, environmental hazards and directions for use. If there are any questions contact the Statewide IVM Coordinator, the herbicide supplier technical representative, or the Department of Agriculture Pesticides Division.
 - Take into consideration application location including terrain, soil types, adjacent vegetation, and adjacent landowners
 - Choose least toxic herbicides to achieve vegetation management goals
 - Rotate herbicides to help prevent plant resistance
 - Dispose of herbicides according to EPA label
 - Purchase herbicides through the DAS Herbicide Convenience Contract. See Reference D
 - Limit the amount of herbicides in storage by purchasing only the amount that will be used in that year.
 - Store herbicides according to standards listed in current EMS Manual

- Applying Herbicides
 - Follow Product's EPA label instructions. Review the labels from the actual containers that herbicide is taken from.
 - Herbicide application equipment must be calibrated at least annually
 - Check weather forecasts before applying herbicides.
 - Herbicides must not be applied when the wind speed exceeds 10 miles per hour. It is strongly recommended that applicators carry handheld wind meters to check wind speeds.
 - Refrain from applying non-selective herbicides such as Roundup beyond the bottom of the ditch
 - If possible, perform brush spraying activities in the fall or winter to minimize the effects of brownout.
 - Follow up brush spraying with mowing
 - Perform shoulder work such as blading and rebuilding prior to applying residual herbicides
 - When herbicide applications are made within three feet of waters of the State the conditions of the NPDES 2300-A permit must be met. The Office of Maintenance and Operations maintains a Statewide Pesticide Discharge Management Plan (PDMP) that outlines ODOT's herbicide use in or near waters of the State. For specific information on the 2300-A permit, see Reference E.
 - When applying herbicides within USFS boundaries the current ODOT/USFS Memorandum of Understanding must be followed.
 - A pesticide use proposal form must be filled out and approved by the USFS prior to herbicide applications within USFS boundaries. See Reference F.

- Spray Widths/Heights
 - Limit shoulder spray to 8 feet on Interstate highways and to 6 feet on secondary highways.
 - Limit shoulder spray to the bottom of the ditch.
 - Refrain from applying non-selective herbicides such as Roundup beyond the bottom of the ditch.

- Vegetation Control/ No-Spray Permit

Landowners can acquire a permit to manage roadside vegetation adjacent to their property. In addition, the landowner can request that ODOT refrain from applying herbicides to the roadside adjacent to their property. The landowner must control vegetation to the standards outlined in the permit. If the landowner fails to adequately control vegetation ODOT may remove the vegetation and the removal could include the use of herbicides.

Public Notification

Herbicide Application Phone System

ODOT Maintenance crews are required to contact their local dispatch with daily herbicide application information (Hwy, Beg & Ending Mile points, Start and Estimated finish time). The information will be placed into the Herbicide Application Phone System and can be accessed by calling **Toll Free at 1(888)996-8080**.

Additional Requests

Individuals may request additional herbicide application information by contacting the corresponding ODOT district office, either verbally, by mail, fax or email, as outlined in the ODOT Public Record Request Policy (ADM 07-04). The following information shall be made available upon request:

1. Tentative district schedules for the entire season. (Annual District IVM Spray Plan)
2. Weekly updates once spraying starts.
 - a. *Tentative herbicide application schedule for the following week.
 - b. Completed herbicide applications from the previous week.
 - c. Information listed by:
 - i. Highway route numbers
 - ii. Beginning and ending mile points, if possible include landmarks (i.e. four miles east of Salem).
 - iii. Type of herbicide application (i.e. Spot spray, Shoulder application).
 - d. Copies of daily spray reports. It should be noted that requests for daily spray reports will trigger the public records request policy.

*Tentative herbicide application schedules should include the following disclaimer: "The herbicide application schedule provided is tentative and is subject to change at any time. For daily information call 1(888) 996-8080 (ODOT Toll Free Herbicide Application Phone System)."

3. The requests are promptly forwarded to district IVM coordinators or appointed district personnel for response.
4. It is important that requests are completed promptly and accurately with a response time of no more than two business days of receipt.
5. Response information is distributed by district personnel to requestors either by phone, email or fax depending on the requestor's technology level.

4.5 Volunteer Activities

The Adopt-A-Highway program was expanded to include noxious weed pulling as volunteer activities. Under the new program, volunteer groups select a section of highway, a minimum of two miles, and, with the help of local county weed boards or the Oregon Department of Agriculture, develop noxious weed removal plans. Once the plan is approved, the permit is issued by the local maintenance district, and signs are installed. It should be noted that volunteers in this program may not use herbicides or powered equipment such as weed eaters or chainsaws. More information is at the following link: <http://www.oregon.gov/ODOT/Pages/involvement.aspx>

4.6 District IVM Plans

District IVM Plans are developed annually using the ODOT IVM plan template (Jan. 2010). A guidance document for the development of District IVM plans is in Reference G.

5.0 Reporting Requirements

5.1 Daily Spray Reports

- Complete Daily Spray Reports (Form 734-3494)
- Completed Daily Spray Reports are to be entered into the ODOT Daily Spray Report Database. For more information on the ODOT Daily Spray Report Database, contact the ODOT Statewide IVM Coordinator.

5.2 NPDES 2300-A Reporting Form

The NPDES 2300-A reporting form must be filled out when herbicide applications take place within three feet of waters of the state. For more information on the NPDES 2300-A reporting form, contact the ODOT Statewide IVM Coordinator.

5.3 USFS Pesticide Use Proposal

A Pesticide Use Proposal form must be filled out and approved by the USFS prior to herbicide applications within USFS boundaries. For more information on the USFS Pesticide Use Proposal form, contact the ODOT Statewide IVM Coordinator.

References

- A. IVM Operational Notice #MAI 130-02
- B. ODOT Roadside Zone Classification
- C. Oregon Department of Agriculture 'Noxious Weed Policy and Classification System (2017)
- D. ODOT Herbicide Price Agreement with Wilbur Ellis
- E. NPDES 2300-A Applicator Guidance Document (March 2012)
- F. USFS Pesticide Use Proposal Form
- G. ODOT District IVM Plan Development Guide (Jan 2017)
- H. Routine Road Maintenance, Water Quality and Habitat Guide, Best Management Practices (Rev. 2014) (Blue Book)