Oregon Department of Transportation

Routine Road Maintenance | Water Quality and Habitat Guide

Best Management Practices

Revised 2020

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Oregon
Kate Brown, Governor

Department of Transportation
Maintenance & Operations Branch
455 Airport Rd SE, Bldg K
Salem, OR 97301
Phone: (503) 986-7915
Fax: (503) 986-3055

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Marc Liverman
Oregon State Habitat Office
National Marine Fisheries Service
1201 NE Lloyd Blvd.
Portland, OR 97232

Subject: Oregon Department of Transportation Section 4(d) Program Update

The Oregon Department of Transportation (ODOT) is pleased to submit its updated Routine Road Maintenance Water Quality and Habitat Guide (aka Blue Book) to National Marine Fisheries Service (NMFS), which has been updated based on the latest five-year program review that occurred in 2019 and into 2020. This is the second time that ODOT has reviewed the Blue Book and reconfirmed that the best management practices continue to be effective. ODOT did modify BMPs around beaver dam removal to ensure steps are taken to reduce the likelihood that listed fish would get stranded. The BMP changes were in response to concerns raised by both NMFS and the Oregon Department of Fish and Wildlife (ODFW).

The intent of reviewing the Blue Book every five years is to evaluate the program and make any necessary changes based on biological or regulatory need, technological advances, or modifications in equipment or methods. This review was conducted with the ODOT NMFS Liaison, ODFW, and the Oregon Department of Environmental Quality.

This latest (fifth) iteration resulted in few changes regarding water quality protection as noted here:

- Updated erosion and sediment control references to the 2016 Erosion and Sediment Control Guide for Road Maintenance.
- Added BMPs to the Beaver Dam Removal activity to reduce the risk of stranding listed fish.
- Added to the annual reporting commitment a description of beaver dam alteration activities.

In addition to these water quality/fish habitat protection BMPs, ODOT also added references to new permits that have been issued since the last iteration. These include the Routine Road Maintenance Habitat Conservation Plan and associated Section 10 Permit from the US Fish and Wildlife Service for Listed Plants and Butterflies and the programmatic agreement with ODFW for culvert repairs. A summary of other key changes is included on page 18 of the Blue Book.

This update effort and final 2020 draft serves as a commitment from ODOT to NMFS that ODOT will continue to implement the measures and abide by the commitments described in Blue Book for training, documentation, and reporting.

Thank you for your continued collaboration on this important effort. If you have any questions or need additional information, please contact Patti Caswell, ODOT Maintenance and Operations Branch, at 503-986-3008.

Sincerely,

Lucinda M Moore

Luci Moore
State Maintenance and Operations Engineer

Enc.

Cc. Kim Kratz

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Contents

Introduction

Since June 9, 1999 the Oregon Department of Transportation (ODOT) has implemented the Routine Road Maintenance Program (Program). The Program is depicted in the ODOT Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices (Blue Book). The Blue Book is considered the cornerstone of the ODOT Maintenance Environmental Program.

This fifth iteration of the Blue Book continues to ensure that ODOT's program is one subset of activities (described in Limit 10(i) under section 4(d) of the Endangered Species Act (ESA) as) exempt from ESA take provisions when its best management practices (BMPs) are implemented. The final rule (65 FR 42422) recognizes the program as adequate to protect and conserve salmon and steelhead that are listed as threatened within Oregon's waters. Therefore ODOT Maintenance employees, maintenance contractors, and municipal partners implementing the BMPs are exempt from take under the ESA for threatened salmon and steelhead species unless federal funding or permitting is utilized.

As required within the final rule, ODOT has spent the last year working with the National Marine Fisheries Service, and others, to review the road maintenance program and incorporate improvements and refinements to the Blue Book learned over the past five years.

In addition to BMPs intended to minimize take under the ESA, this document incorporates commitments to the environmental and cultural resource management agencies listed below. These commitments are included because this document serves as the program's overarching field manual. Best management practices that are included but not intended to minimize take are based upon the following partnerships and permits:

- **National Marine Fisheries Service (NMFS)** - As mandated by Congress, the Magnuson Stevens Act (MSA) requires that the Department of Commerce identify essential fish habitat for managed species. The MSA also requires measures to conserve and enhance the habitat needed by fish to carry out their life cycles. The MSA requires cooperation among NOAA Fisheries Service, fishery management councils, fishing participants, federal and state agencies, and other achieving essential fish habitat (EFH) protection, conservation and enhancement. Congress defined EFH as "those waters and substrate necessary includes several marine species and two anadromous species – Chinook and Coho." This fifth iteration of the Blue Book has incorporated a fish icon in the left margin to denote BMP that are related to fish and water quality.

- **Oregon Department of Fish and Wildlife (ODFW)** – The Blue Book demonstrates partnership with ODOT maintenance and ODFW. ODFW oversees the State Endangered Species Act and species that have been identified as state threatened or endangered. ODFW also oversees fish, wildlife and non-game species and their habitat. Oregon fish passage statutes and administrative rules are administered by ODFW. Biologists and staff with ODFW serve as technical advisors to Oregon Department of Environmental Quality (DEQ), the Oregon Department of State Lands (DSL), and work with NMFS regarding impacts of activities to water quality and fish and wildlife habitat. ODFW has been actively involved in the development and evaluation of the Blue Book.
- **Oregon Department of Environmental Quality (DEQ)** – The Blue Book includes BMPs to minimize impacts to water quality and meet requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit issued to ODOT by DEQ under requirements of the Clean Water Act.
- **US Fish and Wildlife Service (USFWS)** – ODOT and USFWS, in partnership with the Oregon Department of Agriculture, developed (in 2017) a 25-year take permit for routine road maintenance and associated Habitat Conservation Plan (HCP) that provides additional requirements and BMPs for butterflies and plants listed under the state and federal ESA. The permit recognizes the ODOT Special Management Area (SMA) Program as adequate protection measures for listed plants and butterflies for routine maintenance activities within ODOT right-of-way. Practices intended to meet the HCP are included as BMPs in the Blue Book. Blue Book BMPs also reflect ODOT's commitment to minimize impacts to migratory birds, and reflect Migratory Bird Treaty Act permit requirements. Last, the Blue Book reflects the partnership with USFWS in regard to fish habitat protection. USFWS acknowledges the BMPs in the Blue Book as minimizing impacts to habitat for aquatic and terrestrial species.
- **Oregon Department of Agriculture (ODA)** – The Blue Book includes BMPs for activities that have potential to impact state and federal Endangered Species Act (ESA) listed plants and butterflies as described in the ODOT Routine Maintenance Habitat Conservation Plan (HCP). The ODA is co-signatory to the HCP with USFWS.
- **US Department of Agriculture Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS)** – Has statutory authority under the Animal Damage Control Act to cooperate with states for the resolution of wildlife problems. Under an Inter-Governmental Agreement, APHIS-WS assists ODOT with wildlife conflicts that may occur during implementation of routine maintenance activities.

- **US Forest Service (USFS)** – The Blue Book includes the Memorandum of Understanding (MOU) between the USFS and ODOT (see Appendix A). The USFS MOU identifies the coordination between ODOT and USFS, and was updated in June, 2018. The MOU acknowledges partnerships ODOT Maintenance has with other agencies for compliance with state and federal environmental laws that impact *routine maintenance* activities. In addition, the MOU clarifies that Maintenance activities on USFS lands are not considered federal actions. The MOU is located in Appendix A as a reference document.
- **State Historic Preservation Office (SHPO)** – The Blue Book includes unique BMPs for activities that have potential to impact known cultural resources. BMPs previously located in the Memorandum on Archeological/Cultural Requirements and ODOT Maintenance Activities have been incorporated in the body of the Blue Book. Decisions are made in consideration of the need for cultural resource protection as outlined under Oregon Revised Statute 358.920.

How to use this document

The Blue Book serves two simultaneous purposes: 1) to meet permit conditions for ODOT's 4(d) exemption, ODOT's HCP permit, ODOT's Migratory Bird Treaty Act permit, and ODOT's NPDES MS4permit, and 2) to provide Maintenance Districts with direction on how to minimize regulatory compliance risk (e.g., to wetlands, cultural, and other protected resources) during their activities, as well as guide Districts to seek additional assistance from trained environmental staff when appropriate (i.e. the region environmental coordinator (REC)).

All activities described in the ODOT Maintenance Guide were considered for potential impacts to environmental resources when writing the Blue Book. The activities in the ODOT Maintenance Guide fall into three categories:

1) Activities that have the potential to impact environmental resources and are listed specifically in the Blue Book with associated BMPs. These activities are exempt from ESA take provisions when the Blue Book BMPs are implemented (as described herein). The Blue Book BMPs are also sufficient to minimize environmental compliance risk related to all environmental resources.
2) Activities that do not have the potential to impact environmental resources and are therefore not specifically listed in the Blue Book. These activities do not require any environmental review and may proceed as scheduled without any BMPs. Examples include litter pickup (Activity 134), graffiti removal (Activity 168), and winter road patrol (Activity 174).

3) Minor betterments. These are state-funded maintenance activities to improve the highway system. Some betterments are conducted using existing activities identified in the Blue Book (e.g. paving). These activities are exempt from ESA take provisions when the Blue Book BMPs are implemented. Some betterment activities are not described in the Blue Book, such as installing new snow fences and installing permanent variable message signs in new locations, and therefore need to be evaluated to determine ESA impacts (i.e. these activities are not "covered" by the Blue Book) (See page 8 for additional information).

If an activity is not described in the Blue Book, it does not necessarily mean that Maintenance cannot proceed with the activity; it means that the need for ESA coverage and BMPs still needs to be determined through coordination with the REC; environmental clearances and activity-specific BMPs may or may not be necessary. Questions related to coverage under the Blue Book should be directed to the Maintenance & Operations Branch.

If for any reason the minimization and avoidance measures and BMPs are determined to be inappropriate for a given situation, or there are problems implementing the BMPs, the employee will contact the transportation maintenance manager (TMM) for advice and direction.

Information regarding BMP modification and implementation issues as well as a description of methods used to ensure the goal for the given activity was still met are promptly forwarded to the Maintenance and Operations Branch for compilation and annual reporting to NMFS and DEQ.

Maintenance employees are expected to be familiar with the Blue Book and its contents. Maintenance will review and implement the minimization and avoidance measures as well as the BMPs when planning work.

Region environmental coordinators and other environmental staff assisting Maintenance are also expected to be familiar with the Blue Book, and to advise the Districts as needed on how to best complete their work in accordance with the Blue Book BMPs.

Maintenance actions not covered under the Blue Book

Activities that have a federal nexus

Maintenance activities that require a federal permit are not included in the 4(d) Limit 10 coverage. Activities in tidal waters typically need a US Army Corps of Engineers (Corps) permit (e.g., Section 10, 103 and 404). Corps permits require separate water quality permits, including a 401 certification, and compliance with Section 106 of the National Historic Preservation Act (NHPA). Forest Service or BLM Special Use Permits also constitute a federal nexus and therefore require separate permits under the Endangered Species Act Section 7, and compliance with Section 106 of the NHPA.

ODOT has worked with DEQ, Corps, USFWS, and NMFS on programmatic approaches to permits, including identifying BMPs that meet the requirements of the permit. Where appropriate, these BMPs are included in the individual Maintenance Activity. Including the BMPs in the Blue Book does not eliminate the need for the permit, rather, it centralizes BMPs.

For example: Activity 180, Emergency Maintenance, may require a Corps permit and may be eligible for Federal Highway Administration Emergency Repair funding, either of which would 'kick' the activity out of the 4(d) coverage provided by the Blue Book. In order to provide guidance to Maintenance as emergency situations are repaired, BMPs that meet the programmatic approach for emergency situations required by the Corps permit, and coordination with NMFS and USFWS, are included in the Activity 180 Emergency Maintenance section. These BMPs reference the federal permit requirements and are at the end of each emergency activity discussion.

Other state-issued permits such as those issued to ODOT by the DSL or the Department of Fish and Wildlife do not require separate ESA take permits and are covered by the Blue Book as long as BMPs are implemented. DSL permits may include additional water quality conditions.

Minor betterments

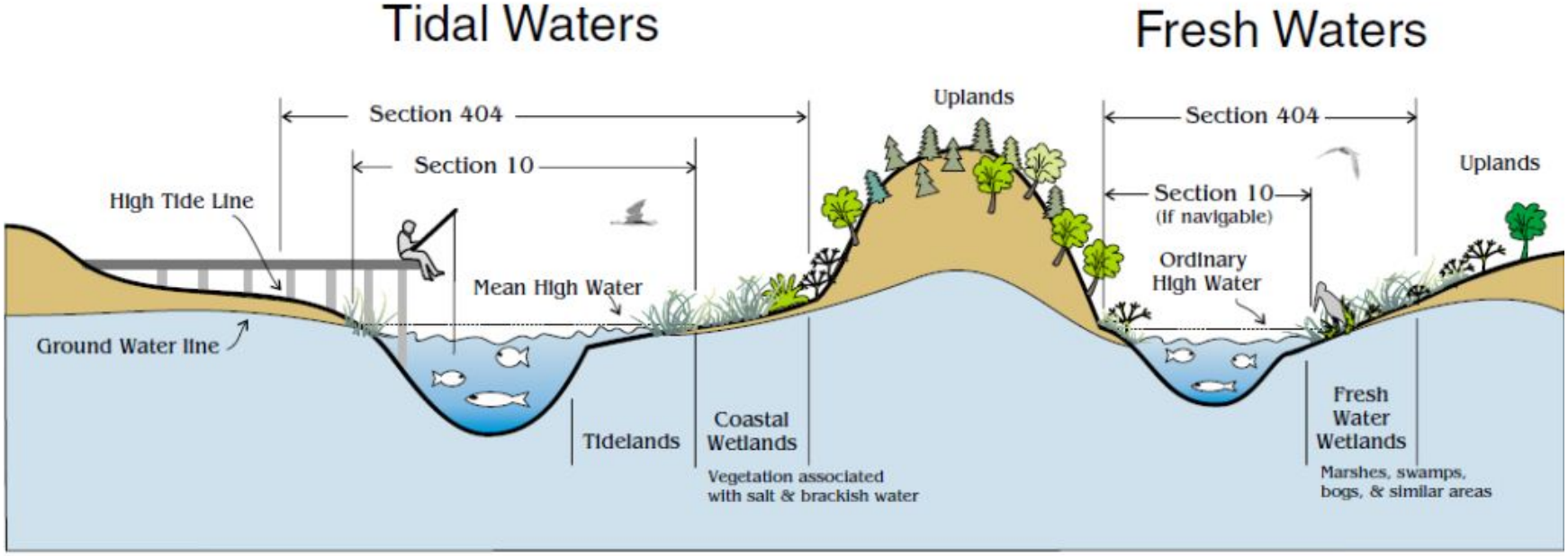
ODOT Maintenance often carries out state-funded activities to improve the highway system (i.e. minor betterments). Some highway improvement related activities are described in the blue book (e.g., stockpiling, fence installation, etc.) and are therefore exempt from ESA take provisions when the Blue Book BMPs are followed because they were permitted by NMFS under Section 4(d) during the development of the Blue Book.

Some betterments are not described in the Blue Book, such as installing new snow fences and installing permanent VMS signs in new locations. These actions are not exempt from ESA take provisions and otherwise don't have specific BMPs identified to protect other resources. Therefore, for activities not otherwise described in the Blue Book, coordinate with the REC to:

1) Determine the need for ESA take coverage and either modify project or develop and implement BMPs to avoid take if necessary.
2) Avoid SMA locations if possible, or decommission and mitigate as required.
3) Determine the need for DSL Fill/Removal and Corps 404 permits (and associated federal clearances).
4) Evaluate potential risk of impacting cultural resources. Work with the archaeologist to check the SHPO database for cultural resources[1].
5) Determine the need for additional activity-specific BMPs such as erosion and sediment control.

[1] The SHPO database is more current than the buffered site list. Highway betterments that are not described by another, more specific, Maintenance Activity are not considered routine road maintenance; therefore, the SHPO database must be checked in order to comply with ORS 358.920, which prohibits any person from impacting a known cultural site without a permit.

CORPS OF ENGINEERS REGULATORY JURISDICTION



	Section 103 Ocean Discharge of Dredged Material	**Section 404** Disposal of Dredged or Fill Material (all waters of the U.S.)	**Section 10** All Structures and Work (navigable waters)
Typical examples of regulated activities	Ocean discharges of dredged material	All filling activities, utility lines, outfall structures, road crossings, beach nourishment, riprap, jetties, some excavation activities, etc.	Dreding, marinas, piers, wharves, floats, intake / outtake pipes, pilings, bulkheads, ramps, fills, overhead transmission lines, etc.

Professional judgment

In the Blue Book, words and phrases such as 'where feasible', 'where appropriate', and 'where practicable' are used in conjunction with some minimization and avoidance measures, BMPs, and techniques. These phrases, which allow some exercise of professional judgment by maintenance managers, are not to be used for convenience or ease of operation. Rather, these words are included to depict the unique nature of maintenance activities. Maintenance activities are often reactive to events and conditions outside the control of ODOT. Therefore, maintenance managers provided with technical expertise by ODOT, NMFS, and other agencies staff must retain a certain level of flexibility to implement BMPs as best possible under varying constraints: employee safety; extreme weather events; traffic accidents; physical and geographic restrictions; availability of equipment; immediate staff and budget resources; multiple state, federal and local laws; and federal highway design guidelines. Compliance with the Blue Book means that ODOT Maintenance will use the best available environmental technical guidance to implement the BMPs in full or to the best level possible under the circumstances.

As an example, the Blue Book states: "Perform ditch work in optimum weather (when the ditch is dry but there is still sufficient soil moisture to prevent dust and the movement of small particulates) to minimize environmental impacts where feasible…" ODOT will strive to do so. However, where safety of the road requires ditch maintenance regardless of the weather and time of year, ODOT will proceed with the maintenance activity, implementing other applicable minimization and avoidance measures and BMPs, including applicable erosion control, as required by the Blue Book.

Defining professional judgment is difficult. It is developed over time through implementation of the Blue Book, the gathering of knowledge from others in ODOT and coordinating with the regulating community. ODOT Maintenance will work with ODOT technical staff, NMFS, and its other partners to share knowledge. NMFS and other agencies will convey their expectations of the program and commitment to those that implement it.

Technical assistance, communication and coordination

The BMPs in the Blue Book are intended to be implemented by maintenance managers or their crews. In cases where additional professional expertise is required, the BMPs direct Maintenance to contact the REC.

The RECs have a critical job to provide Maintenance with technical support and guidance in implementing the BMPs in the Blue Book in a manner that allows flexibility and creativity, and keeps costs low. The REC is responsible for coordinating involvement and responses, as appropriate to the maintenance activity and location, with ODOT technical staff (biologists, archaeologists, etc.) and state and federal resource and regulatory partners. The REC helps

Maintenance determine whether projects need state or federal permits, clearances, or approvals including compliance with those documents used in conjunction with the Blue Book such as the Oregon Fish Passage Law, NMFS fish passage design criteria, and other NMFS programmatic design criteria. The REC can also help maintenance avoid triggering the need for a permit by asking questions to determine if the activity can be modified or done in a manner or location that avoids impacts. The REC is responsible for ensuring appropriate permits, if needed, and other additional required paperwork is in hand prior to the onset of the maintenance activity. Maintenance managers and RECs are encouraged to develop open lines of communication. The Districts are ultimately responsible for implementation of the Blue Book BMPs. District managers must take into account the broader context of managing highway operations when implementing BMPs.

Coordination and communication is critical to the success of the partnerships and the implementation of the Blue Book. All efforts are made to insure appropriate and timely communication and coordination occur.

The district manager and the district management team are responsible for ensuring that appropriate communication and coordination occur with the REC.

In addition to the REC, reference is made throughout the Blue Book to ODFW, NMFS and USFWS. ODOT has partnered over the years with ODFW, NMFS, and USFWS to provide technical assistance to ODOT on maintenance activities in the Blue Book. The role of these agencies is to provide input to maintenance, as appropriate to the activity and location, to minimize the impacts to natural resources. Copies of plans referenced in the Blue Book are provided to the agencies upon request. ODOT will continue to communicate and coordinate with ODFW as outlined in the Blue Book. As necessary, ODOT will rely upon ODOT technical specialists, NMFS, and USFWS for input regarding BMP implementation.

Tools for planning work

Considerable effort has and continues to be made to provide Maintenance personnel information on the natural and cultural resources within each district. Maintenance and Operations Branch has partnered with internal and external groups to provide tools that districts can use when planning work. Maintenance personnel are expected to be familiar with the tools listed below, and to use them as necessary while planning work and determining appropriate BMPs for each activity. This review will help determine whether sensitive resources are present in the activity area.

Resource and Restricted Activity Zone Maps

To ensure preservation and conservation of natural resources ODOT created and continues to update the Resource and the Restricted Activity Zone Map (REZ/RAZ). These maps include known natural resource information. Examples of mapped resources include, but are not limited to, ESA listed salmonid distribution, ESA listed terrestrial species, wetlands, etc. The mapping data originates from such sources as StreamNet, personal interviews with ODOT and

ODFW staff, Oregon Natural Heritage Resource Data Bank, and local and national wetland inventories.

Archaeological Buffered Site List

Archaeological sites are regulated under Section 106 of the NHPA, as well as ORS 358.920. Oregon Revised Statute 358.920 applies to all persons in Oregon and prohibits impacts to known archaeology sites on all non-federal public and private land in the state. The SHPO maintains site location information in confidentiality in order to protect sites from vandals. However, the SHPO recognizes that some ODOT employees – including maintenance managers – need access to site location information in order to effectively avoid impacts to known sites.

In an effort to assist ODOT maintenance crews with routine maintenance activities statewide, the ODOT archaeology staff and the SHPO have agreed to release buffered archaeological site information to the district managers, assistant district managers, transportation maintenance managers, and RECs. This information, updated every two years, is known as the archaeological buffered site list (BSL). The list indicates known areas of concern for archaeological resources that should be avoided during maintenance activities if possible. If avoidance is not possible coordination with the REC is needed. The archaeological buffered site list (BSL) should be checked for activities as noted in the BMPs. When a BMP references the BSL, maintenance personnel are expected to work with managers to check the BSL to identify if there are any known sites within the planned work area, and contact the REC as appropriate. Any maintenance activity that involves ground disturbance outside the road prism has the potential to impact archaeological sites. ODOT minimizes the risk of impacting known sites by checking the BSL and contacting the REC when known sites are present and the area cannot be avoided.

For certain actions the BSL does not adequately minimize ODOT risk and rather than checking the BSL a call is made to the REC who then coordinates with the ODOT archaeologist, who then checks the actual SHPO database. For example, tree removal actions that cause ground disturbance. In some instances, a site visit may be requested prior to giving the go-ahead.

The BSL contains sensitive information that is exempt from the Freedom of Information Act and protected by state laws. All care must be taken to keep archaeological site locations confidential. Staff that have been provided the BSL have been trained on the sensitive nature of the information and have acknowledged the protection requirements via a signed Confidentiality Agreement.

Bridge Log

The Bridge Log is an inventory of structures on Oregon's primary and secondary highway system. Its purpose is to clearly and accurately list all structures for which the ODOT is responsible so that the agency may efficiently carry out bridge inspections, issue special hauling permits, and combat natural and man-made disasters. Other maintenance responsibilities are noted where applicable. The Bridge Log was first compiled into manual form in 1924 and since

then has been continually updated. The Bridge Program Unit of the ODOT Bridge Engineering Section is currently responsible for maintaining the Bridge Log.

The Bridge Log lists basic data for each structure, such as location, structure number, structure type, span lengths, design loading, etc. As part of the 2020 Blue Book update, the Bridge Program Unit added a field for the historic category of structures. Historic structures are listed as Category 1[2] or Category 2[3]. The Blue Book BMPs for Bridge Repair (Activity 162) reference the Bridge Log where applicable.

The current version of the Bridge Log is available at:

https://www.oregon.gov/ODOT/Bridge/Documents/brlog.pdf

Training

Understanding and correctly implementing the BMPs for maintenance activities is the responsibility of every maintenance employee. ODOT has an extensive outreach/training program for maintenance personnel.

Examples of ongoing training include:

- Training is made available annually and as needed on the Blue Book, BMPs, and other environmental issues.
- Cultural resources training.
- Incident Responder classes including "Plug and Patch" training on maintenance responsibilities for spills.
- Basic Hazardous Materials Awareness.
- Erosion and Sediment Control training.
- Participation in professional symposiums and conferences.
- Continuing Education Classes.
- Technology Transfer (T2) programs including Roads Scholars that has environmental sessions including vegetation management, erosion control, etc.
- New product trials.
- Winter maintenance training.

[2] Category 1 Bridges are Oregon's major, well known historic bridges, Oregon's extremely rare or early structures, or some combination, and are significant at a state, sometimes, national level. They are often listed in the National Register of Historic Places, though all are eligible for the National Register.

[3] Category 2 Bridges are eligible, or could even be listed in the National Register of Historic Places, but are a tier below the Category 1 bridges due to minor alterations, a lesser example of a Category 1 bridge are an early example of a common type or have an association with a grouping, i.e.: the Pacific Highway.

- Team meetings.
- Resource and Restricted Activity Zone map coordination meetings.
- Field visits.
- Core training- annual training on specific subject matters as identified by District and Region.
- Track Hoe/Back Hoe classes that discuss issues associated with using equipment for culvert and stream bank activities.
- Poly Tank Inspection Training.
- Spill Prevention Control and Countermeasure Plan training.
- Environmental Management System training on managing materials typically found at maintenance yards.
- Training on specific topics as requested by districts.

Documentation and reporting

The REC helps support maintenance by documenting BMP decisions. ODOT submits an annual report to NMFS as part of the 4(d) exemption and to the DEQ as part of its NPDES MS4 permit. Information in the annual report is limited to the 4(d) take exemption and the NPDES MS4 permit. The annual report will continue to be compiled and submitted by the ODOT Maintenance and Operations Branch staff. The following elements are included in the report:

- Summary of routine work that has been accomplished throughout the year including the activity classification and the representative BMPs as reported by the Districts.
- Summary of investigations of complaints received from or by ODOT staff, other agencies, or members of the public on impacts to the environment from routine road maintenance activities. The documentation will include the basis of the complaint, results of the investigation, the resolution of the issue, and any recommendations.
- Summary of Notice of Noncompliance (NON) received for any maintenance activity. The summary will include the basis of the NON, results of any investigation and resolution of the issue, and any recommendations to Maintenance as a result of the NON.
- Challenges, controversies, and successes affecting the implementation of the BMPs.
- Results of research and any recommendations for modifications to BMPs.
- Summary of Maintenance Environmental Program accomplishments that address maintenance impacts to natural resources.
- Summary of culvert/fish passage improvement projects.
- Beaver dam removal actions and alterations.

- Documentation of any fish capture, rescue, and/or salvage that has occurred under this program, including location, date, fish biologist doing the salvage/capture work, fish species handled, number of fish handled, number of fish injured or incidentally taken.
- Summary of corridor tree plans developed.
- A summary of concerns with regard to application of the Blue Book raised by others.
- A summary of the annual multi-agency meeting to discuss the effectiveness of the Blue Book, hurdles, lessons learned, and agreed upon adaptive management.
- A summary of projects that could not use the BMPs and actions taken so that future revisions of the Blue Book will remain adaptive.
- Illicit discharge findings and resolutions.
- Updates on any newly adopted highway directive that provides guidance to maintenance.

Monitoring

Every maintenance employee is responsible for knowing, implementing, and monitoring the BMPs outlined in the Blue Book. During annual performance reviews, each maintenance employee is evaluated on how the employee adheres to standards of providing services in ways that minimize risk to the environment.

Many districts have work planning sessions that identify personal protective equipment, traffic control and required BMPs for that planned activity. These sessions may be 'tail gate' discussions, or formal discussions.

The ODOT Research Unit issues a call for new and innovative transportation research projects every year. Every year numerous research submittals are reviewed and a number of projects are selected by ODOT for funding. Projects related to ODOT Geo-Technical, Hydrological, and Environmental concerns are submitted every year. As a result, ODOT is constantly developing new research projects either directly or indirectly tied to transportation impacts and the protection of stormwater, water resources, or endangered species. Examples of recently completed, current, and pending ODOT research projects include:

- Watershed analysis of highway runoff using SELDM (Stochastic Empirical Loading and Dilution Model) (2016 – 2019).
- Development of a Quarry Noise Model (QNM) for noise sensitive receivers (2015 – 2019).
- Coastal Bluff erosion monitoring and modeling (2016 – 2024).
- Assessment of the impact of winter salt on streams and groundwater (2017 – 2021).
- Calibration and piloting of the Stormwater Technology Testing Center (STTC) facility for maintainability evaluation of stormwater treatment facilities (2016 – 2020).

ODOT partners with Federal Highway Administration, other transportation agencies, and other interested parties in these research projects. The results of these research projects may provide information on ways to modify and improve BMPs for routine maintenance.

ODOT has monitoring activities built into specific maintenance practices and activities that require permits from the Corps and/or the DSL.

ODOT documents complaints received by other agencies, or members of the public on impacts to the environment by maintenance activities. Complaints are forwarded to the appropriate manager and the Maintenance and Operations Branch for resolution. The documentation will include the basis of the complaint, results of an investigation, resolution and any recommendations.

Maintenance environmental program

The Blue Book is the cornerstone of the Maintenance Environmental Program. The intent of the program is to provide simple, easy to understand direction on meeting the over 68 environmental laws that have the potential to affect the Maintenance and Operations business line. The Maintenance and Operations business line is charged with maintaining the existing transportation system, and to ensure the system is operating as efficiently as possible. Meeting the requirements of these laws within the constitutional use of gas tax dollars (or Highway Trust Funds) is often challenging. As the activities required to maintain the transportation system do not change, the manner in which the activities are implemented may be modified to meet the intent of the laws. Over the years, ODOT maintenance has been in the forefront in minimizing impacts to natural and cultural resources.

The philosophy of the Maintenance Environmental Program is simple:

- Identify the laws and how the laws affect the business line.
- Reach agreement with the environmental regulatory agencies and maintenance staff on how to implement the law/regulation through BMPs.
- Provide direction in simple, easy to understand language.

In addition to the Blue Book, elements of the ODOT Maintenance Environmental Program that are critical to maintenance include:

- The RES/RAZ maps.
- The ODOT Bridge Log
- Archaeological BSL that is updated every two years by the University of Oregon Museum of Natural and Cultural History. The BSL is provided to RECs and available to managers upon request).
- ODOT Statewide Habitat Conservation Plan for Routine Road Maintenance developed in coordination with USFWS and ODA and associated Section 10 Incidental Take Permit from the USFWS.

- Spill Prevention Control and Countermeasure plans for yards that meet federal requirements. The program includes site-specific structural improvements for secondary containment.
- ODOT Environmental Management System (EMS) for the storage, handling, and disposal of materials typically found at maintenance yards. This program, implemented at all maintenance yards, provides BMPs and documentation required to meet state and federal waste management laws, as well as BMPs on managing stormwater and spills.

Process for review

Every five years, ODOT evaluates the need to rewrite or update the Blue Book. The need to revise the Blue Book is determined in collaboration with NMFS, ODFW, and USFWS, and ODOT technical experts by considering the amount of substantive changes needed, new technologies available, lessons learned over the previous five years, available resources and value added to maintenance. Modifications to the Blue Book, in concurrence with NMFS and maintenance managers, may occur annually, and be documented to NMFS in the annual report.

Since the original publication of this document, ODOT maintenance has significantly increased its environmental awareness. This awareness and knowledge has been reflected and incorporated into this most recent version of the Blue Book.

Key 2020 updates

- Clarified how to use the Blue Book (see page 6).
- Added a pre-construction meeting prior to temporary water management.
- Revised beaver dam removal BMPs to address concerns from NMFS and ODFW. Removed beaver relocation as a BMP because it is not a beaver dam removal BMP. Added requirements for coordination with NMFS and ODFW.
- Revised BMPs to clarify archaeological resource concerns for various activities (e.g. Bridge Repair and Vegetation Management).
- Added traffic signal and illumination maintenance activities – including conduit installation – due to concerns related to archaeological impacts when installing new conduits or poles related to these features.
- Added cable barrier to the activity list with the guardrail repair BMPs.
- Added illegal campsite cleanup activity and associated BMPs to address concerns related to archaeological impacts and erosion control.
- Revised BMPs to incorporate those listed in the Migratory Bird Treaty Act Highway Directive and removed the Directive from the Appendix.

- Revised bridge BMPs to acknowledge historic bridges and make sure that historical integrity is considered relative to bridge maintenance actions.
- Deleted tree work checklist due to a lack of usage and redundancy with foresters' work products.
- Added historic bridge information to ODOT Bridge Log and included a link to the Bridge Log in the Blue Book.
- Incorporated cultural resource protection BMPs from the MLT Operational Notice #MAI 180-01: Archaeology Guidance for Hazardous Material Spills and Emergency Situations. Incorporated emergency BMPs into the 180's and added Activity 307 (spill cleanup).

Acknowledgments

Since it was first developed and implemented in 1999, the Blue Book has resulted in an increased level of environmental and cultural resource awareness. ODOT Maintenance acknowledges the valuable input and contribution from NMFS, ODFW, and USFWS to this iteration of the Blue Book. ODOT appreciates the keen insight, knowledge, and experience of maintenance employees and technical experts to ensure BMPs remain technically sound, safe, and practicable. Overall program success could not be accomplished without the support of every maintenance employee.

Maintenance activities and practices

1. Stormwater Management

Description: Stormwater management is not a unique activity, but an aspect of every activity performed by ODOT. Stormwater quantity and quality is an issue that must be considered and addressed during every activity performed by maintenance crews. Stormwater BMPs are included under specific maintenance activities as appropriate. Stormwater management BMPs that apply to all maintenance activities are included in this section.

Goal: To reduce or eliminate pollutants or pollution, to the maximum extent practicable, from entering the waters of the state. ODOT manages stormwater associated with the transportation system, maintenance facilities, and rest areas through erosion control, trapping winter sanding materials, developing and maintaining permanent storm water treatment facilities, managing and maintaining *ditches*, etc. The ODOT drainage system is essential in maintaining a safe and effective transportation system. Routine maintenance actions (including pavement installed, repaired, or replaced by ODOT maintenance staff) do not contribute significant amounts of additional stormwater.

Routine maintenance actions that repair or replace pavement (such as inlay projects, pothole patching, shoulder paving, etc.) and do not alter the course, quantity, or flow of stormwater are covered by the Blue Book.

Minimization Measures, Avoidance Measures, and BMPs:

1) If planning maintenance that alters impervious area or changes existing drainage coordinate with REC to determine if stormwater management is 'triggered' and required. Report to the ODOT Maintenance and Operations Branch if drainage changes will be mitigated in coordination with the REC. The Maintenance and Operations Branch will work with District staff to document drainage changes and implemented mitigation measures.

2) Promote sheet flow for stormwater to leave the road, when and where appropriate. Methods for promoting sheet flow may include blading or grading to re-establish sheet flow in areas where stormwater is being concentrated. Coordinate with the REC for additional methods of restoring sheet flow.

3) Implement BMPs in the ODOT Maintenance Guide for inventoried water quality features where appropriate. If available, consult the facility specific Operations and Maintenance Plan for additional information (also refer to Section 11. Activity 125).

4) Work with regulatory agencies and land management agencies as appropriate to resolve heavy sediment or pollutant impacts to ODOT structures and drainage systems that result from adjacent land management practices. Contact the Maintenance and Operations Branch if impacts associated with adjacent land uses are observed (i.e. illicit discharges).

5) Take opportunities to minimize discharge to receiving streams and wetlands. Examples may include plugging scuppers and weep holes on bridges; installing curbing to divert water off structures; installing check dams in ditch lines, or constructing sand traps.

2. Stockpiling (Activity 081)

Description: Activity includes stockpiling materials (such as rock, sanding material, etc.) to be used for future ODOT maintenance activities or projects.

Goal: To stockpile material for future use in a manner that minimizes impacts to natural and cultural resources and to ensure material stays within right-of-way.

Minimization Measures, Avoidance Measures, and BMPs:

1) When new stockpile sites or modifications to existing sites are proposed:

   a. Coordinate with REC for site-specific requirements, including the location of protected resources such as wetlands, waterbodies, listed plants, or known cultural resources.

   b. Avoid impacts to protected resources, including those listed in a. above whenever feasible. If not feasible, contact the REC.

c. Develop site plans and/or implement erosion control plans, as appropriate, for areas adjacent to or near riparian areas, waterbodies, or wetlands. The plan should identify erosion and sediment control needs and ensure stability of the stockpiled material.

2) Identify sites as part of local disposal plans.

3) Review the appropriate procedures in the EMS Policy and Procedure Manual for managing materials. Refer to the Roadwaste Management Chart in Appendix B for reuse or disposal of stockpiled materials.

3. Surface Work (Activities 100 – 110)

Description: Activity includes repairs of road bases, surfaces, and shoulder irregularities. Work could include activities performed on asphalt, concrete, and chip seal surfaces. Activities also include producing pavement materials (concrete, asphalt, chip rock), using grinding materials, deep base digging, site de-watering, fog sealing, filling voids (slab jacking), and crack sealing.

Goal: To repair the road and preserve a safe driving surface while protecting nearby waterways from potential pollutants associated with surface work (such as asphalt, concrete, and release agents).

3.1. Pavement Production/Minor Surface/Deep Base Repair

Description: Asphalt plant production includes staging, moving, stockpiling, and setup of asphalt plants for production of asphalt for paving and patching materials. This activity occurs at existing material source or stockpile sites.

Minimization Measures, Avoidance Measures, and BMPs:

1) Ensure contractors and ODOT staff who fuel and operate asphalt plants develop and implement an adequate spill plan that includes having materials for spill containment on site.

2) Establish temporary asphalt plants outside of known populations of listed plants, wetlands, riparian corridors, or known archaeological/cultural resource site, based on site approval by the REC with appropriate technical assistance.

3) Use commercial asphalt plants for asphalt supply where economically feasible.

4) Provide upland areas for truck chute cleanout with proper containment of wet concrete and asphalt. Clean out will not occur over waterbodies or in wetlands or SMAs.

5) Protect inlets and catchments from green concrete using appropriate containment.

6) Perform surface work in dry weather where possible to minimize any runoff of potentially hazardous material.

7) Review the archaeological buffered site list when planning deep base repair projects. If no sites are listed in the project area, proceed as planned. If site(s) are listed, coordinate with the REC. If archaeological material is identified during any work activities stop work immediately and contact the REC.

8) Refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of grindings.

3.2. Release Agents

Description: Release agents are used to soften hard asphalt or release asphalt and oils from paving equipment. Release agents are also used to pre-treat equipment to prevent asphalt from adhering to the equipment.

Minimization Measures, Avoidance Measures, and BMPs:


1) Eliminate the use of diesel fuel as a releasing or cleaning agent except for the use of diesel as required by equipment needs in closed distributor bar systems.


2) Use environmentally sensitive cleaning and releasing agents.


3) Use only products marketed as release agents (including those that may contain diesel). Capture and contain all excess materials when cleaning equipment at a maintenance yard. For areas without engineered wash rack systems with oil/water treatment, capture the material released (using plastic, sand blankets, drip pans, etc.). Capture and contain excess material containing release agents when cleaning equipment in the field or retain material on the pavement.


4) Recycle or dispose of release agents and materials released as directed by the Safety Data Sheet or manufacturer's direction.


5) Prevent release agents and released material from escaping the top of the pavement. Use limited amounts of release agents or capture material as necessary.

6) Use heat sources to heat and clean tack nozzles during operations.


7) Carry adequate spill kits with absorbent materials (diapers, kitty litter, shovels, etc.) to keep materials out of waterbodies.

3.3. Void Filling

Description: Activity includes filling voids in asphalt or concrete roadways, in bridges, or over culverts.

Minimization Measures, Avoidance Measures, and BMPs:


1) If the void is connected to a *waterbody* (observed visually) use foam or other quickset material designed for use in water to plug the void or prior to using concrete. The intent of the plug is to prevent concrete from entering a waterbody.

2) Contact the REC if any concrete enters a waterbody. Follow the reporting and tracking requirements outlined in the Documentation and Reporting section of the Blue Book. Restoration and mitigation may be required.

3) Use good housekeeping practices including erosion control and spill containment as appropriate.

4. Shoulder Rebuilding /Blading/Erosion Repair (Activity 112)

Description: Activity includes restoring and reshaping shoulder sections or gravel surfaces by hand or mechanical means to ensure adequate width, smoothness, and drainage. New material may (or may not) be added under this activity. This work is done to correct rutting and buildup of materials; correct drop-offs; restore proper cross section shape; repair erosion; repair truck escape ramps; to maintain safety; and to maintain proper drainage.

Goal: To repair shoulders to provide a safe surface for vehicle recovery; to provide an adequate clear zone; to drain water away from the road while protecting nearby waterbodies. If shoulder material is not properly contained it has the potential to change site hydrology, increase sediment in streams, and degrade water quality.

4.1. Shoulder Blading

Minimization Measures, Avoidance Measures, and BMPs:

1) Install erosion and sediment control measures (such as check dams in roadside ditches) when appropriate. Refer to the ODOT Erosion and Sediment Control Guide for Routine Maintenance Activities (current version) for guidance on selection, installation, maintenance, and removal of erosion and sediment control measures.

2) Determine if there is an existing barrier or natural bench to protect waterbodies from fallback material. If a barrier or natural bench is present it is not necessary to use erosion and sediment control measures or take further protective actions. The bench or barrier must be above the ordinary high-water line (OHWL) and be adequate in width and location to prevent movement of material during typical weather events.

3) Evaluate specific sites for alternatives to blading such as berming or paving the shoulder.

4) Evaluate the width of the blading activity and (if the site warrants) modify the width to minimize disturbance of vegetation.

5) Blade in dry weather while moisture is still present in soil and aggregate (to minimize dust) where possible.

6) Incorporate this activity into local Integrated Vegetation Management (IVM) plans to coordinate activities.

7) Permanently stabilize disturbed soils using BMPs (seeding, plants, etc.) as conditions warrant.

8) Refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of materials generated by blading.

4.2. Shoulder Rebuilding

Minimization Measures, Avoidance Measures, and BMPs:

1) Review the ODOT Roadwaste Management Chart in Appendix B for additional information reusing and recycling sweeping and grinding materials.

2) Consult the RES/RAZ maps to identify areas of concern prior to starting work. If the shoulder rebuilding is in an area of concern contact the REC. Be sure to document the process for use in future work.

3) Install erosion and sediment control measures such as check dams in roadside ditches when and where appropriate. Refer to the ODOT Erosion and Sediment Control Guide for Routine Maintenance Activities (current version) for guidance on selection, installation, maintenance, and removal of erosion and sediment control measures.

4) Determine if there is an existing barrier or natural bench to protect waterbodies from fallback material. If a bench or natural barrier is present it is not necessary to use erosion and sediment control measures or take further protective actions. The bench or barrier must be above OHWL and be adequate in width to prevent any movement of material into protected waterbodies.

5) Evaluate specific sites for alternatives to blading (such as berming).

6) Evaluate the width of the blading activity. If appropriate modify the width to minimize disturbance of vegetation.

7) Blade in dry weather while moisture is still present in soil and aggregate (to minimize dust) where possible.

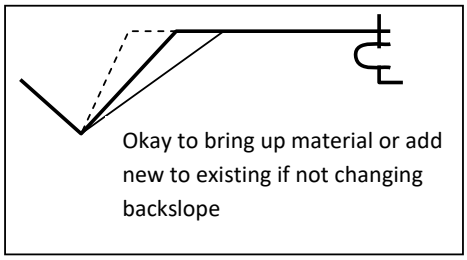
8) Incorporate this activity into local IVM plans to coordinate activities.

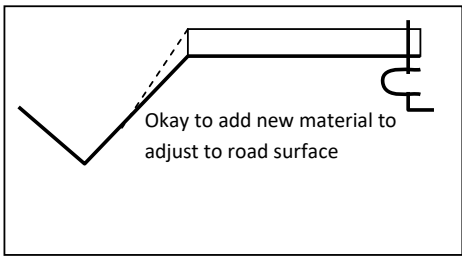
9) Permanently stabilize disturbed soils using BMPs (seeding, plants, etc.) where appropriate.

10) Care should be taken not to over-steepen ditch slopes/channels or decrease ditch/channel capacity. These actions could result in slope failure.

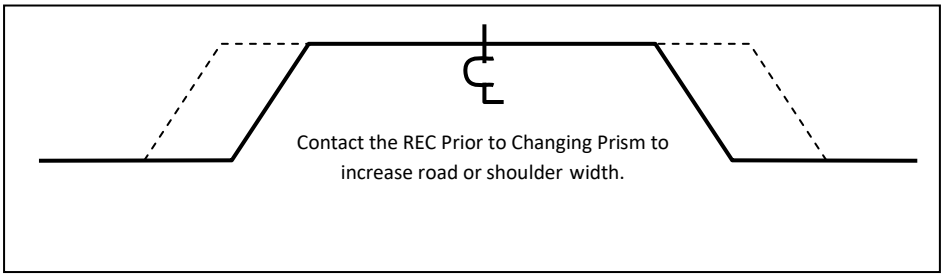
11) Contact REC if maintenance activity includes moving soils or bank that was previously undisturbed.

Activities typically not requiring a Corp or DSL permit.





If it is necessary to increase or widen shoulders contact the REC for assistance. Shoulder widening can involve a permit from the Corps of Engineers. Activities that require Corps permits are outside the scope of the Blue Book. Widening or increasing the shoulder has the potential to impact archaeological sites and/or change site hydrology, ditch hydrologic capacity, and stream dynamics.



4.3. Erosion Repair

Description: Activity involves repairing water damage that has occurred over time to roadways and fill-slopes including importing and shaping material to restore slope and grade lines. In-water work covered by this action could include, but is not limited to, replacement of riprap or rock which has been removed due to bank erosion, failed gabion baskets, etc.

Goal: To maintain and repair the roadway while minimizing impacts to water quality and fish habitat while emphasizing opportunities to incorporate vegetation into the repair activity.

Minimization Measures, Avoidance Measures, and BMPs:

1) Coordinate with the REC when planning work. This activity may require a Corps permit, a DSL permit, temporary water management, fish salvage, or impact habitat for protected species.

2) Review the archaeological buffered site list and proceed with work if no sites are listed as occurring within the action area; coordinate with the REC if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

3) Consider the use of bio-engineering solutions where practicable. Bio-engineered options are not restricted to a comprehensive approach. Some solutions may be completely bio-engineered while others may incorporate vegetation as a component of an engineered solution.

4) Replace clean riprap during ODFW in-water work periods unless it is an emergency. Coordinate with the REC in urgent or emergency situations. ODFW in-water work guidelines are located in Appendix C.

5) Place excess material at appropriate sites above the OHWL where there is no opportunity for material to reach wetlands and waterways or impact other sensitive resources. Refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

6) Refer to the ODOT Erosion and Sediment Control Guide for Routine Maintenance Activities (current version) for guidance on selection, installation, maintenance, and removal of erosion and sediment control measures.

7) Install erosion and sediment control measures in a timely manner where appropriate such as where measures can be safely and successfully applied and in areas where erosion is likely to occur. Measures may include seeding and mulching locations with non-invasive species.

8) Use temporary erosion control measures as needed until permanent devices (such as plantings) are established.

9) Look for opportunities to plant vegetation on failing banks to prevent further deterioration of the roadbed and reduce sediment and pollutants from reaching nearby waterbodies.

10) Replacement of gabion baskets above ordinary high water should be avoided unless no other alternative is appropriate. Replacement of gabion baskets below ordinary high water will not be approved by NMFS."

5. Sweeping/Flushing (Non-Pickup) (Activity 116)

Description: Activity includes sweeping and flushing of roadways to remove dirt and *debris*. Materials are sidecast (not recovered) under this activity. Activities are performed year round.

Goal: To remove materials such as sanding material, dirt, non-hazardous *debris*, etc. from the travel lanes and shoulders while preventing suspended sediment and pollutants from reaching waterbodies so that water quality is not impacted.

Minimization Measures, Avoidance Measures, and BMPs:

1) Schedule sweeping during damp weather (to minimize dust production) when feasible. If sweeping cannot be done during damp weather use water (as needed) to reduce dust.

2) If the road is parallel to a waterbody that is less than 25 feet from the fog line, slow the sweeper and broom speed and change the angle of the broom to prevent sweepings from leaving the improved road shoulders and entering the waterbody.

3) Plant or maintain vegetation buffers to catch sanding material and other pollutants where appropriate to protect the water quality of nearby waterbodies.

4) Reduce use of winter sanding material and the need for sweeping by using winter maintenance deicer products as appropriate (per the District Winter Maintenance Level of Service and Maintenance Guide).

6. Sweeping/Flushing (Pickup) (Activity 117)

Description: This activity includes sweeping and flushing of roadways, curbs, and bridge decks to remove dirt and *debris*. Activity also includes scupper (weep holes or direct drains on bridges) cleaning. Scupper cleaning involves unplugging scuppers with a rod or Vactor©, sweeping excess material away from the scupper, and then cleaning with high-pressure water. Materials are recovered (not sidecast) and disposed of during this activity. This activity is performed year round.

Goal: To remove materials (such as sanding material, dirt, *debris*, etc.) from the travel lanes, shoulders, and bridge decks, and to prevent materials from reaching waterbodies so that water quality is not impacted. This activity includes the removal of materials from the site to further prevent impact to the resources.

Minimization Measures, Avoidance Measures, and BMPs:

1) Schedule sweeping during damp weather (to minimize dust production) when feasible. If sweeping cannot be done during damp weather use water (as needed) to reduce dust.

2) Store and dispose of collected materials at appropriate sites (per local disposal plans where available). Collected material may be temporarily stored. Temporarily store materials in a manner that avoids impacts to protected resources. Follow BMPs in Activity 081 for stockpiling material.

3) Reuse sweeping materials where practicable. Refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

4) Complete bridge sweeping activities prior to cleaning scuppers when feasible.

5) Reduce use of winter sanding material and the need for sweeping by using winter maintenance deicer products as appropriate (per the District Winter Maintenance Level of Service and Maintenance Guide).

7. Ditch Shaping and Cleaning (Activity 120)

Description: Activity includes use of equipment for cleaning and reshaping of ditches. Activity includes loading, hauling, and disposing of excess material. Material is removed to an approved

location for disposal or storage. Vegetation located in the ditch is removed during cleaning. This activity is performed year round.

Goal: To maintain *ditches* in a manner that allows for efficient stormwater passage, storage, and infiltration while minimizing impacts to water quality.

Minimization Measures, Avoidance Measures, and BMPs:

1) Review Section 7.1 - "When is a Waterway (Corps/DSL) Permit Needed for Ditch Maintenance?" Coordinate with the REC as needed.

2) Review the archaeological buffered site list and proceed with work if no sites are listed as occurring within the action area; coordinate with the REC if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

3) Use erosion and sediment control devices (such as check dams and silt mats) and other erosion and sediment control measures when the potential exists to have sediment (or other materials) enter waters of the state. Refer to the ODOT Erosion and Sediment Control Guide for Routine Maintenance Activities (current version) for guidance on selection, installation, maintenance, and removal of erosion and sediment control measures.

4) Consult with the REC if erosion and sediment control devices appear to be ineffective at preventing sediment discharge to waterbodies.

5) Use BMPs identified in the local IVM plan for timing and coordination with other activities such as herbicide spray.

6) Re-seed drainage ditches and steep slopes as appropriate.

7) Perform ditch work in optimum weather (when the ditch is dry but there is still sufficient soil moisture to prevent dust and the movement of small particulates) to minimize environmental impacts where feasible.

8) Evaluate and modify existing ditch slopes, where feasible and appropriate, to trap sediment and support development of vegetation.

9) Place excess material above the OHWL and in upland areas where there is no opportunity for material to reach a waterbody or wetland.

10) Reuse excavated material when feasible. Refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

11) Near riparian corridors, determine if there is an existing barrier or natural bench to protect waterbodies from fallback material. Use extreme caution to minimize fallback material entering wetlands and waters where no barrier or natural bench is present.

12) If the ditch is an inventoried water quality facility refer to Section 11 – Water Quality Features (Activity 125) for appropriate BMPs. If available, consult the facility specific Operations and Maintenance Plan for additional information.

13) If there is reason to believe fish may be present in a ditch contact the REC (and re-review Section 7.1—When is a Waterway (Corps/DSL) Permit Needed for Ditch Maintenance (page 29).

7.1. When Is A Waterway (Corps/DSL) Permit Needed for Ditch Maintenance?

Answer all questions from both columns

WATERWAY ISSUES			WETLAND ISSUES
Is there running or standing water in drainage facility other than during or after rainfall events?	Yes ☐ No ☐	☐ Yes ☐ No	**Is there wetland vegetation (willows, rushes, cattails) in ditch?**
Does the drainage have an open water connection to a lake, pond, creek, river, or wetland?* * If yes, contact *REC* to make appropriate coordination with local ODFW/NMFS fisheries biologist regarding potential impacts to fish.	Yes ☐ No ☐	☐ Yes ☐ No	**Is there standing water or wetland vegetation adjacent to ODOT ROW?** (Call Region Environmental Coordinator for assistance)
Is the waterway subject to tidal influence?	Yes ☐ No ☐	☐ Yes ☐ No	**Would the activity add to or change the existing facility?** (Add rip-rap, extend culverts, ditch widening or deepening or new work)

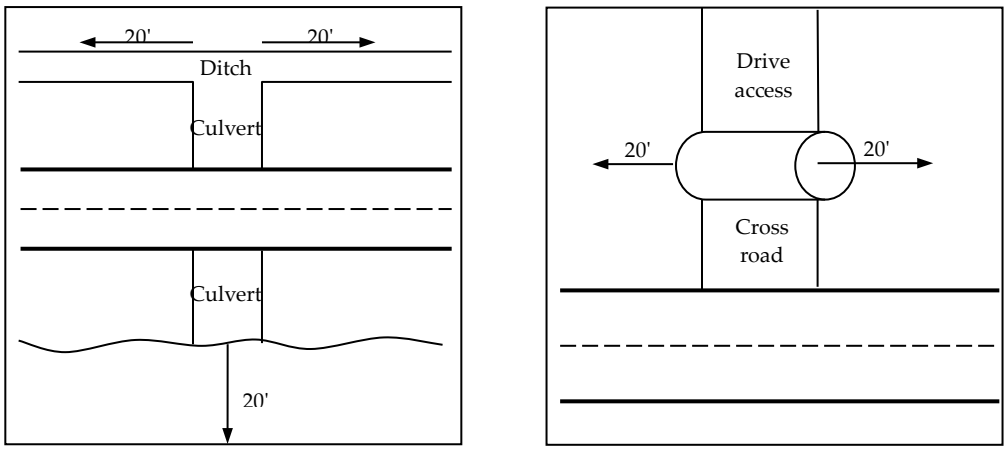
A 'Yes' to any questions in this column	If ALL responses are 'No'	A 'Yes' to any question in this column
PERMIT AND BIOLOGICAL ASSESSMENT MAY BE NEEDED Contact Region Environmental Coordinators	**NO WATERWAY PERMITS NEEDED** If ODOT Best Management Practices are followed	**PERMIT MAY BE NEEDED** Contact Region Environmental Coordinators

ODOT Environmental Permit Coordinators: Check regional listings for name and phone number.

8. Culvert and Inlet Cleaning / Hand Cleaning (Activity 121/626)

Description: Activity is done to restore function and to repair damaged water conveyances (including box, concrete, metal, and wood culverts, siphons, catch basins, and drop inlets). Activity includes inspection of the culvert using cameras and drills. Activity includes clearing *debris* from culvert inlet/outlets, pump stations, and wash rack sumps. This activity also includes cleaning diversions, trash racks, stand pipes, tide gates as well as fish passage retrofits and slip linings. This activity uses various equipment including backhoes, spider hoes, Vactor©/jet rodder (powerful vacuum with a high-pressure hose), slip chute mechanism, draglines, conveyer belts, bobcats, suction devices (dredges), clam buckets, and shovels. Vegetation may be removed during cleaning. These activities are performed in all weather and year round, as necessary.

Fish passage and elements of the fish passage statutes, administered by ODFW are found in ORS 509.585-509.610 and must be considered when performing many of these activities. In addition NMFS Fish Passage design criteria may be required. Additional information is available on ODFW's website http://www.dfw.state.or.us/fish/passage/. Coordinate with the *REC* where appropriate.



Removal of beaver dams (and other debris dams) that occur within 20 feet of the culvert barrel end (upstream and downstream) to restore flow, prevent flooding, and allow for fish passage is considered culvert cleaning (see above diagram). Before removing beaver dams consult the beaver dam removal subsection on page 32. If work is outside this area (greater than 20 feet from the end of the barrel) use the practices identified in the Section 10 - Channel Maintenance. ODFW in-water work guidelines are located in Appendix C.

Goal: To provide for adequate hydraulic flow through the culvert, to prevent flooding, and to aid in providing fish passage upstream and downstream of the culvert, while protecting water quality from sedimentation. Additional caution is needed to reduce impacts to protected fish species and their habitat.

This activity may require a Corps permit, a DSL permit, temporary water management, fish salvage, or the need to provide fish passage. Coordinate with the *REC* when planning work. If a permit is required plan in advance to allow time to get permits. Acquiring the permits and scheduling fish salvage can require 75 days or more.

8.1. Culvert Cleaning and Debris Dam Removal

Minimization Measures, Avoidance Measures, and BMPs:

1) Coordinate with the REC when performing work in a stream.

2) Perform culvert cleaning on streams during the lowest flow possible when feasible (optimally dry) and during the ODFW in-water work window. Coordinate with the REC and ODFW prior to work outside the in-water work window.

3) Manage streamflow when working in water to minimize turbidity in coordination with the REC.

4) Install erosion control devices prior to culvert work when there is flowing or stagnant water in the culvert.

5) Install erosion and sediment control measures before culvert or trash rack cleaning where erosion control devices can feasibly be installed.

6) Minimize or eliminate jumps created during culvert cleaning that may impact fish passage where practicable. Repair any damage to modifications to the culvert (end bents, disconnected joints, etc.) and fish passage modifications (such as weirs or baffles) that may have occurred during cleaning.

7) Mimic natural stream channel conditions inside and outside the culvert when feasible.

8) Manage drift removed from debris dam as appropriate and safe, using the following priorities:

   a. Turning and allowing drift to float.

   b. Remove drift to riparian area safely out of the channel.

   c. Remove drift and place downstream where available.

   d. Cut and turn drift to float.

9) Place excess material above the OHWL where there is no opportunity for material to reach waters of the state. Stabilize material in a timely manner. Stabilization may include: spreading and top seeding; covering with matting, straw; or other appropriate erosion or stabilization control measures. Haul away and appropriately manage of any material that cannot be stabilized above the OHWL (refer to Appendix B, Waste Management Chart).

10) Review the archaeological buffered site list and proceed with work if no sites are listed as occurring within the action area; coordinate with the REC if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

8.2. Trash Rack Maintenance/Cleaning

Minimization Measures, Avoidance Measures, and BMPs:

1) Visually inspect trash rack for debris buildup.

2) When cleaning and where practicable, ensure the elevation of the stream on either side of trash rack mimics natural stream slope where fish passage may be impacted.

3) Where practicable, minimize or eliminate jumps associated with the trash rack that could impact fish passage.

4) Contact the REC prior to trash rack repair or replacement on fish-bearing streams to ensure design standards are followed.

8.3. Beaver Dam Removal

Goal: To remove problematic beaver dams and other debris from ODOT right-of-way in a manner that minimizes the likelihood of stranding fish, harming fish habitat, and adding sediment to the stream. Problematic beaver dams include those that inhibit the function of ODOT infrastructure and/or jeopardize its stability (e.g. roadway fill not engineered for saturation) or those that threaten damage to private property. Beaver dam material and debris should be moved off-site or at least outside of the riparian area to keep the beaver from reusing it to build another dam.

Minimization Measures, Avoidance Measures, and BMPs:

1) Identify problematic beaver dams (e.g. inhibits the function of ODOT infrastructure, jeopardizes infrastructure stability, or causes damage to private property), and coordinate with the REC, NMFS, and ODFW to resolve concerns. Resolution may include beaver dam removal or a longer term solution (refer to Beaver Dam Modification Flowchart in Appendix I).

2) Consider, in coordination with the REC, NMFS, and ODFW, long term solutions to recurrent beaver dam issues/locations, and document decisions. Long term solutions may include installing deterrents to beavers, beaver dam analogs, or pond levelers in appropriate locations. Coordinate installation of beaver deterrents, beaver dam analogs, and pond levelers with the REC and ODFW.

3) Coordinate with the REC to determine if a biologist needs to be present during beaver dam removal to address potential fish stranding.

4) Remove the minimum amount of material necessary to alleviate the concern.

5) Remove beaver dam material in a slow, controlled manner in order avoid a rapid change in water level upstream and downstream of the dam to minimize the risk of stranding fish.

6) Contact the REC if stranded fish observed during beaver dam removal.

7) Move beaver dam material and debris off-site or at least outside of the riparian area to keep the beaver from reusing it to build another dam.

8.4. Tidegate Maintenance (Activity 169)

Minimization Measures, Avoidance Measures, and BMPs:

1) Inspect and clean structures prior to the rainy season, if possible.

2) Coordinate with the REC when ODOT-maintained tidegates need repair, fail, or need replacement or removal. Individual biological assessments, permits, temporary water management, fish passage, and fish salvage may be required with this activity. Some tidegates currently maintained by ODOT may no longer be maintained by ODOT as described in the ODOT tidegate policy http://transnet.odot.state.or.us/cs/BSS/Policies%20and%20Procedures/MAI%2006-04.pdf

Activities in navigable (e.g. Section 10 or tidally influenced) (see Appendix H) waters are subject to permit by the Corps of Engineers or Department of State Lands, and may require consultation with NMFS. It may take up to six months to obtain these permits and agreements; plan activities accordingly. These typically include waters that are coastal, tidally influenced, and are used for commerce.

9. Culvert/Inlet Repair (Activity 123)

Description: Activity applies to replacement and repair of drainage structures that are less than 6 feet diameter (for larger structures refer to Activities 160 and 162). This activity includes removing a culvert and re-installing (a culvert or slip-lining) in the same location. This activity may include the use of temporary water management. Culvert replacement may require a permit from the Corps and/or the DSL. In addition, replacement and some repairs will require that fish passage, fish salvage and temporary water management be addressed.

Goal: To restore function or to prevent failure of drainage structure while minimizing impact to water quality, aquatic species, and aquatic habitat.

Minimization Measures, Avoidance Measures, and BMPs:

1) Coordinate with the REC when planning work. This activity may require a Corps permit, a DSL permit, temporary water management, fish salvage, or impact habitat for protected species such as fish passage.

2) Conduct work during the in-water work window when appropriate (e.g., not always necessary, for example, on cross drains).

3) Review the archaeological buffered site list and proceed with work if no sites are listed as occurring within the action area; coordinate with the REC if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

Fishway (e.g. ladders, baffles, and simulated steepened stream grades maintenance will follow the above measures for culvert repair and cleaning. *Fishway* maintenance may be done as needed throughout the year. Maintenance is generally done from the banks of the drainage with a backhoe. Additional handwork and weir repair may also be occasionally required. Vegetation may be removed during cleaning. This activity should be coordinated with the REC.

9.1. Temporary Water Management

Minimization Measures, Avoidance Measures, and BMPs:

1) Coordinate with the REC while planning work to discuss temporary water management, fish salvage, fish passage, and to coordinate a pre-construction meeting. This activity may require permits from the Corps and DSL. Plan ahead to allow time to secure permits.

2) Coordinate work with ODFW through the REC, as appropriate.

3) Hold a pre-construction meeting no more than eight days prior to temporary water management implementation.

4) Cross reference practices for Activity 162 – Bridge Repair, as appropriate.

5) Restore water diversions as appropriate.

6) Work during the in-water work window or as coordinated with ODFW or NMFS. ODFW in-water work guidelines are located in Appendix C.

7) Screen any intake pump per NMFS screening criteria during operation. See Appendix D for screening criteria.

10. Channel Maintenance (Activity 124)

Description: Activity includes cleaning and repairing of existing channels to facilitate culvert inlet and outlet flows. This activity originates from *debris* flows, wood and debris jams, landslides, streambed aggradations, etc. This activity include replacing riprap in kind to restore the line and grade of the channel. Vegetation may be removed during this activity.

Goal: To maintain the integrity of the *channel* structure, improve flow, ensure fish passage, and minimize impacts to water quality and habitat.

Minimization Measures, Avoidance Measures, and BMPs:

1) Coordinate with the REC when planning work. This activity may require a Corps and/or a DSL permit. If a Corps permit is required the work is not covered by the Blue Book.

2) Review the archaeological buffered site list and proceed with work if no sites are listed as occurring within the action area; coordinate with the REC if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

3) Evaluate potential to use bioengineering solutions during replacement of significant sections of riprap within channels (i.e. provides adequate stability and is not cost-prohibitive). If bioengineering solutions cannot be used, coordinate with the REC to determine appropriate mitigation.

4) Remove excess material associated with the maintenance activity and place above the OHWL or in appropriate locations offsite.

5) Perform work that is below OHWL during the ODFW in-water work window or as coordinated with ODFW or NMFS. ODFW in-water work guidelines are located in Appendix C.

6) Coordinate with the REC to communicate cleaning schedules, methods, and repairs of channels to ODFW (by email) at least two weeks prior to cleaning in ODFW/DSL identified sensitive areas such as spawning grounds or essential salmonid habitat. Any in-water work will be coordinated with NMFS or ODFW (except during emergency situations) to identify BMPs to aid in fish passage, to ensure that no fish stranding occurs, to minimize sediment in the stream, and to clarify in-water work windows in transitional stream reaches.

7) Use appropriate rock sources to maximize safety, operation, and habitat function as guided by the REC.

8) Manage drift removed from debris dam as appropriate and safe, using the following priorities:

   a. Turning and allowing drift to float.
   b. Remove drift to riparian area safely out of the channel.
   c. Remove drift and place downstream where available.
   d. Cut and turn drift to float.

9) Place excess material in a manner that doesn't impact protected resources.

10) Stabilize material in a timely manner. Stabilization may include: spreading and top seeding; covering with matting, straw; or other appropriate erosion or stabilization control measures. Haul away and appropriately manage of any material that cannot be stabilized above the OHWL.

Installation of new sections of riprap in *channels* typically requires a Corps permit and therefore may not be covered by the Blue Book.

11) Refer to the Waste Management Chart in Appendix B for reuse or disposal of materials.

12) Work in the dry where practicable.

11. Water Quality Facilities (Activity 125)

Description: Activity includes maintaining inventoried water quality structures designed and constructed to treat stormwater runoff from ODOT roads and facilities. These structures include detention and retention ponds, grassy swales, holding vaults, etc. Maintenance activities include removing sediment, vegetation, changing filters, holding periodic inspections, grading as needed. Equipment used to maintain these structures include backhoes, vactors, jet rodders, hand tools, etc. Specialty equipment may be used as needed.

Goal: To ensure that the designed facilities for stormwater treatment function as intended.

Minimization Measures, Avoidance Measures, and BMPs:

13) Implement maintenance procedures described in the Maintenance Guide and feature specific Operations and Maintenance manual (if available).

14) Place excess or removed material in a manner that doesn't impact protected resources.

15) Refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of excess materials.

12. Vegetation Management Program

ODOT implemented an Integrated Pest Management (IPM) Program as required by ORS 634.660. An IPM program identifies the most appropriate method for controlling a pest. For ODOT the "pest" being controlled is *unwanted vegetation*. Consequently, ODOT prefers the term Integrated Vegetation Management (IVM). IVM methods typically involve:

- Mechanical: using equipment such as mowers, chain saws, brushers, etc.
- Biological: using a natural predator to control the noxious weed or *unwanted vegetation* (flea beetle or Cinnabar Moth to control tansy ragwort, for example).
- Cultural: incorporating native or more appropriate plant material to out-compete the *unwanted vegetation*.
- Chemical: applying herbicides in accordance with the label.

Each maintenance district develops an IVM plan. Each plan typically includes:

- Goals and objectives for IVM,
- Maps of roads and management zones,
- Methods (in some cases by mile point) to be used to control vegetation,
- Reports,
- BMPs including timing activities in consideration of fish and wildlife species, and
- Coordination with other maintenance activities as appropriate.

ODOT incorporates *routine maintenance* activities, landscape maintenance, and rest area vegetation activities into the IVM program.

12.1 Tree/Brush Cutting By Hand (Activity 133)

ODOT incorporates tree management into its vegetation management program. ODOT maintenance managers determine immediate tree hazards and remove the tree. ODOT maintenance, working with ODOT foresters, also remove *trees* from unstable slide areas that are forested, where the *trees* or slide material have the potential to reach the highway. In the process of removing trees from unstable slide areas or stream banks, large portions of bank areas may be removed. Tree and brush cutting activities have the potential to impact water quality (via erosion), archaeological sites and migratory birds, including eagle nests. The timing of tree and brush cutting activities are often constrained due to heavy rain, snow, or fire danger, and the lack of available funding and resources (e.g., crew size). This activity occurs year round when necessary.

Description: Tree/brush cutting activities are designed to promote stand health, eliminate hazard trees, restore sight distance, improve wildlife visibility, minimize or remove shading that may cause icy road conditions, remove encroaching vegetation, 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. These activities may include the use of equipment operating off pavement to collect and process material.

ODOT manages tree species vegetation 8" or greater diameter at breast height (DBH) as trees. Tree species vegetation less than 8" DBH is managed as brush.

Goal: To maintain a safe and efficient transportation system that includes controlling noxious, invasive, and inappropriate vegetation, while promoting native and other desirable vegetation for the benefit of adjacent landowners, the public user and the natural environment.

Minimization Measures, Avoidance Measures, and BMPs:

Refer to the table on page 39-40.

12.2 Mowing (Activity 130), Brush Mowing (Activity 132), Landscape Area Maintenance (Activity 136), Rest Area Maintenance (Activity 137)

Description: Activities are designed to restore sight distance; minimize or remove shading that may cause icy road conditions; and control or prevent slope failure. These activities are also designed to control unwanted vegetation; control noxious weeds; comply with city, county or local ordinances; reduce fire danger; reduce snowdrift accumulation near roadways; and to maintain a clear zone along the roadway. These actions involve mechanical mowing, trimming, removal of brush, and cleanup. This activity occurs year round as necessary.

Goal: To maintain sight distance and clear zone requirements amid other factors associated with a safe transportation system while maintaining appropriate vegetation and controlling unwanted vegetation.

Minimization Measures, Avoidance Measures, and BMPs:

Refer to the table on page 39-40.

Vegetation Management Chart, 2020

Read through entire column prior to conducting activity to determine general or site specific cautions or restrictions.

Activity / Maintenance Action	**Activity 133**				**Activity 130 Activity 132**
	Imminent hazard tree	*Hazard tree*	*Tree Cutting (≥8")*	*Brush Cutting (<8")*	*Mowing / Brush Mowing*
District IVM - Planning	Not planned. Remove as soon as possible.	Not planned. Remove when possible.	Include planned tree removal projects and BMPs.	Include planned brush removal projects and BMPs.	Include mowing areas, planned work, and BMPs.
Contact REC	See below.	See below.	Coordinate with REC for corridor plans.	See below.	No restrictions.
Timing ALL LOCATIONS	Allowed any time to eliminate threats to safety.	Preferred Sept. 1 –March 1 Allowed any time if preferred timing not feasible due to safety risk.	Preferred Sept. 1 – March 1 Allowed early spring and late summer if preferred timing is not available.	No restrictions.	**Grass Mowing**–No restrictions. **Brush mowing** preferred September – March; allowed early spring and late summer if preferred timing is not practicable.
Archy/Cultural Review ALL LOCATIONS	No restrictions. Check buffered site list *if* ground disturbance[4] *occurred*; contact REC if listed	If ground disturbance is anticipated, contact the REC. If archeological material is discovered, stop work immediately and contact REC.	If ground disturbance is anticipated, contact the REC. If archeological material is discovered, stop work immediately and contact REC.	If ground disturbance is anticipated, contact the REC. If archeological material is discovered, stop work immediately and contact REC.	**Grass Mowing**-No restrictions. **Brush Mowing** – proceed if ground disturbance can be avoided; Contact REC if ground disturbance anticipated. If archaeological material is discovered stop work immediately and contact REC.

[4] **Ground disturbance** includes building access roads; clearing/grubbing; dragging large tree limbs, brush, or trees along the ground using heavy equipment; using heavy metal-tracked equipment off pavement; use of other equipment that will substantially churn up ground during routine vegetation management that is more than just soil exposure and minor rutting.
NOTE: dropping trees and leaving in place is not ground disturbance.

Activity / Maintenance Action		Activity 133				Activity 130 Activity 132
		Imminent hazard tree	*Hazard tree*	*Tree Cutting (≥8")*	*Brush Cutting (<8")*	*Mowing / Brush Mowing*
Nesting **ALL LOCATIONS**		Report any impact to birds, nests, and eggs to the REC.	Avoid cutting if you see a nest in the tree. If avoidance is not possible, contact REC. Report any impact to birds, nests, and eggs to the REC.	Avoid cutting if you see a nest in the tree. Report impact to birds, nests, and eggs to the REC.	Avoid cutting if you see a nest in a tree. Report any impact to birds, nests, and eggs to the REC.	Report any impact to birds, nests, and eggs to the REC.
ESC **All locations**		Implement erosion and sediment control (ESC) measures when there is potential for sediment to enter Waters of the State				Not Applicable.
Habitat Restoration Projects		Not applicable.	As time allows, coordinate with ODFW or REC on leaving downed trees for habitat restoration or bio-engineering projects.		Not applicable.	Not applicable.
LOCATION SPECIFIC BMPs	**Within 20' of bridge (either end and under)**	No restrictions.	No restrictions.	No restrictions.	No restrictions.	No restrictions.
	Riparian Areas (within 150' of stream)	No restrictions.	Coordinate with the Forester and REC if trees provide shade or bank stabilization. Plant 2" seedlings for every shade tree over 12" that was removed (in same watershed)	Coordinate with the Forester and the REC if trees provide shade or bank stabilization. Felled trees may be left within the riparian area or stream channel. Plant 2 seedlings for every shade tree over 12" that was removed (in same watershed)	Allowed if impact bridge or affects line of sight. Leave cut brush/chips if possible.	Limit mowing to no more than 8' off edge of pavement unless necessary to maintain highway function. If distance to stream is less than 8 feet, either avoid mowing or mow level with roadway surface.
	Scenic Areas	No restrictions.	No restrictions.	Maintain buffer strips as appropriate, or coordinate with Forester for exemption.	No restrictions.	No restrictions.
	SMA	Not applicable		Site specific practices for non-hazard trees. Incorporate new sites per Appendix E		
	USFS	Refer to ODOT-USFS Memorandum of Understanding (MOU)				

12.3 Spraying (Activity 131)

Description: Activity consists of spraying herbicide to control the growth and spread of noxious weeds and other vegetation. Herbicides used include broad-based foliar-active herbicides and soil residual herbicides. ODOT follows the DEQ 2300 permit for pesticide applications near water.

Goal: To control noxious weeds and other vegetation through the application of herbicide under the label restrictions of EPA and ODA.

1) Follow BMPs in the annual District IVM plan. The annual District IVM Plan identifies sensitive natural resources and areas where spraying should not occur. The IVM Plan also identifies buffer limits for areas around water resources and addresses practices for the protection of sensitive fish species. The herbicide spray program may also include modification of spray times and modifications of spray widths to protect riparian areas. Develop specific minimization/avoidance measures on a site-specific basis.

2) Use and store herbicides in accordance with EPA labels.

3) Follow appropriate site-specific practices in SMA management plans.

Herbicide application is not included in ODOT's 4(d) exemption nor the USFWS ESA Section 10 Permit, consequently, any take occurring as part of maintenance operations resulting from herbicide application is not permitted.

13. Striping (Activity 140) and Legend Marking (Activity 141)

Description: Activities include painting traffic lines, arrows, bike lanes, crosswalks, etc. Materials used to establish road markings include waterborne paint and longer lasting durable products containing glass beads to provide retro reflectivity. The materials are placed on the road using specialty equipment. These activities are done as needed on the road and are done during dry weather conditions. Pavement preparation may include grinding off old markings. Less than 10% of old markings are ground off.

Goal: To maintain traffic markings for the safety of the traveling public.

Minimization Measures, Avoidance Measures, and BMPs:

1) Contact the region hazmat coordinator prior to disposal of stripe grindings since stripe grindings may be hazardous waste.

2) Contain all waste from equipment clean outs and dispose appropriately.

3) Store materials appropriately. Use containment as necessary.

4) Use environmentally safe products by purchasing only from the Qualified Products List.

14. Fence/sign installation (Activities 138) and traffic signal/illumination maintenance (Activities 142, 144, 145, 159)

Description: Activity includes washing, locating, installing, repairing, and replacing fences, signs, traffic signals, and illumination along the rights of way. This activity does not include snow fence maintenance, which is addressed in Activity 177.

Goal: To ensure that fences, signs, traffic signals, and illumination are in good repair and functional.

Minimization Measures, Avoidance Measures, and BMPs:

1) Check the archaeological buffered site list if installing a new fence, sign post, illumination pole, or conduits in a new location or if building access roads. Proceed with work if no sites are listed as occurring within the action area; coordinate with the REC if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

2) Use erosion and sediment control devices (such as straw or mulch) when the activity increases the potential to have sediment (or other materials) enter waters of the state. Refer to the ODOT Erosion and Sediment Control Guide for Routine Maintenance Activities (current version) for guidance on selection, installation, maintenance, and removal of erosion and sediment control measures.

3) Avoid wetlands where possible. Coordinate with REC if new sign or fence is to be installed in wetland area. Install new fences/sign posts using non-treated timber or other nontoxic alternative, where feasible.

4) Replace the fencepost/signpost in kind in designated historic areas. If replacement in kind is not possible due to federal and state required standards (such as sign design or post type) coordinate with the REC.

5) Coordinate with REC in SMAs and review the SMA management plan for special BMPs.

6) Provide upland areas for truck chute cleanout with proper containment of green concrete. Clean out will not occur over waterbodies.

7) Protect inlets, catchments, wetlands and waterways from green concrete.

15. Accident Clean-up (Activity 149)

Description: Activity includes removal of accident *debris* and may include response to hazardous spills. ODOT is responsible for maintaining public safety and working with DEQ

contractors or responsible parties to ensure the cleanup is done in an appropriate manner. Refer also to Activity 307 on page 61.

Goal: To restore transportation system following unforeseen incidents.

Minimization Measures, Avoidance Measures, and BMPs:

1) Assess the situation for safety considerations.

2) Stop and contain any spill if appropriate. Appropriate training is required for spill containment.

3) Call district, region hazmat coordinator, or REC for assistance as needed.

4) Provide traffic control as appropriate.

Notify Oregon Emergency Response System (1-800-452-0311) when:

- Reaches or has potential to reach a waterbody (any quantity); OR
- Is larger than 42 gallons of oil or fuel and is on the ground (OERS only); OR
- Is more than 200 pounds or 25 gallons of diluted or undiluted pesticide; OR
- Is a hazardous product or waste.

16. Guardrail/Cable barrier Replacement and Cleaning (Activity 151)

Description: Activity involves repair and replacement of existing guardrail and cable barrier sections, including pouring concrete pads and placing concrete barriers. Cleaning includes the removal of material from under guardrail and around posts by hand or grader mounted cleaner.

Goal: To maintain physical barriers that guide and direct traffic in a manner that minimizes impacts to the natural resources.

16.1 Guardrail/Cable Barrier Repair and Replacement

Minimization Measures, Avoidance Measures, and BMPs:

1) Coordinate with the REC when installing guardrail or cable barrier in a new location (e.g., new post holes).

2) Install erosion control measure (silt fences, etc.) in unstable areas to protect the down slope during guardrail/cable barrier replacement, as appropriate, to minimize adding sediment into aquatic systems.

3) Protect inlets, catchments, wetlands and waterways from green concrete. Match new guardrail with the existing material, where possible, which may include the use of treated guardrail posts. (See Appendix F)

4) Limit the use of creosote or other treated woods (See Appendix F).

16.2 Guardrail Cleaning

Minimization Measures, Avoidance Measures, and BMPs:

1) Prevent material from entering streams or waterbodies.

2) Pick up excess material rather than blading onto the bank when working near streams.

3) Reuse recovered material when feasible. Refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

17. Attenuator Maintenance (Activity 153)

Description: Activity includes service, repair, replacement, and realignment of damaged attenuators (physical systems that are strategically placed along exit ramps, bridge abutments, etc. to minimize impacts and cushion vehicles). Following impact attenuators wil compact, sometimes releasing fluid that may flow directly to drainage systems.

Goal: To repair, replace, and restore impact systems for the safety of the traveling public in a manner that minimizes impacts to natural resources.

Minimization Measures, Avoidance Measures, and BMPs:

1) Use non-chemical systems when installing new attenuators.

2) Install those devices found to be the most environmentally sound when replacing attenuators.

3) Use absorbent materials (dams, diapers, etc.) around attenuators during repair or maintenance.

4) Identify and close inlets (if it can be done safely) during attenuator maintenance.

18. Bridge Maintenance (Activity 160), Structure Painting (Activity 163), and Other Structure Maintenance (Activity 169)

Description: Activity is a large category of ODOT maintenance actions. There are two major categories: 1) drift removal and 2) maintenance of bridges and large (over six feet diameter)

culverts. Maintenance and replacement of structures includes washing, painting, scraping and patching of curbs, rails, deck joints, on wood, concrete and steel bridge components. Jet rodding of drain holes, weeps, and scuppers may occur throughout the year to restore and maintain drainage off the structure. High pressure air or water may be used. Fish passage and elements of the fish passage statutes found in ORS 509.585 through ORS 509.610 must be considered when performing many of these activities. Additional information on fish passage is available on ODFW's website http://www.dfw.state.or.us/fish/passage/.

Goal: To maintain and repair the structural integrity of bridges and culverts along state highways in a manner that minimizes impacts to natural and cultural resources.

18.1 Drift Removal

Minimization Measures, Avoidance Measures, and BMPs:

1) Remove drift during the in-water work window or as coordinated with the REC and ODFW.

2) Turn, or cut and turn, and allow drift to float whenever practicable. Use environmentally-friendly bar oil whenever practicable when cutting over water.

3) Remove drift when necessary. Place removed drift above OHW (also see bullet 5) or return the drift to water further downstream to float.

4) Contact the REC prior to removing buried drift in tidally influenced or mainstem rivers (e.g. Section 10 waterways) (see Appendix H for list of Section 10 waterways in Oregon); a Corps permit may be required. In non-Section 10 waterways, remove buried drift during the in-water work window or as coordinated with ODFW (see Appendix C) except when there is imminent danger to life, limb or structure.

5) Place removed drift above the OHWL where there is no opportunity for material to reach waters of the state. Stabilize material in a timely manner. Stabilization may include: spreading and top seeding; covering with matting, straw; or other appropriate erosion or stabilization control measures. Haul away and appropriately manage of any material that cannot be stabilized above the OHWL. Refer to the Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

6) Repair and restore riparian areas temporarily impacted by machinery during drift removal. Coordinate long-term access for drift removal with the REC.

18.2 Bridge Cleaning and Maintenance

Minimization Measures, Avoidance Measures, and BMPs:

1) Refer to and follow Water Withdrawals and Use BMPs in section 24.3 below.

2) Bridge washing over wetted waterways should occur during a period when receiving waterways are actively flowing to minimize water quality impacts. Bridge washing over dry waterways may occur at any time.

3) Bridge washing over wetted waterways may occur at any time if all materials including water are kept on top of the bridge and 1) water can be pushed to the ends of the bridge and routed off the bridge through a pre-existing water treatment facility or sediment control device or 2) allowed to sheet flow across a vegetated area where it can be filtered or infiltrated prior to entering a waterway.

4) Remove debris from bridge decks in a manner that minimizes material entering waterbodies. Preferred methods may include removal of large debris from bridge decks with a sweeper or a shovel. Other material may be scraped by hand before being collected and removed (prior to pressure washing). Identify stockpile locations on local plans or refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

5) Implement adequate measures to ensure paint and other hazardous material does not enter waters of the state. Coordinate guano (bird and bat waste material) removal and any other specific concerns with REC. Remove material that falls into the water (if possible) in the least destructive way possible or leave in place if this would be less destructive to fisheries habitat.

6) Temporarily block deck drains and scuppers over streams when pressure washing, sandblasting, or scraping structures, to route water off deck and into vegetated areas where practicable.

7) Inactive bird nests (i.e., nests that do not contain eggs or dependent young) may be cleaned off bridges at any time.

8) If bridge washing activities will directly impact active nesting migratory birds (or maternal or overwintering bat colonies), stop work and contact the REC.

9) Report to the REC any incidental impacts to active nests or birds (e.g., damaged eggs or dead birds).

10) Coordinate with the REC prior to cleaning when fish passage may be affected.

11) Where feasible mimic natural stream channel conditions inside and outside the bridge.

12) Minimize or eliminate jumps created during bridge cleaning that may impact fish passage, where practicable. Repair bridge damage or damage to existing fish passage modifications. Repair damage to the bridge that may have occurred during cleaning.

Fishway maintenance will follow the above measures for bridge repair and cleaning. *Fishway* maintenance may be done (as needed) throughout the year. Maintenance is generally done from the banks of the drainage with a backhoe. Additional handwork and weir repair may also be occasionally required. Vegetation may be removed during cleaning. This activity should be coordinated with the REC.

18.3 Water Withdrawals and Use

Minimization Measures, Avoidance Measures, and BMPs:

1) Use non-chlorinated water where practicable.

2) Review Regional Water Withdrawal Authorizations and follow instructions for using water from streams or lakes.

3) When using water from a municipal source (cities) that will enter a waterbody de-chlorinate the water by evaporation (allow the tank truck of water to sit overnight) or use a de-chlorinating agent that is non-toxic to fish, where practicable.

4) Screen any intake pump used in this activity per NMFS Screening criteria. See Appendix D.

18.4 Bridge Vegetation

Description: Activity includes vegetation management around existing structures. The primary purpose of bridge vegetation management is to maintain sight distance. Bridge vegetation management must also maintain access to the structure for structure maintenance, fire safety, access for inspection, and to maintain the integrity of the structure.

Goal: To manage the vegetation that may limit sight distance or impact the structural integrity of bridges and culverts on state highways in a manner that minimizes impacts to natural resources.

Minimization Measures, Avoidance Measures, and BMPs:

Refer to the table on pages 39-40. There are no restrictions on vegetation maintenance associated specifically with bridge structures. BMPs in the table are intended to protect or minimize impacts to migratory birds, listed plants, water quality (erosion and sediment control) and archaeology.

19. Bridge Repair (Activity 162)

Description: Activity includes repair of bridges and large culverts (over six feet diameter). In-water bridge repair can include repair or replacement of riprap, bridge drainage features, and catch basins and replacement of structural members. Bridges may be constructed of steel, wood, or concrete. Maintenance typically replaces structural elements in kind.

Goal: To maintain and repair the structural integrity of bridges and culverts along state highways in a manner that minimizes impacts to natural and cultural resources.

Minimization Measures, Avoidance Measures, and BMPs:

1) Coordinate bridge repairs that require in-water work or work within the channel (actual work or access) with the REC. These activities may require a permit, temporary water management, and/or fish salvage.

2) If a new access road is needed to access repair area or if repair requires excavation or new piers, review the archaeological buffered site list and proceed with work if no sites listed as occurring within the action area; coordinate with the REC if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

3) Historic Bridge BMPs:

4) Historic review and approval is not required for the following activities, regardless of the historic status of the bridge:

- Deck surface work (e.g. striping, paving, joints, epoxy overlay, patching, and deck seals).
- Replacement of moveable bridge controls and related traffic safety systems.
- Scour repair.

For other activities, check the bridge log for the historic bridge category. If the bridge is listed as Category 1 or Category 2, the following BMPs apply:

- Perform work with in-kind material if possible. If not possible, coordinate with the REC (except for timber pile work; see below).
- Notify the REC prior to timber pile work for tracking and documentation purposes.

5) If stream channel work is necessary, where feasible, mimic natural stream channel conditions upstream and downstream of bridge.

6) Repair existing fish passage modifications such as weirs or baffles.

7) Consider using bio-engineered solutions for bridge repair work that requires installation of riprap, where practicable. "Practicable" use areas will include areas (unshaded by bridge elements) above the OHWL where success is probable and safety of the bridge structure is assured. Bio-engineered solutions are not restricted to an all or nothing approach. Some solutions may be completely bio-engineered; others may include an engineered solution that incorporates vegetation.

8) Attempt to incorporate fish passage solutions and enhancements such as adding roughness in the engineering solution when repairing drainage features. Coordinate with the REC and hydraulics engineer.

9) Remove and dispose of repair material and debris appropriately. Refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

10) Ensure green concrete does not come into contact with waterbodies.

11) Use a stable, appropriate concrete truck chute clean-out area to keep material from being deposited in riparian corridors, wetlands, or in an area where it can be washed into a stream or wetland.


12) Use cofferdams for structural repairs as appropriate.


13) If treated wood needs to be cut, contain saw chips from treated wood where feasible.

14) Review the guidelines for Pesticide-Treated Wood (located in Appendix F) when in-kind replacement of creosote or pressure treated wood is necessary for integrity of the structure or the safety of the traveling public.


15) Avoid active nests and bat colonies when conducting repairs when feasible. If not feasible, contact the REC to report impacts.


16) Contact the REC if activity causes impacts to migratory birds, active nests, or bats.


17) Install floating absorbent boom, where feasible, when treated pile is cut for repair.


18) Coordinate with REC on noise reduction requirements for pile driving activities to determine if a bubble curtain is necessary.


19) Use foam or other quickset material designed for use in water to plug the void prior to using concrete, if the void is connected to a waterbody. The intent of the plug is to prevent concrete from entering a waterbody.


20) Contact the REC if any concrete enters a waterbody. Follow the reporting and tracking requirements outlined in the Documentation and Reporting section of the Blue Book. Restoration and mitigation may be required.


21) Use good housekeeping practices including erosion control and spill containment as appropriate.


22) Screen any intake pump per NMFS screening criteria during operation. See Appendix D for screening criteria.

20. Fish Habitat Restoration and Passage Improvement (Activities 160/358, 162/359)

Description: Activities include any ODOT work that involves planting vegetation or placing large wood (LWM- e.g. logs or root wads) in or along a stream corridor (e.g. slope stabilization or replanting of removed vegetation). It also includes fish habitat restoration or enhancement, as well as fish passage improvements. Typical work includes: installation and removal of culverts or the installation, removal, and repairs of baffles, weirs, or other systems (within and adjacent to culverts) for fish passage. In addition, this activity may include the placement of large wood and other methods of improving fish passage.

Goal: To improve habitat conditions or to restore fish passage, as appropriate, while maintaining a safe and efficient transportation system.

Minimization Measures, Avoidance Measures, and BMPs:

1) Coordinate with REC when planning work. This activity may require a Corps permit, a DSL permit, temporary water management, fish salvage, or cultural resource clearance.

2) Install erosion control devices, such as check dams, silt mats and other erosion and sediment control measures. ODOT Erosion and Sediment Control Guide for Routine Maintenance Activities (current version) for guidance on selection, installation, maintenance and removal of erosion and sediment control measures.

3) Install erosion control methods in a timely manner, including seeding and mulching specific areas with non-invasive species. Install silt fences and other devices as appropriate.

4) Follow ODFW in-water work guidelines for that system or as coordinated with ODFW or NMFS. ODFW in-water work guidelines are located in Appendix C.

5) Look for opportunities to plant vegetation on failing banks to prevent further deterioration of the roadbed and reduce sediment and pollutants from reaching nearby waterbodies.

6) Place excess material above the OHWL where there is no opportunity for material to reach waters of the state or impact a wetland, unless otherwise directed by ODFW or NMFS to incorporate material into fish habitat or fish structure.

7) Stabilize material in a timely manner. Stabilization may include: spreading and top seeding; covering with matting, straw; or other appropriate erosion or stabilization control measures. Haul away and appropriately manage of any material that cannot be stabilized above the OHWL. Refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

21. Illegal Campsite Cleanup (Activity 164)

Description: Activity includes work associated with cleaning up illegal camp sites, including work access, vegetation removal, picking up and disposing of litter, giving notice to persons camping on ODOT right-of-way, and assisting law enforcement to monitor illegal camp site areas. This activity is performed year-round. Refer to Activity 180 (Emergency Maintenance) for actions required to alleviate an immediate threat to life, health, safety, or infrastructure.

Goal: To restore safety and cleanliness to areas impacted by illegal camping.

Minimization Measures, Avoidance Measures, and BMPs:

1) If time allows (i.e. the activity is not an emergency), review the archaeological buffered site list prior to mobilizing heavy equipment to be operated off-road and proceed with work if no sites are listed as occurring within the action area; coordinate with the REC if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

2) Use erosion and sediment control devices (such as straw or mulch) when the activity increases the potential to have sediment (or other materials) enter waters of the state. Refer to the ODOT Erosion and Sediment Control Guide for Routine Maintenance Activities (current version) for guidance on selection, installation, maintenance, and removal of erosion and sediment control measures.

22. Snow and Ice Removal (Activity 177)

Description: Activity includes removal of snow, ice, and slush from roadways, ramps, interchanges, and shoulders. Activity also includes removal by snow plow, grader, loader or snow blower. The Maintenance and Operations Branch reviews and approves deicer products for use in winter storm maintenance. ODOT is a member of the Clear Roads Pooled Fund for Winter Maintenance Research. Clear Roads develops quality standards for winter maintenance deicer products. ODOT has developed state guidelines and BMPs to reduce impacts to the environment.

Goal: To remove snow and ice from the roadway while protecting nearby forestry and water resources. This activity is performed solely for safety purposes.

Minimization Measures, Avoidance Measures, and BMPs:

1) Reduce plowing speeds in sensitive areas.

2) Adjust blower chute to minimize blowing into sensitive areas, where appropriate and if feasible and safe.

22.1 Sanding and Pre-wetting (Activity 177)

Description: Activity includes applying abrasive material to roadway surfaces to assist with traction. ODOT recycles sanding material into shoulders. ODOT crews estimate that anywhere from 10% to 50% of the sand applied is trapped or re-used. The majority of sanding material is removed from the road by plows. ODOT captures sand around bridges, guardrails, and near streams, where possible. Activity also includes mixing pre-wetting agents, such as magnesium chloride, with sanding material. Pre-wetting sanding material helps the material bore into the snow and ice. This helps the material improve traction and stay on the road longer, which reduces the need for and amount of sand applied.

Goal: To apply sanding material on roads and bridges to provide traction for safer driving while protecting water quality and fish habitat in nearby waterbodies.

Minimization Measures, Avoidance Measures, and BMPs:

3) Follow the District Winter Maintenance Level of Service for use of sanding material and/or winter maintenance deicer products.

4) Carefully review the use of sanding material in the following areas: a) those with dust related air quality problems; b) those where there is danger of siltation in streams, shallow lakes, or ponds.

5) Store sanding material in a manner to minimize any contamination of surface or groundwater. Contain runoff from treated stockpiles. Covered storage for sanding material is preferred.

6) If applying deicer product to stockpiled material, prevent or capture runoff.

7) Use pre-wetting when appropriate to minimize bounce and scatter.

8) Reduce speed when applying abrasives to minimize bounce and scatter.

9) Keep accurate application records including when, where, and quantity of sanding material applied.

10) Place barriers in site specific locations to capture sanding material, where appropriate and practicable, such as along streams or areas that drain directly to waterbodies.

11) Identify and create facilities to capture sanding material where appropriate and opportunity presents themselves.

12) Clean inlets at the end of winter or prior to first rain as feasible.

22.2 Anti-icing and Deicing (Activity 177)

Description: Activity includes applying anti-icing and deicing products to road surfaces to prevent snow and ice from bonding to the roadway or to break the bond between snow and ice and the roadway.

Goal: To provide a reasonably safe roadway surface for the traveling public during winter conditions. The use of anti-icing and deicing products is helpful in reducing the need for sanding material. Reducing the use of sanding material will also reduce sanding related impacts to air quality, water quality, and aquatic habitat. Additionally, the use of anti-icing and deicing products has been associated with vehicle accident reduction. Reducing accidents reduces the risk of petroleum and debris entering waterbodies and reduces the opportunity for structural damage to stream systems and habitat.

Minimization Measures, Avoidance Measures, and BMPs:

1) Follow the District Winter Maintenance Level of Service for sanding and use of deicer products.

2) Use only products that meet the Clear Roads specifications. All deicer products under price agreement to ODOT meet the specifications.

3) Maintain a quality assurance, quality control program. Crews will sample anti-icing and deicing product shipments and send samples to the ODOT Maintenance and Operations Branch for testing.

4) Follow application guidelines in the ODOT Maintenance Guide.

5) Apply solid deicer at speeds not to exceed 35 mph whenever safe to do so to reduce bounce and scatter.

6) Pre-wet solid deicer to reduce bounce and scatter.

7) Keep accurate application records including when, where, and quantity of deicer applied.

8) Calibrate equipment or verify calibration as needed. Calibration assistance and resources are available; contact the Maintenance and Operations Branch.

9) Routinely inspect equipment and storage facilities (including nozzles, slip in tanks storage tanks, and secondary containment) for damage. Complete inspection forms located in the EMS Manual. Promptly repair or replace damaged equipment or facilities.

10) Store deicer products in a manner that minimizes contamination of surface or groundwater. Care should be taken to prevent runoff from product tanks or treated stockpiles. Covered storage is required for dry products. Review the "Deicer Tank Guidance" located in the EMS Manual under Winter Maintenance, for guidance on purchasing, installing, and assessing containment requirements.

11) Ensure annual training and information sharing opportunities are available for ODOT crews.

12) Coordinate the trial of new or different deicer products with the ODOT Maintenance and Operations Branch.

22.3 Snow Fence Maintenance (Activity 177)

Description: Activity includes maintenance and repair of existing snow fences. Refer to information on Minor Betterments section (page 8) for installation of new snow fences.

Goal: To ensure that snow fences function as designed to prevent snow from blowing across and accumulating on roadways.

1) Coordinate with the REC if access roads are proposed.

2) If excavation for new supports or if a temporary access road is required, review the archaeological buffered site list and proceed with work if no sites listed as occurring within the action area; coordinate with the *REC* if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

3) Use erosion and sediment control devices (such as straw or mulch) when the activity increases the potential to have sediment (or other materials) enter waters of the state. Refer to the ODOT Erosion and Sediment Control Guide for Routine Maintenance Activities (current version) for guidance on selection, installation, maintenance, and removal of erosion and sediment control measures.

4) Coordinate with REC in SMAs and review the SMA management plan for special BMPs.

23. Emergency Maintenance (Activity 180)

Description: Activity includes fixing damage to roadways, the roadside, and structures (bridges) caused by storms, floods, and other events. Failure to perform these activities may result in immediate threat to life, limb, or infrastructure.

Goal: To restore and manage the transportation system in the event of natural and man-made emergencies while minimizing impact to environmental resources.

Minimization Measures, Avoidance Measures, and BMPs:

1) Proceed with work to protect public and staff safety of immediate concern. Notify the REC in a timely manner to determine if environmental resources are at risk.

2) The district manager (or management designee) determines if the event warrants a declaration of an emergency to expedite repair work and approvals, and complete necessary environmental documentation/review concurrently or after the fact (refer to Appendix G for a sample DSL/Corps Emergency Authorization Form).

3) Review NMFS requirements and processes, as appropriate and applicable, described in bracketed text in this Section (page 55).

4) The district manager will coordinate with the REC to determine whether resources are in the area that may be impacted by repair work.

5) The district manager will decide if repair work may be halted to obtain necessary environmental or cultural clearances or if repair work must continue in which case clearances will be obtained concurrent with repair work or after the fact.

6) If archaeological sites are known to occur in the area per the REC (in coordination with the archaeologist), and repair work isn't scheduled to begin for 30 days or more, archaeological surveys should proceed if necessary and appropriate clearance documentation provided, prior to proceeding with repair work.

7) May require an archaeological monitor present during repair activities.

8) The district manager ensures coordination with the REC. The REC assists with identifying environmental concerns, notifying regulatory agencies, coordinating other technical staff, and obtaining verbal approval or after-the-fact permits as required by the situation. This activity may require in-water work and/or a Corps permit, a DSL permit, temporary water management, fish salvage, archaeological clearances, and review and compliance with NMFS review and processes, as appropriate and applicable, as described bracketed text in this section. The bracketed text also applies, as appropriate and applicable, if ER monies are to be sought. The event may trigger coordination with ODFW on the fish passage laws.

9) Repair damage to fishery or water resources (caused by ODOT maintenance responses to the emergency) in coordination with the Corps, DSL, ODFW, NMFS, or USFWS as appropriate.

10) Avoid and/or minimize additional impacts to wetlands or waterbodies. Coordinate with the REC on required *mitigation*.

11) Provide, whenever possible, adequate erosion control or bank stabilization necessary to keep material from entering watercourses.

12) Identify and plan for slide material storage as appropriate. Identify (and map) appropriate long and short- term material storage sites and obtain appropriate environmental clearances.

13) Explore alternatives to blasting in areas with ESA-listed birds or eagles present, if appropriate and emergency allows.

In order to meet the requirements of Standard Local Operating Procedures for Endangered Species (SLOPES) additional BMPs have been developed to implement if response to the event requires a Corps permit or the event may be eligible for ER reimbursement.

NMFS and USFWS have defined a 'Natural Hazard' as an event, as declared by the District Manager (or management designee), that requires a response that is immediate, or before the next in-water work window, to repair or rehabilitate a road, culvert, bridge or utility line as necessary to prevent imminent loss of human life, property or natural resource. (District Manager (or management designee added)).

Refer to the current version of SLOPES for additional information on Major Hazard Response and USFWS Major Hazard Response Programmatic Agreement.

Other federal clearances may also be required per the ER Manual if federal reimbursement is expected to cover the cost of repair work after the immediate emergency threat has been addressed.

23.1 Extraordinary Maintenance

Description: Activity includes work which is extraordinary but not specifically identified as a separate activity. Examples include: military operations, forest and other fire response, cleaning benches and moats, ice floes, and broken water line repair and cleanup.

Goal: To maintain the transportation system under circumstances outside the control of ODOT while making every effort to protect valuable resources.

Minimization Measures, Avoidance Measures, and BMPs:

1) Practice good housekeeping activities to ensure sediment and other materials do not enter wetlands or waterbodies.

2) Repair any damage to fish habitat caused directly or indirectly by ODOT actions. Coordinate with REC when these actions occur.

3) Coordinate with Maintenance and Operations Branch - Emergency Operations Section on FEMA reimbursement, if responding to wildland fire situations.

23.2 Use of Riprap

Minimization Measures, Avoidance Measures, and BMPs:

1) Repair bank and bridge scours with riprap large enough to prevent riprap from being dislodged in high water storms. Limit riprap to the amount of rock needed to protect the integrity of the structure.

2) If toe of slope must be established below the OHWL, create with adequate size rock constructed in an irregular pattern. Rock size will be determined by best professional judgment of the maintenance manager and coordinated with the Tech Center when feasible. Limit the amount of rock to the minimum amount needed to protect the integrity of the structure.

3) When practicable, place riprap from the top of bank or bridge.

4) Place rocks individually whenever equipment, time, and safety allow.

5) If riprap is used above the OHWL, use appropriate size rock that is NOT open graded. Mix with soil, when circumstances allow, to encourage plant growth.

6) If riprap is used below the OHWL, use rock that is open grade.

7) Taper use of riprap size and shape above the toe. Eliminate, if possible, the use of riprap above OHWL to allow vegetation to establish.

8) Incorporate appropriate vegetation, as practicable, in riprap below OHWL, if safe. Above OHWL, plant appropriate species throughout the riprap from OHWL to top of bank. Coordinate species, size, and numbers of planting material with the REC.

9) Incorporate *large wood* and other elements of bioengineering into slope stabilization project when appropriate and feasible. Coordinate with the REC and engineering staff as appropriate.

10) In situations where woody vegetation and large wood cannot be incorporated into riprap, the REC will coordinate with the district manager, biologist, and NMFS/USFWS on developing a mitigation plan that meets the scope, scale and effects of the repair. Some potential options include: remove unwanted vegetation from immediate area and replant with appropriate vegetation or provide resources, equipment, and services to another organization for a restoration project (ODOT contribution would 'match' the scope/scale/effect of the repair).

23.3 Pile Installation

Minimization Measures, Avoidance Measures, and BMPs:

1) In emergency situations (e.g.: Major Hazard Response, SLOPES, or USFWS Programmatic Agreement), where the installation of pile is required to restore the infrastructure, use a vibratory hammer where available.

2) Coordinate with the REC when using an impact hammer to minimize noise impacts where feasible (e.g., bubble curtain).

3) Use steel or untreated wood as pile. Use treated timber ONLY if other materials are not available and timber will be coated/sealed.

4) Follow up with the REC if material changes on historic bridges.

5) Document decision making process on the use of pile and BMPs.

23.4 Fish Passage, Screening, Capture and Removal

Minimization Measures, Avoidance Measures, and BMPs:

1) Screen water intake per requirements in Appendix D.

2) If a culvert or other hydraulic facility must be replaced, when practicable, use the stream simulation method. A culvert placed following the stream simulation method will typically have the following characteristics:

   a. When feasible, install the culvert 1.5 times the active stream channel.

   b. Set at the average slope of the upstream and downstream substrate grade.

   c. Buried to the greater of 12 inches or 20% of the culvert height.

   d. Embedded with streambed material in the culvert barrel.

3) If work area is to be isolated, REC will coordinate potential fish salvage with biologists. Biologists will review appropriate program requirements.

> If a culvert does not meet passage requirements or cannot follow the "stream simulation method" the culvert may need to be retrofitted or replaced. In some cases *mitigation* may be acceptable instead.

23.5 Temporary Access Roads

Minimization Measures, Avoidance Measures, and BMPs:

1) Review the archaeological buffered site list and proceed with work if no sites are listed as occurring within the action area; coordinate with the REC if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

2) Minimize the number and size of entry points or access into the work area.

3) Consider using geotextile fabric to protect the ground and ease cleanup.

4) When the action is completed the temporary access routes may be obliterated, removed, or mitigated. Stabilize soil and restore vegetation if possible

23.6 Equipment Management

Minimization Measures, Avoidance Measures, and BMPs:

1) Use readily available equipment that causes the least biological and environmental damage (e.g. machines equipped with environmentally safer fluids or excavators with 360-degree rotating clam buckets, rubber instead of metal tracks, cranes, or spider hoes) to minimize vegetation removal or tearing up the ground.

2) Vehicle maintenance, refueling of vehicles and storage of vehicles, and fuel storage will occur at least 150 feet away from the OHWL or in a containment area approved by the maintenance manager.

3) Minimize tracking of material onto the highway.

4) At the end of the work shift, park equipment greater than 150 feet (horizontal) away from the OHWL or in an area approved by the maintenance manager.

23.7 Erosion Control and Site Management

Minimization Measures, Avoidance Measures, and BMPs:

1) If time and circumstances allow, the maintenance manager will flag the boundaries of the clearing limits. Ground will not be cleared beyond the flagged area unless circumstances change.

2) If vegetation in the riparian area must be cleared, trim at ground level (not grubbed) unless noxious weeds are present...

3) Minimize removal and damage to aquatic, riparian, and terrestrial vegetation during repairs (including riprap installation) without jeopardizing safety.

4) Minimize erosion and sediment, as appropriate for site conditions, by installing erosion control measure prior to conducting the repair. This may include, if appropriate and safe, installing measures in-channel.

5) Inspect erosion and sediment control measures daily to ensure adequate function.

6) Mobilize work crews to make immediate repairs to erosion controls or to install erosion controls during work or off-work hours. Repair or replace ineffective measures immediately. Install additional controls as needed.

7) Remove erosion and sediment control devices, where appropriate, following stabilization of the project and vegetation.

23.8 Drilling and Boring

Minimization Measures, Avoidance Measures, and BMPs:

1) If repairs require drilling and boring, the REC will coordinate with GeoTech staff and review appropriate program requirements.

2) All drilling equipment, drill recovery and recycling pits, and any associated waste or spoils must be completely isolated from surface waters, off-channel habitats and wetlands.

3) All waste or spoils must be covered, unless fully contained, if precipitation is imminent or falling.

4) Make a reasonable effort to recover all drilling fluids for recycling or disposal to prevent water contact.

5) When drilling is complete, remove as much remaining drilling fluid as possible from the casing (e.g., by pumping) to reduce turbidity when the casing is removed.

6) If a drill boring case breaks and drilling fluid or waste is visible in water or a wetland, make all possible efforts to contain the waste and contact NMFS within 48 hours.

24. Slides (Activity 181) and Settlements (Activity 182)

Description: Activity includes repair of settlements and slides by placing fill and removing material. Settlement/slide repairs are done primarily when a road is in danger of collapse and to forestall an emergency.

Goal: To proactively repair and restore the roadway to prevent a catastrophic failure.

Minimization Measures, Avoidance Measures, and BMPs:

1) Provide quick response and first inspection. Notify appropriate resource staff in a timely manner.

2) DM (or management designee) determines if the event warrants a declaration of an emergency. Review NMFS requirements and processes for emergency maintenance, as appropriate and applicable, as described in the bracketed text in Section 29 -Emergency Maintenance (Activity 180).

3) District manager ensures coordination with the REC. The REC assists with identifying environmental and/or cultural resource concerns, notifying regulatory agencies, coordinating other technical staff, and obtaining verbal approval or after-the-fact permits as required by the situation.

   This activity may require a Corps permit, a DSL permit, temporary water management, fish salvage, archaeological clearances, and review and compliance with NMFS review and processes, as appropriate and applicable, as described bracketed text in Section 29 - Emergency Maintenance (Activity 180). The bracketed text also applies, as appropriate and applicable, if ER monies are to be sought. The event may trigger coordination with ODFW on the fish passage laws.

4) In coordination with the REC (and/or the DSL, Corps, ODFW, NMFS, or USFWS), repair damage to fishery or water resources caused by ODOT maintenance responses to the emergency, as appropriate.

5) Avoid and/or minimize additional impacts to wetlands or waterbodies. Mitigation may be required depending on resource impacts.

6) Provide adequate erosion control or bank stabilization necessary to keep material from entering waterbodies.

7) Identify and plan for slide material storage as appropriate. Identify (and map) appropriate long and short- term material storage sites and obtain appropriate clearances for potential wetland, sensitive species, and archaeological/cultural impacts.

8) Incorporate bioengineering and fish and wildlife friendly designs, taking into account stability and safety during repair activities, as appropriate.

9) Explore alternatives to blasting in areas with ESA-listed birds or eagles present, if appropriate and emergency allows.

10) Review the archaeological buffered site list and proceed with work if no sites are listed as occurring within the action area; coordinate with the REC if sites are listed in the action area. If archaeological material is identified during any work activities stop work immediately and contact the REC.

11) Coordinate significant changes to the topography or vegetation within the riparian area with the REC and other regulatory agencies (including archaeological /cultural technical staff), as appropriate.

12) Follow ODFW in-water work guidelines or as coordinated with ODFW or NMFS. ODFW in-water work guidelines are located in Appendix C.

13) Place excess material above the OHWL where there is no opportunity for material to reach wetlands or waterways. Refer to the ODOT Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

14) Install erosion control measures in a timely manner, where they can be safely and successfully applied, in areas where erosion is likely to occur. Measures may include seeding and mulching specific areas with non-invasive species. Install silt fences and other devices as appropriate.

15) Look for opportunities to plant vegetation on failing banks to prevent further deterioration of the roadbed and reduce sediment and pollutants from reaching nearby waterbodies.

16) Refer to the ODOT Erosion and Sediment Control Guide for Routine Maintenance Activities (current version) for guidance on selection, installation, maintenance, and removal of erosion and sediment control measures.

Any installation of new material that exceeds the amount of material removed by bank erosion (below *OHWL*) will constitute a significant action. Increases in the material profile will require additional coordination with regulating agencies.

If a Corps permit or DSL permit is required or the event may qualify for ER reimbursement, see bracketed text in Section 29 - Emergency Maintenance (Activity 180) for additional BMPs to be implemented to meet Corps requirements and to comply with the current version of SLOPES.

25. Cleanup of hazardous materials spills (Activity 307)

Description: Activity involves all work associated with hazardous materials abandoned, leaked, or spilled on ODOT property by parties other than ODOT. Work includes identifying, testing, removing, and disposing of the involved material and restoring the site as needed.

Goal: To contain and then clean up hazardous material to protect human health, safety, and the environment. The following BMPs should be implemented in a manner that does not impede cleanup activities.

Minimization Measures, Avoidance Measures, and BMPs:

1) Follow the current ODOT "First Responder Guide" and applicable ODOT safety standards.
2) Contain cleanup activities and equipment to the right-of-way or other traffic areas, unless doing so interferes with spill response, public safety or traffic control.
3) Allow the responsible party or cleanup contractor to conduct emergency response actions and cleanup necessary to protect human health, safety and the environment.
4) Contact the REC, when time allows but as soon as feasible, to check for potential archaeological sites.
5) If an archaeological site is identified as occurring in the immediate vicinity of the spill, notify the ODOT Haz Mat Coordinator and ensure the responsible party and their contractor are also notified.
6) The responsible party and their contractor are responsible for coordinating with the SHPO and complying with all archaeological requirements.
7) If ODOT issues a permit for cleanup, include requirements to obtain archaeological clearance and comply with all federal and state archaeological resource protection laws.

26. Dust Abatement (No Activity Number)

Description: Activity is the application of dust palliatives to control dust generated during routine activities. ODOT uses palliatives to control dust on access roads, maintenance yards, and slide areas. Dust palliatives may include water, calcium magnesium acetate, magnesium chloride, or lignin sulfonates, applied in a liquid form. Other types of dust palliative products may be used as approved by NMFS and other partner agencies on a case-by-case basis.

Goal: To control dust during maintenance activities to protect air quality.

Minimization Measures, Avoidance Measures, and BMPs:

1) Construct gravel berms at the low shoulders of the roadway during preparation for application of dust Palliatives to inhibit liquid palliatives from entering waters of the state, where appropriate.
2) Eliminate the application of dust palliatives during rain.
3) Use water (whenever feasible) as a dust palliative.

4) Apply materials in a manner that is not detrimental to either water or vegetation.
5) Apply materials in accordance with the manufacturers' recommendations.

6) Provide adequate spill containment materials onsite when palliatives are applied.
7) Dispose of excess materials per manufacturers' recommendations.

Acronyms

APHIS	Animal and Plant Health Inspection Service
BLM	Bureau of Land Management
BSL	Archaeological Buffered Site List
BMP	Best Management Practices
Corps	U.S. Army Corps of Engineers
DBH	diameter at breast height
DEQ	Oregon Department of Environmental Quality
DSL	Oregon Department of State Lands
EFH	essential fish habitat
EMS	Environmental Management System
EPA	Environmental Protection Agency
ER	Emergency Response
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
HCP	Habitat Conservation Plan
IPM	Integrated Pest Management (Integrated Vegetation Management)
IVM	Integrated Vegetation Management
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
MSA	Magnuson Stevens Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration Fisheries Division
NON	Notice of Noncompliance
NPDES	National Pollutant Discharge Elimination System
ODA	Oregon Department of Agriculture
ODFW	Oregon Department of Fish and Wildlife
ODOT	Oregon Department of Transportation
OERS	Oregon Emergency Response System

OHWL	Ordinary High Water Line
ORS	Oregon Revised Statute
QNM	Quarry Noise Model
RAZ	Restricted Activity Zone Map
REC	ODOT Region Environmental Coordinator
RES	Resource Map
ROW	Right-of-way
SELDM	Stochastic Empirical Loading and Dilution Model
SHPO	State Historic Preservation Office
SLOPES	Standard Local Operating Procedures for Endangered Species
SMA	Special Management Area
STTC	Stormwater Technology Testing Center
T2	Technology Transfer
TMM	Transportation Maintenance Manager
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VMS	Variable Message Sign
WS	Wildlife Service

Definition of terms

Bioengineering: Streambank stabilization techniques that include plants and organic materials incorporated, as appropriate, into riprap.

Channel: A channel is a feature that contains a natural stream. It may or may not be manmade.

Clear zone: The unobstructed, traversable area provided beyond the edge of the through traveled way for the recovery of errant vehicles. The clear zone includes shoulders, bike lanes, and auxiliary lanes, except those auxiliary lanes that function like through lanes. The AASHTO guide provides various clear zone distances based on design speed, slope, crash history, horizontal curvature, non-recoverable foreslope, etc.

Cultural Resources: Includes both archaeological and historic built environment.

Debris: Debris includes soil, rock, construction material, or vegetation placed in such a way so as to bury and prevent the growth vegetation (e.g. slash pile). Whole trees, individual logs, accumulations of large wood, and log jams are not considered debris. Brush piles approved by ODFW or used for erosion control are not considered debris.

Ditch: A manmade conveyance feature constructed for drainage. It does not contain a stream or waters originating from a stream. A ditch may (or may not) contain fish and/or wetland vegetation.

Dust Palliative: A chemical or water solution used to reduce dust that results from activities performed on access roads, maintenance yards, and slide areas. Dust palliatives may include water, calcium magnesium acetate, magnesium chloride, or lignin sulfonates, applied in a liquid form.

Emergency: Immediate action is required to repair a structure or facility that has failed or is in imminent danger of failing. The decision that the problem is an emergency is based on the best professional judgment of the maintenance managers responding to the problem. Although there would not be enough time for design and environmental documentation prior to the repair, ODOT maintenance managers will coordinate with Environmental and Hydraulic Engineering Section staff to determine the appropriate solutions (when time allows). In circumstances where a Corps permit may be required in the solution or ER funding may be sought the BMPs found in the current version of SLOPES will be implemented as appropriate. See Section 29 - Emergency Maintenance (Activity 180). In that case, the District Manager will declare an emergency for that particular event.

Enhancement: Activities performed by maintenance that improves resource conditions, without any benefit to the transportation system. Enhancements by maintenance may be inappropriate use of gas tax dollars and beyond the scope of maintenance. Examples may include installing bat boxes on bridges.

Fallback: Material that is intended to be removed from an area but drops out of or overflows from the bucket.

Federal nexus: A federal agency funds, authorizes or carries out the program or project. Federal agency determines effects. Federal agency consults with NOAA or USFWS.

Fishway: A set of human-built and/or operated facilities, structures, devices, and measures that together constitute are critical to the success of, and were created for the sole purpose of providing upstream fish passage at artificial or natural obstruction.

Hazard tree(s): A tree or trees that have the potential to fall due to structural defect or site conditions (e.g. weighted slopes) that may result in property damage or personal injury. Trees or snags near the highway that are weakened, unsound, undermined, leaning, or exposed so they may fall across the transportation system or adjacent properties.

Imminent Hazard Tree(s): A hazard tree that poses an immediate and substantial risk to safety, property, or operations. The risk should be to the degree that traffic should be restricted or prohibited from using the highway until the unsafe condition is remedied.

Large Wood: Large wood means a tree, log, or root wad that is large enough to dissipate stream energy associated with high flows, capture bedload, stabilize stream banks, influence channel characteristics, and otherwise support aquatic habitat function. For bioengineering purposes, large wood should not be less than 18" diameter. Lengths vary upon application. Large wood may have to be larger diameter and length depending upon site conditions and hydrology. Diameters above 35" should be considered when functioning as key pieces.

Mitigation: Replacement of resources damaged or impacted as a result of a permitted activity or performing some other activity that offsets or alleviates such damage.

Ordinary High Water Line (OHWL): Jurisdictional boundary on freshwater streams that defines where DSL and Corps regulations apply. That line on the bank to which the high water rises annually in season, excluding exceptionally high water levels caused by large flood events. The OHWL is determined in the field based on physical indicators including a clear natural line impressed on the bank and change in vegetation from riparian to upland. If there is doubt as to the demarcation, contact the REC. Other terms that are used interchangeably include: ordinary high water mark, ordinary high water line, ordinary high water elevation, bank-full elevation, and top of bank.

Region Environmental Coordinator (REC): Initial contact person for maintenance forces. The REC provides technical assistance, direction, and coordination on environmental issues for maintenance actions and coordinates other technical experts as appropriate for maintenance actions (temporary water management, erosion control, etc.)

Riparian: That area that includes the stream channel, the flood plain, and upland area within 150 feet measured from the ordinary high water line.

Routine Maintenance: Recurring activities (scheduled or predictable) that are needed to maintain the functional integrity of the existing transportation facility.

Special Management Area (SMA): A Special Management Area (SMA) is an identified location along an ODOT right-of- way where protected natural or cultural resources are found and where maintenance actions are altered to accommodate the resource. These resources are protected under state or federal law and require unique or modified maintenance actions to ensure continued viability of the resource.

Temporary Water Management: A temporary containment or a dewatering/rewatering system to effectively isolate the in-stream waters from the work area.

Tree: Tree species that is greater than 8" Diameter at Breast Height (DBH).

Unwanted vegetation: Vegetation within the right-of-way that is (or is likely to) impact the safety or integrity of the highway. Examples include: vegetation that obstructs safety features, signs, delineators, safety structures, or structures that require inspection; vegetation that limits sight distance, impedes drainage, increase fire hazard, or breaks up pavement; and hazard trees. Unwanted vegetation also includes vegetation classified by the Oregon Department of Agriculture's (ODA) Noxious Weed Policy and Classification Guide. Noxious weeds managed for reasons other than safety will be on a case-by-case basis as outlined with this Guide (Level of Service definition, approved by MLT in April 2008).

Waterbody: Includes any river, stream, creek, ditch, wetland, *channel*, or other waterway that holds water anytime during the year.

Water Diversion: A temporary water management strategy to bypass moving water around a culvert, around the work zone, and maintaining downstream flow.

Waters of the State: Natural waterways including all tidal and non-tidal bays, intermittent and perennial streams, lakes, wetlands, and other bodies of water in this state (navigable and non-navigable) including that portion of the Pacific Ocean, which is in the boundaries of this state. "Waters of the State" does not include the ocean shore, as defined in ORS 390.605.

List of appendices

Appendix A: USFS/ODOT Memorandum of Understanding

Appendix B: Management of Highway Maintenance Generated Materials (aka Materials Management Chart)

Appendix C: ODFW In-Water Work Window

Appendix D: NMFS Fish Screen Criteria

Appendix E: Highway Division Directive on Special Management Areas

Appendix F: Pesticide-Treated Wood

Appendix G: Emergency Authorization Form

Appendix H: Section 10 Waterways (Rivers and Harbors Act)

Appendix I: Beaver Dam Modification Flowchart

APPENDIX A

2018 USFS-ODOT Memorandum of Understanding (MOU)

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2020

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FS Agreement No. 18-MU-11062751-045

ODOT Misc. Contracts & Agreements No. 32935

MEMORANDUM OF UNDERSTANDING
between the
STATE OF OREGON
DEPARTMENT OF TRANSPORTATION
and the
USDA, FOREST SERVICE
PACIFIC NORTHWEST REGION

This MEMORANDUM OF UNDERSTANDING (MOU) is hereby made and entered into by and between the State of Oregon, Department of Transportation, hereinafter referred to as "ODOT," and the USDA, Forest Service, Pacific Northwest Region, hereinafter referred to as the "U.S. Forest Service," both herein referred to individually or collectively as "Party" or "Parties."

Title: State Highways Over National Forest Lands

I. PURPOSE AND SCOPE:

1. The purpose of this MOU is to document the cooperation between the Parties to coordinate transportation activities of mutual interest involving state highways on, or accessing, lands managed by the U.S. FOREST SERVICE. The scope of this MOU is limited to construction activities, maintenance and operation of state highways within the road easement or right-of-way. This MOU supersedes MOU 12-RU-11060051-003, ODOT Misc. Contracts and Agreements No. 28729, dated July 9, 2012. MOU 12-RU-11060051-003, ODOT Misc. Contracts and Agreements No. 28729 will terminate upon execution of this MOU.

2. U.S. FOREST SERVICE, Forest Supervisors, and ODOT, Region Managers, are encouraged to coordinate and establish the appropriate document for activities of mutual interest that are not covered by this MOU (e.g., winter recreation, etc.).

II. STATEMENT OF MUTUAL BENEFIT AND INTERESTS:

This MOU establishes procedures for coordination of transportation activities involving State highways to and on lands administered by the U.S. FOREST SERVICE. Both ODOT and the U.S. FOREST SERVICE will benefit from this coordination. ODOT has jurisdiction over the highways, and is responsible for their management and operation. The U.S. FOREST SERVICE has a vested interest in the highways as they provide critical access to National Forest lands it is responsible for managing. Therefore, it is of mutual interest to, as well as the responsibility of, both Parties to ensure safe access over these highways.

In consideration of the above premises, the Parties agree as follows:

III. COORDINATION

1. U.S. FOREST SERVICE Forest Supervisors and ODOT Region Managers will coordinate all activities included herein, unless otherwise noted. They will jointly agree on items to be coordinated by the U.S. FOREST SERVICE District Rangers and ODOT District Managers or Area Managers.
2. The U.S. FOREST SERVICE Regional Engineer and ODOT Technical Services Manager will coordinate programs, final easements, and any items where the U.S. FOREST SERVICE Forest Supervisor or the ODOT Region Manager request assistance.
3. The U.S. FOREST SERVICE Regional Transportation Program Manager and ODOT Maintenance Environmental Program Manager will coordinate an annual meeting to review concerns, practices, any MOU modification recommendations, and to share organizational/contact information.

IV. PROGRAMS

1. For State highways accessing, or on, National Forest lands, ODOT will consult with U.S. FOREST SERVICE during development of the ODOT four-year Statewide Transportation Improvement Program (STIP). Copies of the draft and approved program will be provided to all U.S. FOREST SERVICE Forest Supervisors in Oregon and Regional Forester by ODOT or by notification of where it can be accessed electronically.
2. The Federal Lands Access Program provides funds to improve state/local routes providing access to Federal lands. Funding decisions will be made locally by the Programming Decisions Committee (PDC) comprised of ODOT, FHWA-Western Federal Lands Highway Division (WFLHD), and a political subdivision of the State.
3. The PDC will consult with all federal land management agencies, including the U.S. FOREST SERVICE, prior to making programming decisions.

V. PLANNING

1. ODOT will coordinate with U.S. FOREST SERVICE at project inception for projects using or affecting National Forest lands or interests. U.S. FOREST SERVICE will consult with ODOT on projects that may affect State highways, including State highways on National Forest lands by easement.

    a. ODOT and U.S. FOREST SERVICE will agree on needed environmental documents and lead agency responsibility when ODOT conducts work outside ODOT's existing right-of-way/easement, or seeks to expand the transportation right-of-way/easement. ODOT will have the primary responsibility for highway related projects.

    b. ODOT will collaborate closely with USFS and share environmental documents and information, as requested, for transportation projects occurring fully within ODOTs existing right-of-way/easement.

    c. ODOT is responsible for compliance with National Environmental Policy Act (NEPA) and all applicable state and federal environmental laws and regulations while conducting transportation projects that are fully located within ODOT's existing right-of-way/easement.

d. ODOT and U.S. FOREST SERVICE will cooperate in development of a single set of environmental documents for each project where ODOT conducts work outside ODOT's existing right-of-way/easement or seeks to expand the transportation right-of-way/easement, and jointly seek public involvement when necessary.

e. U.S. FOREST SERVICE will provide early guidance and suggestions to ODOT regarding project consistency with the applicable forest plan(s).

f. Draft and final environmental documents will be circulated to each Party for review before distribution for public comment.

g. ODOT and U.S. FOREST SERVICE will address preventing the introduction and spread of invasive plants and pathogens in proposed projects (See ODOT Standard Specifications, Sections 01030.02, 01030.30 and 01030.42).

h. The 2015 Pollinator-Friendly Practices for Federal Lands, issued by the United States Department of Agriculture, the United States Department of the Interior, and the United States Environmental Protection Agency, will be used for promotion of pollinator habitat."

i. ODOT and U.S. Forest Service will reference the revised Roadside Revegetation: An Integrated Approach to Establishing Native Plants and Pollinator Habitat, as well as the Ecoregional Revegetation Application (ERA) online utility when appropriate (www.nativerevegetation.org).

VI. PRECONSTRUCTION

1. ODOT and U.S. FOREST SERVICE will coordinate early in project development/design and participate in field reviews for projects.
2. ODOT and U.S. FOREST SERVICE will agree which requirements will be provided in the plans, specifications and provisions, and which requirements will be placed in the stipulations that accompany the Letter of Consent. Written stipulations should be kept to a minimum.
3. ODOT and U.S. FOREST SERVICE agree that designs and construction plans for projects shall comply with "*Preventing and Managing Invasive Plants Record of Decision*," (USFS Region 6, October 2005) (which amended Forest Land Management Plans), standards 2 (equipment washing), 3 (weed free straw and mulch), 7 (weed free gravel, fill, sand, and rock), and 13 (using genetically appropriate native plant materials for re-vegetation work). Standard 7 can be met by using U.S. FOREST SERVICE, ODOT, or County weed specialists to review material sources before integrating materials into the road. Standard 13 can be met by having a U.S. Forest Service revegetation specialist develop or review/approve the revegetation prescription, including species and seed sources.'

VII. RIGHTS-OF-WAY

1. The standard "U.S. Department of Transportation (USDOT) Easement Deed" will be used on all Forest Highway and Federal-Aid System rights-of-way within National Forest boundaries. ODOT and U.S. FOREST SERVICE will adhere to the requirements set forth in the 1998 Memorandum of Understanding between United States Department of Agriculture, Forest Service and USDOT Federal Highway Administration Regarding the Appropriation and Transfer of National Forest System Lands for Highway Purposes.

2. ODOT will submit proposed right-of-way and construction plans and specifications for projects to U.S. FOREST SERVICE for review and approval. If right-of-way is necessary, U.S. FOREST SERVICE will prepare and submit draft stipulations to ODOT. U.S. FOREST SERVICE and ODOT will cooperate to prepare easement or right-of-way plan/plat that meets legal requirements for monumentation, based on approved construction plans, specifications and stipulations.
3. ODOT will submit an application (letter) to FHWA Division Administrator requesting a USDOT easement for National Forest System lands needed for a project. The application will include the accepted plan/plat and description of the land.
4. U.S. FOREST SERVICE Regional Forester will issue Letter of Consent with stipulations, if any, upon receipt of application from FHWA Division Administrator and return signed easement or right-of way plan/plat to FHWA Division Administrator. Said Letter of Consent will provide for immediate entry upon National Forest lands for construction or reconstruction of said highway and for the transfer of right-of-way to ODOT through issuance of a USDOT Easement Deed.
5. Significant changes in easement or right-of-way width occurring during construction will require an amendment to the recorded Easement Deed.
6. Use or occupancy of National Forest lands for other highway related uses outside the easement areas, including temporary construction areas, will require a U.S. FOREST SERVICE issued Special Use Permit.
7. ODOT and U.S. FOREST SERVICE agree to issue each other the appropriate permits and easements necessary for construction in a timely manner, provided that the conditions of Sections III, IV, V and VI of this MOU have been fulfilled.
8. ODOT and U.S. FOREST SERVICE agree that they will convert, as funding permits, older rights of use and special use permits to USDOT easements for STIP projects with federal funding

VIII. CONSTRUCTION/RECONSTRUCTION

1. ODOT will designate a project manager who will represent ODOT in all matters pertaining to a project. ODOT will inform U.S. FOREST SERVICE of project advertisement and award.
2. ODOT will notify and obtain approval from U.S. FOREST SERVICE for any changes that will affect National Forest lands beyond that of the original contract. U.S. FOREST SERVICE will act promptly to provide approval.
3. ODOT will notify U.S. FOREST SERVICE when a project nears completion, at which time U.S. FOREST SERVICE will indicate if they choose to participate in the final review.

IX. MAINTENANCE

1. The term "maintenance" means the preservation of the entire highway, including surface, shoulders, roadsides, structures, and such traffic-control devices as are necessary for safe and efficient utilization of the highway (23 U.S.C. 101).
2. Road maintenance activities that are state funded and state directed on state highway rights of way and/or easements through National Forest lands are not subject to NEPA requirements because these activities are not subject to Forest Service control and responsibility (FSH

1909.15 Chapter 01 and 40 CFR 1508.18). ODOT is responsible for meeting all applicable state and federal environmental regulatory requirements.

3. ODOT has consulted on Road Maintenance activities with NOAA Fisheries and operates under best management practices as described in "Routine Road Maintenance Water Quality and Habitat Guide, Best Management Practices". NOAA Fisheries has stated that prohibitions of section 4(d) of the Endangered Species Act will not apply to actions carried out in compliance with "Routine Road Maintenance Water Quality and Habitat Guide, Best Management Practices" guide.
4. ODOT has also coordinated with USFWS on the following documents to ensure that requirements of the Endangered Species Act (ESA) and the Migratory Bird Treaty Act are met during routine maintenance activities:
    a. Migratory Bird Treaty Act Highway Division Directive
    b. Special Management Areas Highway Division Directive
    c. ODOT Statewide Habitat Conservation Plan for Routine Maintenance Activities (Permit TE28451C-0; USFWS Take Permit for certain listed plants and butterflies)
    d. Bald Eagle Technical Services Advisory
    e. Peregrine Falcon Management Plan
    f. ODOT Routine Road Maintenance, Water Quality and Habitat Guide, Best Management Practices
5. The provisions contained in this section pertain only to maintenance work performed under ODOT's control that may affect National Forest lands. The ODOT District Manager will coordinate such maintenance activities with local U.S. FOREST SERVICE staff.
6. During winter operations, surface anti-icing/deicing solutions may be used to provide a safer driving surface. These operations will be performed according to the "Routine Road Maintenance Water Quality and Habitat Guide, Best Management Practices" and use chemicals within the Qualified Products List of the Pacific Northwest Snowfighter products list.
7. ODOT maintenance activities to be coordinated with the U.S. FOREST SERVICE shall include, but are not limited to:
    a. All maintenance activities that involve slash burning, the marking of trees over 6 inches dbh (diameter at breast height) to be felled except for danger trees classified as a danger (see Danger Tree Removal below), and the purchase of any timber to be removed.
    b. All maintenance activities that involve disposal of slough material, changes in road drainage patterns, and similar actions that affect National Forest lands outside the right-of-way/easement.
    c. The development of any material source or storage area not shown on approved construction plans.
    d. Snow and avalanche control (removal/storage).
8. For those activities that will be coordinated with the U.S. FOREST SERVICE, the U.S. FOREST SERVICE will:
    a. Expedite review on maintenance items requiring U.S. FOREST SERVICE concurrence. U.S. FOREST SERVICE will respond within 30 days of receiving the request for concurrence. Not providing a response within the 30 day period constitutes concurrence to those maintenance activities for which the concurrence was requested.

b. Assist ODOT maintenance forces with matters related to equipment parking and materials storage, emergency communications needs, material sources, and designation of slough and slide material disposal areas.

c. Advise ODOT of planned U.S. FOREST SERVICE activities that may have an impact on highway maintenance.

9. Danger Tree Removal: Danger trees will be identified using the most recent edition of the "Field Guide for Danger Tree Identification and Response" (Filip, G.; Barger, M.; Bronson, J.; Chadwick, K.; Collins, R.; Goodrich, B.; Kearns, H.; McWilliams, M.; Oblinger, B.; Omdal, D.; Ramsey, A.; and Saavedra, A. 2016. Field Guide for Danger-Tree Identification and Response along Forest Roads and Work Sites in Oregon and Washington. R6-NR-TP-021-2016. USDA Forest Service, Forest Health Protection, Pacific Northwest Region, Portland, OR. 120 pp).

   a. According to the referenced publication, trees have three failure potentials; Imminent, Likely, or Low. Typically, those trees that are classified with imminent failure potential that will intersect the travel way or clear zone represent a danger to the traveling public and workers and will be mitigated.

   b. The following describes mitigation required:

      i. Trees identified as a Danger, which typically are those with imminent failure potential, may be cleared by ODOT. Resultant logs can be positioned so they are stable and will not roll into the travel way or clear zone or decked for U.S. FOREST SERVICE disposal. ODOT is responsible for identification of these trees. U.S. FOREST SERVICE will communicate concerns over particular trees to the ODOT District Manager.

      ii. Trees that are not identified as a Danger, which typically are those with Low or Likely Failure Potential, will be identified jointly by ODOT and U.S. FOREST SERVICE personnel and removed by the U.S. FOREST SERVICE by whatever mechanism is available. When U.S. FOREST SERVICE does not have a mechanism available to them for the removal of potential danger trees, then the U.S. FOREST SERVICE and ODOT will cooperate in removal of these trees.

      iii. Warning signing, flaggers and other safety measures deemed necessary to protect highway traffic during danger tree removal operations will be required. ODOT is responsible for approval of all safety measures and traffic control plans before danger tree removal commences by any party or contractors thereof.

10. Vegetation Treatment: Vegetation treatments beyond that needed for highway maintenance (see paragraph 2 above), should be consistent with NEPA decisions and Forest Land Management Plans (Forest Plans), as amended by "*Preventing and Managing Invasive Plants Record of Decision*" (Forest Service Region Six, October 2005)". Use of herbicides to treat invasive or native vegetation is subject to specific project design criteria that vary from Forest to Forest, and will be consistent with relevant Forest Plans.

11. Invasive Plant Prevention:- "*Preventing and Managing Invasive Plants Record of Decision* (Forest Service Region Six, October 2005)" includes standards for invasive plant prevention. The standards relevant to road maintenance include Standard 3 (weed free straw and mulch), 7 (weed free gravel, fill, sand, and rock) and 8 (coordination of blading, brushing, and ditch cleaning). Standard 7 can be met by using U.S. FOREST SERVICE, ODOT, or County weed specialists to review material sources before integrating materials into the road. Standard 8 can be met by local weed specialists at U.S. FOREST SERVICE, ODOT, or County Extension

Agent consulting with ODOT District Managers on location of invasive plant populations and appropriate timing of brushing and ditch cleaning operations.

12. Pesticide Use: ODOT is responsible for obtaining National Pollution Discharge Elimination System (NPDES) or other applicable permits for pesticide use. The Forest Service is required to coordinate with states and others applying pesticides within National Forest system lands (FSH 2109.14 Chapter 13.11.) The primary tool for this coordination is the pesticide use proposal (see Appendix 4 attached). ODOT will submit a pesticide use proposal to the local Forest Service Pesticide Use Coordinator for review as soon as possible as work plans are developed, but at least 30 days ahead of any scheduled application. Pesticide use outside of state rights of way and easements are subject to Forest Service approval. In addition, ODOT will submit a report outlining pesticide use performed by the state on each National Forest, due by October 15 of each year.

II. SIGNS

1. Installing and Maintaining Signs. ODOT has authority and responsibility for the installation and maintenance of all signs within the right-of-way/easement of the State Highway System, except as noted in paragraph 3 in this section. All such signing will be in accordance with Oregon Standard Specifications, the Manual on Uniform Traffic Control Devices (MUTCD), the Oregon Supplements to the MUTCD, the "ODOT Sign Policy and Guidelines for the State Highway System" and Sign and Poster Guidelines for the Forest Service EM 7100-15 as appropriate.
2. ODOT is financially responsible for and will furnish, install, and maintain guide signs within the right-of-way/easement as requested by the U.S. FOREST SERVICE and approved by ODOT, for the following sign categories (Examples shown in Appendix 1). Sign requests will be made to the ODOT District Manager at least sixty (60) calendar days in advance by the U.S. FOREST SERVICE Forest Supervisor. A proposed sign plan will be provided by the US Forest Service that shows the signs and their proposed locations. ODOT will review, modify, and approve or deny the request.
    a. Approach signs for National Forest administrative facilities such as Ranger District and Supervisor offices that provide public services or functions
    b. Junction signs for important National Forest arterial routes.
    c. Directional signs to important destinations within the National Forest. The following conditions apply:
        i. Messages will be limited to no more than three (3) destinations at any single location, using location names identified on public use maps.
        ii. At areas where there are more than one Agency's facilities from one point on the highway, a generic recreation sign will be used with the represented Agencies' logos below the generic message.
        iii. Up to four symbol plaques may be used on single destination signs, but they will not be used on generic multi-agency signs.
        iv. Local road numbers as well as Agency road numbers may be used where appropriate. U.S. FOREST SERVICE provided distinctive route marker(s) may be used.

v. Advance destination signs will only be used where special emphasis is required. Examples are limited sight distance; high traffic volumes; multi-lane (more than 2) highways; and high-speed areas.

vi. Agencies are encouraged to work together to develop specific signing to multiple destinations.

3. U.S. FOREST SERVICE is financially responsible for and will furnish, install, and maintain the following sign categories:

a. Signs with pedestal bases such as large boundary or administrative site signs (Examples shown in Appendix 2).

b. The following signs are included in this category: National Forest Boundary (FE or FL); Recreation Site (RS); Headquarters (A or AS); and special interpretive. These signs are normally located outside the highway right-of-way/easement or at parking areas. A permit from ODOT is required for placement within the highway right-of-way/easement. All signs within the highway right-of-way/easement shall be installed on breakaway sign supports, or protected by barrier, or shall be removed by U.S. FOREST SERVICE when requested by ODOT.

c. U.S. FOREST SERVICE will furnish, install, and maintain all temporary warning, regulatory, and guide signs; other traffic control devices (such as delineators, barricades, and temporary pavement markings); and all other appropriate devices which are needed to warn and control traffic during emergencies, construction, or maintenance activities, for which the U.S. FOREST SERVICE is responsible.

4. ODOT and U.S. FOREST SERVICE will cooperate in installation and maintenance of the following sign categories (Examples shown in Appendix 3). Sign requests will be made to the ODOT District Manager at least sixty (60) calendar days in advance by the U.S. FOREST SERVICE Forest Supervisor. A proposed sign plan will be provided by the US Forest Service that shows the signs and their proposed locations. ODOT will review, modify, and approve or deny the request.

a. Recreation Fee signs and logos will be furnished by the U.S. FOREST SERVICE. ODOT will maintain the signs and logos including installing new signs and logos on existing posts as appropriate to inform motorists when recreation fees will be charged. This maintenance will be provided at ODOT expense. Installations requiring new posts will be charged to the U.S. Forest Service. Logos on existing guide signs that direct motorists to National Forest facilities where fees are required will be installed and maintained at ODOT expense.

b. National Forest Scenic Byway signs will be furnished by the U.S. FOREST SERVICE. ODOT will install and maintain the signs at ODOT expense. Installations requiring new posts will be charged to the U.S. Forest Service.

c. U.S. FOREST SERVICE administrative and recreation signs within the state highway right-of-way/easement not covered in other categories will be furnished by the U.S. FOREST SERVICE. ODOT will install and maintain these signs. Installations requiring new posts will be charged to the U.S. Forest Service). The U.S. FOREST SERVICE and ODOT will agree in a separate project agreement as to how maintenance and other installation expenses will be shared.

5. Highway Advisory Radio Signs. U.S. FOREST SERVICE will coordinate with and abide by ODOT requirements to obtain a permit for Highway Advisory Radio (HAR) signs. Requirements are listed in ODOT's "Guidelines for Highway Advisory Radios" and in the

"Sign Policy and Guidelines for the State Highway System". These signs will provide the U.S. FOREST SERVICE the capability to communicate forest information to motorists using the vehicle's AM radio receiver. The Forest Service "shield", "National Forest" logo, and "Northwest Forest Pass" logo may be incorporated into the HAR sign layout. U.S. FOREST SERVICE will reimburse ODOT for all costs involved in the fabrication, installation, and maintenance of the HAR signs. Any reimbursement(s) will be authorized by a separate appropriate document

6. Signs off the Right-of-way/easement. Signs installed off the right-of-way/easement, and visible to highway travelers, will comply with "The Federal Highway Beautification Act of 1965, Part 750, Subpart B, National Standards for Official and Directional Signs (750.153 and 750.154)", the Oregon Motorist Information Act; and ORS 377.505 to 377.545. Permits for such signage will be obtained from the ODOT – Outdoor Advertising Unit.

7. U.S. FOREST SERVICE Shield. The Parties recognize the U.S. FOREST SERVICE "shield" and "National Forest" script logo are copyrighted by the Department of Agriculture and will be allowed and should be used as U.S. FOREST SERVICE identification as approved by the U.S. FOREST SERVICE. The U.S. FOREST SERVICE logo is not needed on a sign if specific words such as "National Forest" are used.

III. INCIDENT MANAGEMENT

1. During an incident management activity such as a fire suppression emergency, the U.S. FOREST SERVICE and ODOT maintenance personnel will coordinate to identify the signing requirements and accomplish the installation of signs and traffic control devices as soon as possible after the emergency occurs. ODOT will work with the U.S. FOREST SERVICE to identify any hazards that may not be visible at night and have the necessary signs, barricades, and flashers in place prior to darkness to protect both the traveling public and firefighting personnel.
   a. In addition to the above, the Parties agree as follows:
      i. All temporary traffic control (TTC) devices and activities, including signage, piloting, and flagging on ODOT roads shall comply with the standards and guidelines of the Manual on Uniform Traffic Control Devices (MUTCD), ODOT supplements to the MUTCD, the Oregon Temporary Traffic Control Handbook, and the ELM-provided sign catalog and drawings to the degree practicable.
      ii. ODOT, the Incident Management Team (IMT) for incident activities, and/or local agencies will cooperatively develop TTC plans where warranted.
      iii. Traffic control flaggers must be certified to conduct flagging operations on ODOT roads. ODOT recognizes certification acquired in other states as being valid on ODOT roads. All standards in MUTCD Section 6E shall be followed for all flagging operations. Flaggers shall wear safety apparel meeting the requirements of International Safety Equipment Association of American National Standard for High Visibility Apparel and labeled as meeting the current American National Standards Institute standard performance for Class 2 risk exposure, and these requirements are hereby incorporated herein by reference.
      iv. ODOT is the only authority that can establish speed-limits on roads under ODOT jurisdiction. Advisory or regulatory speed zones will not be allowed below 45 MPH unless special circumstances or situations warrant.
      v. ODOT is the only authority that can designate and legally close roads under ODOT jurisdiction. ODOT grants Incident Commanders (IC) of incident management activities limited authority to institute initial emergency road closures that are necessary for immediate safety concerns under this MOU. ODOT will be notified immediately, which is typically within the first half-hour of an emergency closure. The sooner the notification the sooner traveler information can be disseminated to the

traveling public for alternate routing. The decision to re-open, keep the road closed and any new closures will remain the responsibility of ODOT. This decision is typically based on highway motorist safety.

vi. ODOT is the only authority that can design and implement a detour of a highway under their jurisdiction.

vii. All Parties will mutually work together within the Incident Command System (ICS). ODOT is willing to bring its authority into the unified command structure as necessary.

b. All Parties will document information related to TTC decisions, requests, orders, etcetera, in order to determine appropriate fiscal responsibility, as needed on a case-by-case basis. Reimbursement is situation dependent and accurate records must be kept. A Resource Order is required for payment purposes.

i. An accurate record is defined as:
A detailed description of work ordered by the IMT (date, time and name of IMT member ordering the work).

1. Inclusive dates and locations of work performed.
2. Number of ODOT resources (employees, signs, etc.) and rates of each involved.
3. Resource Order and procurement document allowing for payment associated with incident management activities detailed description of work ordered by the IMT.

ii. Payment will be made for the cost of services that are necessary due to U.S. FOREST SERVICE incident management activities, such as a closure to enable a back burn or to use highway as a firebreak/control line, or signing for establishment of a base camp (except as provided in this section under 3a below)

iii. A U.S. FOREST SERVICE incident management activity is defined as an activity adjacent to, on, or above the roadway involving: personnel, equipment such as trucks or helicopters, and congestion related to managing the incident, such as traffic in and out of a staging area or command post that alters the primary use of the highway as a transportation structure that provides safe and open travel for the public and therefore requires highway closure, signs, TIC, or other resources to manage.

iv. In general the U.S. FOREST SERVICE is financially responsible for any road closures, TTC, signing, or other services or resources necessary or requested due to incident management-related activities or decisions, after the initial ODOT response.

v. If there is any incident management activity triggering the need for traffic control in a 24 hour period as defined from midnight to midnight, the costs for the entire 24 hour period is treated in its entirety as an incident management activity for accounting purposes. This will be determined on a daily basis and agreed to by both Parties.

vi. Damages may be reimbursable through the appropriate agency claim process.

vii. The U.S. FOREST SERVICE may request special use or closure of the highway to enable such operations as a back burn or may request special signing for certain instances (such as for establishment of base camp), through the ODOT District Manager or designee.

c. The U.S. FOREST SERVICE and ODOT will coordinate on the removal of incident-caused and other hazard trees within striking distance of the highway to alleviate this risk in the most safe and efficient manner as is practical.

2. The U.S. FOREST SERVICE shall:

a. Assume responsibility including financial for furnishing, installing, maintaining, and operating warning and directional signing, flagging, and piloting needed for incident management activities beyond the initial ODOT response and throughout the duration of any such incident management activities. The initial ODOT response is limited to the first 24 hours. The assumption of this responsibility will only take place after a transfer of responsibility from ODOT to the IC through the ODOT District Manager or designee.

b. Coordinate with the appropriate ODOT District Manager or designee if special circumstances or situations warrant ODOT establishing regulatory speed zones or other regulatory traffic control, such as "no stopping" and "no parking" zones on roads under ODOT jurisdiction. Depending on availability of ODOT signs and personnel, the U.S. FOREST SERVICE may be asked by ODOT to provide regulatory signing as necessary for incident management activities.
c. Coordinate with the appropriate ODOT District Manager or designee if special circumstances or situations warrant posting advisory speeds below posted speeds on roads under ODOT jurisdiction.
d. Notify the appropriate ODOT District Manager or designee at the earliest time practicable of planned incident management, activities including air operations, back bum, or utilization of the state highway as a firebreak, that can impact traffic on roads under the jurisdiction of ODOT, and include in its notification to the appropriate ODOT District Manager or designee relevant information such as size and duration of the activity.
e. Provide a catalog of standard signs with approved messages conforming to MUTCD, and provide standard drawings showing typical layout of the catalog signage for the most common incident activities needing temporary traffic control.
f. Coordinate with ODOT when standard sign messages do not meet specific on-site conditions, and when circumstances require the use of messages not identified in the catalog.
g. Remove all traffic control devices when no longer appropriate or necessary for incident management activities.
h. Coordinate all proposed state highway traffic detours through the ODOT District Manager or designee.
i. Make available to ODOT a list of appropriate U.S. FOREST SERVICE regional and local contacts, including the 24-hour duty officer.

3. ODOT shall:
   a. Assume responsibility including financial for furnishing, installing, and maintaining initial temporary traffic controls as necessary; including regulatory and warning signs, flagging, and piloting operations for the first 24 hours of incident management activities, such as the establishment of an incident base, that impact ODOT highways. After that, ODOT may authorize the U.S. FOREST SERVICE to furnish, install, and maintain at the U.S. FOREST SERVICE's expense, continued and any additional temporary traffic control signing as deemed necessary by the ODOT District Manager or designee for U.S. FOREST SERVICE incident management activities on highways in accordance with the provided catalog and sign placement drawings (noted in 2e). Any additional documents or permits such as encroachments permits will not be required under this MOU for temporary traffic control.
   b. Assume responsibility including financial for furnishing, installing, and maintaining traffic control beyond the initial 24 hours for all services not related to U.S. FOREST SERVICE incident management activities, such as smoke caused reductions of visibility or other highway safety related issues.
   c. Grant limited authority to the IC to institute initial emergency closures of roads under ODOT jurisdiction where incident effects, such as fire behavior, are changing rapidly and may have substantial immediate effects on public safety. The IC shall notify the ODOT District Manager or designee as soon as feasible to coordinate additional legal closures if warranted.
   d. Furnish liaison officer to the IC where substantial impacts from incident management activities are or may involve roads under ODOT jurisdiction.
   e. Each year make available to the U.S. FOREST SERVICE an electronic (pdt) map and supplemental documents that details ODOT:
      i. Maintenance district areas.
      ii. District Manager names and phone numbers.

iii. Maintained routes with route numbers and reference points.
iv. List of RWIS (Remote Weather Information System) sites.
v. .List of permanent variable message sign locations.
vi. ODOT HAR (Highway Advisory Radio) system and Fixed and Portable Variable Message signs, if available, for public and/or overall safety messages as appropriate for incident management. Messages will be developed on a case-by-case basis as conditions wan-ant in coordination with ODOT. Variable Message Sign messages will be in compliance with "Guidelines for the Operation of Variable Message Signs on State Highways" (Oregon Department of Transportation, 2013 or most recent revision) and "Standard Message List for Portable Variable Message Signs On State Highways". Highway Advisory Radio messages will be in compliance with "Guidelines for the Operation of Highway Advisory Radio and Traveler's Advisory Radio on State Highways".

IV. ACCESS MANAGEMENT

1. Access to interstate highways will be only by established interchanges, except for emergency use in accordance with the rules and regulations governing the interstate highway system.
2. U.S. FOREST SERVICE and its permittees will obtain an approach road permit from ODOT when proposing approaches to State highways. ODOT and U.S. FOREST SERVICE will determine where to locate an approach where highway safety will not be jeopardized. New approaches will be at the expense of U.S. FOREST SERVICE or its permittees. Future maintenance of approaches will be covered in the Permit to Operate, Maintain and Use an Approach.
3. Except in access-controlled areas, temporary approaches required by U.S. FOREST SERVICE during firefighting or other emergencies may be constructed as necessary without formal ODOT approval. The appropriate ODOT District Manager will be notified as soon as practical. Necessary obliteration and restoration measures will be at no expense to ODOT. U.S. FOREST SERVICE will take precautions during such emergencies to safeguard the highway users. In access-controlled areas, ODOT Right-of-way procedures for temporary legal access will be followed.
4. This Agreement will serve as the Archaeological Resources Protection Act (ARPA) Permit for work (limited to pedestrian survey and shovel probing) performed by ODOT cultural resources specialists on U.S. Forest Service lands outside of ODOT right of way/easement. Contractors working on behalf of ODOT preparing for subsurface testing will be required to obtain Archaeological Resources Protection Act Permits as needed.

V. THIRD PARTY OCCUPANCY

1. In the case of a public utility, or any other third party occupancy permittee, wishing to exercise its right to locate on highway right-of-way/easement over National Forest lands, ODOT will advise the applicant that it must first apply to the Forest Supervisor for a permit for the land involved. ODOT will make final judgment as to applicant's occupancy of the highway right-of-way/easement, and may, after consultation with U.S. FOREST SERVICE and receipt of an approved U.S. FOREST SERVICE permit, issue a permit to the applicant.
2. ODOT and U.S. FOREST SERVICE will consult before any third party occupancy permits, or other encumbrances are acted upon. Placement and location of utilities shall conform to standard AASHTO and FHWA construction practices and procedures.

3. The applicant shall be held responsible for any damage to the highway resulting from utility placement, or any work associated with the permit.
4. ODOT and U.S. FOREST SERVICE will ensure the appropriate processes are adhered to for all third party occupancy permits.

VI. IT IS MUTUALLY UNDERSTOOD AND AGREED BY AND BETWEEN THE PARTIES THAT:

1. ESTABLISHMENT OF RESPONSIBILITY. This MOU is not intended to, and does not create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, by a party against the United States, its agencies, its officers, or any person.

2. RESPONSIBILITIES OF PARTIES. U.S Forest Service and ODOT and their respective agencies and office will handle their own activities and utilize their own resources, including the expenditure of their own funds, in pursuing these objectives. Each Party will carry out its separate activities in a coordinated and mutually beneficial manner.

3. PRINCIPAL CONTACTS. Individuals listed below are authorized to act in their respective areas for matters related to this MOU.

Principal ODOT Contacts:

ODOT Program Contact	ODOT Administrative Contact
Lucinda M. Moore, State Maintenance and Operations Engineer Maintenance and Operations Branch 455 Airport Road, Building K Salem, OR. 97301-3871 Telephone: (503) 986-3005 FAX: (503) 986-3032 Email: lucinda.m.moore@odot.state.or.us	Patti Caswell, Maintenance Environmental Program Manager, Maintenance and Operations Branch 455 Airport Rd, Building K Salem, OR 97301 Telephone: (503) 986-3008 FAX: (503) 986-3032 Email: patti.caswell@odot.state.or.us

Principal U.S. FOREST SERVICE Contacts:

U.S. FOREST SERVICE Program Contact	U.S. FOREST SERVICE Administrative Contact
Christy Darden, Director of Engineering Pacific Northwest Region 1220 SW 3rd Avenue Portland, OR. 97204 Telephone: (503) 808-2500 FAX: (503) 808-2511 Email: cdarden@fs.fed.us	Dennis Motsinger, Grant Management Spec. Pacific Northwest Region 1220 SW 3rd Avenue Portland, OR 97204 Telephone: (503) 808-2372 Email: dmotsinger@fs.fed.us

4. NON-LIABILITY. The U.S. Forest Service does not assume liability for any third party claims for damages arising out of this agreement.

5. NOTICES. Any communications affecting the operations covered by this agreement given by the U.S. Forest Service or ODOT is sufficient only if in writing and delivered in person, mailed, or transmitted electronically by e-mail or fax, as follows:

   a. To the U.S. Forest Service Program Manager, at the address specified in the MOU.

   b. To ODOT, at ODOT's address shown in the MOU or such other address designated within the MOU.

   c. Notices are effective when delivered in accordance with this provision, or on the effective date of the notice, whichever is later.

6. PARTICIPATION IN SIMILAR ACTIVITIES. This MOU in no way restricts the U.S. Forest Service or ODOT from participating in similar activities with other public or private agencies, organizations, and individuals.

7. ENDORSEMENT. Any of ODOT's contributions made under this MOU do not by direct reference or implication convey U.S. Forest Service endorsement of ODOT's products or activities.

8. NONBINDING AGREEMENT. This MOU creates no right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity. The Parties shall manage their respective resources and activities in a separate, coordinated and mutually beneficial manner to meet the purpose(s) of this MOU. Nothing in this MOU authorizes any of the Parties to obligate or transfer anything of value.

   a. Specific, prospective projects or activities that involve the transfer of funds, services, property, and/or anything of value to a party requires the execution of separate agreements and are contingent upon numerous factors, including, as applicable, but not limited to: agency availability of appropriated funds and other resources; cooperator availability of funds and other resources; agency and cooperator administrative and legal requirements (including agency authorization by statute); etc. This MOU neither provides, nor meets these criteria. If the Parties elect to enter into an obligation agreement that involves the transfer of funds, services, property, and/or anything of value to a party, then the applicable criteria must be met. Additionally, under a prospective agreement, each party operates under its own laws, regulations, and/or policies, and any Forest Service obligation is subject to the availability of appropriated funds and other resources. The negotiation, execution, and administration of these prospective agreements must comply with all applicable law

   b. Nothing in this MOU is intended to alter, limit, or expand the agencies' statutory and regulatory authority.

9. USE OF U.S. FOREST SERVICE INSIGNIA. In order for ODOT to use the U.S. Forest Service insignia on any published media, such as a Web page, printed publication, or audiovisual production, permission must be granted from the U.S. Forest Service's Office of Communications. A written request must be submitted and approval granted in writing by the Office of Communications (Washington Office) prior to use of the insignia.

10. MEMBERS OF U.S. CONGRESS. Pursuant to 41 U.S.C. 22, no U.S. member of, or U.S. delegate to, Congress shall be admitted to any share or part of this agreement, or benefits that may arise therefrom, either directly or indirectly.

11. FREEDOM OF INFORMATION ACT (FOIA). Public access to MOU or agreement records must not be limited, except when such records must be kept confidential and would have been exempted from disclosure pursuant to Freedom of Information regulations (5 U.S.C. 552).

12. TEXT MESSAGING WHILE DRIVING. In accordance with Executive Order (EO) 13513, "Federal Leadership on Reducing Text Messaging While Driving," any and all text messaging by Federal employees is banned: a) while driving a Government owned vehicle (GOV) or driving a privately owned vehicle (POV) while on official Government business; or b) using any electronic equipment supplied by the Government when driving any vehicle at any time. All cooperators, their employees, volunteers, and contractors are encouraged to adopt and enforce policies that ban text messaging when driving company owned, leased or rented vehicles, POVs or GOVs when driving while on official Government business or when performing any work for or on behalf of the Government.

13. U.S. FOREST SERVICE ACKNOWLEDGED IN PUBLICATIONS, AUDIOVISUALS AND ELECTRONIC MEDIA. ODOT shall acknowledge U.S. Forest Service support in any publications, audiovisuals, and electronic media developed as a result of this MOU.

14. NONDISCRIMINATION STATEMENT – PRINTED, ELECTRONIC, OR AUDIOVISUAL MATERIAL. ODOT shall include the following statement, in full, in any printed, audiovisual material, or electronic media for public distribution developed or printed with any Federal funding.

    a. ***In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. (Not all prohibited bases apply to all programs.)***

    b. **To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.**

    c. If the material is too small to permit the full statement to be included, the material must, at minimum, include the following statement, in print size no smaller than the text:

        i. ***"This institution is an equal opportunity provider."***

15. TERMINATION. Any of the Parties, in writing, may terminate this MOU in whole, or in part, at any time before the date of expiration.

16. DEBARMENT AND SUSPENSION. ODOT shall immediately inform the U.S. Forest Service if they or any of their principals are presently excluded, debarred, or suspended from entering into covered transactions with the federal government according to the terms of 2 CFR Part 180. Additionally, should ODOT or any of their principals receive a transmittal letter or other official Federal notice of debarment or suspension, then they shall notify the

U.S. Forest Service without undue delay. This applies whether the exclusion, debarment, or suspension is voluntary or involuntary.

17. MODIFICATIONS. Modifications within the scope of this MOU must be made by mutual consent of the Parties, by the issuance of a written modification signed and dated by all properly authorized, signatory officials, prior to any changes being performed. Requests for modification should be made, in writing, at least 30 days prior to implementation of the requested change.

18. COMMENCEMENT/EXPIRATION DATE. This MOU is executed as of the date of the last signature (DLS) and is effective through a period of five (5) years from DLS, at which time it will expire.

19. AUTHORIZED REPRESENTATIVES. By signature below, each party certifies that the individuals listed in this document as representatives of the individual Parties are authorized to act in their respective areas for matters related to this MOU. In witness whereof, the Parties hereto have executed this MOU as of the last date written below.

6/11/18
PAUL MATHER, HIGHWAY DIVISION ADMINISTRATOR, Date
Oregon Department of Transportation

6/21/2018
for JIM PEÑA, REGIONAL FORESTER Date
U.S. Forest Service, Pacific Northwest Region

APPROVAL RECOMMENDED:

ODOT

6/4/18
LUCINDA M. MOORE, STATE MAINTENANCE ENGINEER Date
Oregon Department of Transportation

5.29-2018
PATTI CASWELL, MAINTENANCE ENVIRONMENTAL PROGRAM MGR. Date
Oregon Department of Transportation

U.S. FOREST SERVICE

The authority and format of this agreement (18-MU-11062751-045) have been reviewed and approved for signature.

5.29.2018
DENNIS MOTSINGER Date
U.S. Forest Service Grants Management Specialist

6/19/18
AMANDA WARNER THORPE, PE Date
Regional Transportation Program Manager
(Operations, Maintenance & Planning)

ATTACHMENTS: Appendices 1 – 4.

Burden Statement

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0217. The time required to complete this information collection is estimated to average 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.

Appendix 1 – Examples of signs where ODOT is responsible for installation and maintenance

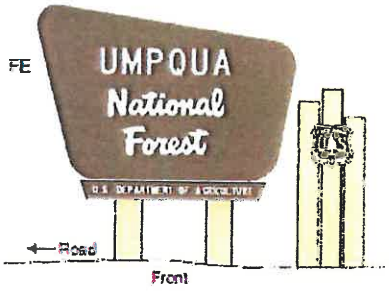
Appendix 2 – Example of signs where USFS is responsible for installation and maintenance.

RS-Recreation Site Identification sign

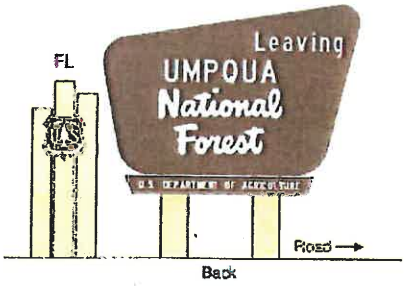
NRA-National Recreation Area sign

AS-Administrative Site Sign

Administrative Site Sign - Urban



FE-National Forest Entrance Sign



FL-Forest Boundary Leaving sign

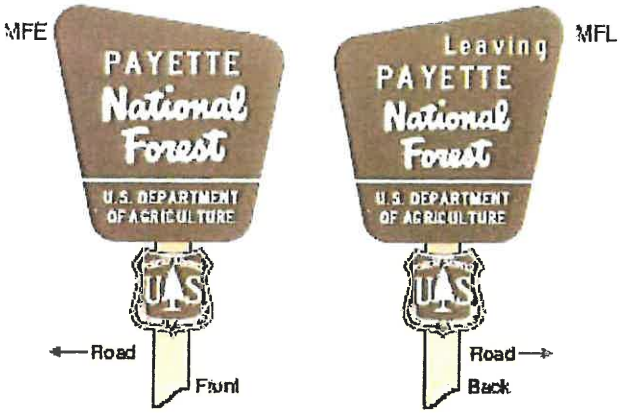
Appendix 3 – Examples of signs where USFS/ODOT share financial or performance responsibility for installation and maintenance

National Forest Scenic Byway (Chapter 3A.13.1)

Note: Department of Transportation designated byways prevail in priority over Forest Service byway designations and should be signed according to the MUTCD, Section 2D.55.

Recreation Fee Sign Examples and Fee Logo

Fee Logo


MFE
PAYETTE
National
Forest
U.S. DEPARTMENT
OF AGRICULTURE
Road
Ahead
Leaving
PAYETTE
National
Forest
U.S. DEPARTMENT
OF AGRICULTURE
Road
Back
MFL

Appendix 4

Pesticide Use Proposal Instructions

Pesticide Use Proposal Form

Pesticide Use Proposal Form: 2- Column

Pesticide Use Proposal Form: 4- Column

Pesticide Use Proposal Form: 6- Column

Pesticide Use Proposal Form: 8- Column

Instructions for Form FS-2100-2, Pesticide-Use Proposal

AGENCY INFORMATION (Header)

Provide requested information.

How would you like to be informed of the decision on your proposal? Please check one option.

OBJECTIVE (Block 1)

a) Project name and/or identifier – Include the local project name and/or identifying name such as the name of the relevant NEPA compliance document and date of decision. [Note–Environmental analyses (EA's and/or EIS's) may be cited within the Pesticide-Use Proposal for additional information.]

b) Specific target pest(s) – Identify target pest(s) by the common and scientific name. Also identify the life cycle stage for animals (adult, larva, etc.) or stage of growth for plants (pre-emergent, seedling, sapling, etc.) at the time of application. A table may be attached to list information for multiple targets.

c) Purpose – State exact purpose of pesticide use.

PESTICIDE PRODUCT(S) (Block 2)

a) Trade name – State the trade name(s) exactly as shown on container (e.g., Roundup Ultra, Tordon 22k, Sevin SL).

b) Formulation as purchased – State the formulation (liquid, dust, granule, pellet, emulsion, bait, solution (ready-to-use without dilution), gas, flakes, packets, etc.) of each pesticide product as purchased.

c) Restricted-use pesticide (yes/no) – Specify whether the pesticide is a restricted-use pesticide or not.

d) EPA registration number – State the EPA registration number from the pesticide label.

e) Common name of chemical(s) – State the common name (glyphosate, picloram, carbaryl, etc.) of active ingredient(s) as given on the pesticide label. When more than one pesticide active ingredient will be used during treatment of a single pest, list active ingredients separately by placing the word "and" between them to indicate the different pesticide names (e.g., aminopyralid and 2, 4-D). When alternative materials are proposed for the application, use the word "or" in listing the names.

f) AI, AE, IU, or PIB expressed as % or concentration – State the percentage (%) or concentration (lb/gal, oz/oz, etc.) of any active ingredient (AI), acid equivalent (AE), international units (IU), or polyhedral inclusion bodies (PIB) as shown on the pesticide label. For herbicides, report as acid equivalent rather than active ingredient when available. IU may be expressed as billion international units/gal for bacteria, and PIB may be expressed as billion polyhedral inclusion bodies/oz for viruses, as appropriate.

TYPE OF APPLICATION (Block 3)

a) Method – Indicate the specific method of application to be used (aerial, ground, aquatic, etc.).

b) Equipment – Indicate the specific type of equipment to be used such as backpack sprayer, helicopter, fixed-wing aircraft, mist blower, hydraulic sprayer, injector, packets, etc.

FIELD APPLICATION INFORMATION (Block 4)

a) Formulation of material to be applied – Indicate the pesticide material to be applied in the field (spray liquid, pellets, granules, dust, bait, gas, flakes, packets, etc.).

b) Planned application rate – Indicate the amount of liquid or dry material to be applied on a per unit area basis (gal/acre, lbs/acre, oz/1,000 ft^2, etc.). In general, calibration of liquid sprayers requires determination of the application rate in gallons per acre (GPA).

c) Dilution rate – Indicate the pesticide concentration to be applied in the field as the amount of concentrate to be mixed with a specified amount of diluent (e.g., 1 qt. Tordon 22K/25 gallons of total mix).

d) Diluent – Identify the material (water, oil, talc, etc.) that will be used to reduce the concentration of a pesticide formulation at the time of application.

e) Pounds of AI or AE per acre (or other applicable rate) – State the pounds of active ingredient (AI) or acid equivalent (AE) (specify which) to be applied on a per acre basis, unless some other unit is indicated on the label. If reporting acreage is not appropriate, indicate units used. If a pesticide for trees or brush is to be applied by aircraft or mist blower, express as pounds of AI or AE per acre. For outdoor spot applications, the rate of application should also be expressed in pounds of AI or AE per acre. For pesticide treatment of individual trees, the application rate for AI or AE is described as number of trees and rate per tree (or an equivalent measure).

Indoor applications of residual sprays may be expressed as gallons per 1,000 square feet (at whatever percent AI in the prepared spray) or simply as pounds AI per 1,000 square feet. For spraying pesticide on most indoor surfaces to the point of runoff, assume the rate to be 1 gallon of formulation per 1,000 square feet. If a dust is being used, express as ounces or pounds of AI in prepared dust per M (1,000) square feet. The AI rate of application for fumigants or indoor aerosols is expressed as pounds AI per M (1,000) cubic feet. Rodent baits should be given as ounces or pounds of AI in the prepared bait per bait station.

The rate of application of AI for pesticide treatments in water may be expressed in parts per million (ppm) or parts per billion (ppb). Specify whether ppm or ppb is by weight or volume.

f) Other pesticides being applied to proposed treatment site(s) – Indicate other pesticides currently being applied or will be applied to the same site(s) proposed for treatment within the same year (e.g., ongoing carbaryl treatment of trees in the same campground where invasive plants will be treated; pesticides applied under other Pesticide-Use Proposals within the same treatment area).

TREATMENT AREA DESCRIPTION (Block 5)

a) Targeted treatment area – Specify area(s) to be treated (wilderness area, stretch of river, grazing allotment, etc.).

b) State and county – Indicate State(s), county(ies), and any other geographic jurisdictions involved with the area(s) to be treated.

c) Site description – Provide information on the type of area (rangeland, tree nursery, etc.) to be treated and any specific parts or portions of the area that will be treated such as ditch banks, rights-of-way, etc. When applicable, specify whether the pesticide will be applied directly to water or near the water's edge (e.g., riparian area). State the distance to nearest surface water (lakes, streams, etc.) or wetland. Where applicable, indicate the general slope of the treated area(s). For aquatic applications, indicate water quality (hardness and pH) of treated water body if available or applicable.

d) Estimate of acres (or other unit) to be treated – Provide an estimate for acres to be treated, unless other units are otherwise applicable. When projects require repeat applications, estimate only those acres to be treated in the first application.

e) Number of applications – For projects that will require repeat applications within the same area, provide an estimate of the number of treatments that will be used per season.

f) Month(s) and year(s) of application – Indicate the month(s) and year(s) that applications are planned. If necessary, provide general season of treatment (e.g., spring, summer, or fall) or an estimate of the range of years for treatment (e.g., 2011 through 2019).

SENSITIVE AREAS (Block 6)

a) Special designated area (if applicable) – Identify any wilderness area, Research Natural Area (RNA), botanical area, or other similar designated area that is in proximity to areas to be treated. Describe specific precautionary measures that will be taken to protect identified special designated area (e.g., no pesticide application with mechanical ground equipment inside wilderness area).

b) Areas to be avoided – Identify specific areas to be protected from direct application, drift, or runoff (waterbodies, private property, T&E species habitat, etc.). Describe specific precautionary measures that will be taken to avoid presence of pesticide in identified area (e.g., no application within 100 feet of stream).

c) Areas to be treated with caution – Identify sensitive areas (riparian areas, areas with a shallow water table, T&E species habitat, etc.) that require special precautions during treatment to avoid undue impacts or contamination. Describe specific precautionary measures that will be taken to protect identified area (e.g., use of pesticides with an aquatic label in riparian areas).

PROJECT IMPLEMENTATION (Block 7)

a) Trained/certified personnel to be used – Provide information regarding personnel who will be performing the actual pesticide work. Applicators and personnel serving as supervisors must be trained in the proper application of pesticides. Personnel handling or applying a restricted-use pesticide must be state or Federally certified for restricted-use pesticide operations.

b) Personal safety – State any restricted entry interval (REI) required by the pesticide label following application. If additional personal protection equipment other than what is on the label is proposed, please describe.

c) State and local coordination – Indicate any coordination at the State or local level that will be made for the project.

d) Best management practices – Describe or reference the best management practices that will be followed for pesticide application such as lowest effective application rate, equipment calibration, field scouting/monitoring before pesticide application, buffer zones, and weather restrictions (wind speed limit, inversion avoidance, etc.).

e) Monitoring – Describe monitoring required for treatment effectiveness and any other monitoring that will be conducted.

f) Additional project information – Describe other information pertinent to the project that is not addressed in sections above (e.g., information as to whether the project will be conducted by force account or through a contract).

SUBMISSION

Please contact the U.S. Forest Service Region/Area Pesticide Use Coordinator in advance to inform him/her of the method in which the form will be submitted (in person or by courier, via e-mail, or via U.S. Postal Service).

The following website has the List of Pesticide Use Coordinators by Region/Area:

http://www.fs.fed.us/foresthealth/pesticide/contactus.shtml

REVIEWER(S) (Block 8)

a) Pesticide use coordinator – A pesticide use coordinator's signature at the district, forest, or regional level (as appropriate) is required before final approval.

b) Other reviewers (as necessary) – Include any necessary signature(s) of specialists in pertinent programs such as biologists, entomologists, agronomists, wilderness program managers, or Research Natural Area (RNA) program managers that are required before final approval.

APPROVAL (signature of approving official) (Block 9)

Signature of approving line officer with delegated signing authority

Burden Statement

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0241. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

PESTICIDE-USE PROPOSAL (Reference FSM 2150)

To complete this form, see **Instructions for Form FS-2100-2, Pesticide-Use Proposal**

AGENCY/ COOPERATOR	CONTACT NAME, PHONE NUMBER, and E-MAIL	REGION	FOREST/ DISTRICT	DATE SUBMITTED

How would you like to be informed of the decision on your proposal?	Please choose one: ___ Telephone ___ Email ___ Both
1) OBJECTIVE a) Project name and/or identifier b) Specific target pest(s) c) Purpose	
2) PESTICIDE PRODUCT(S) a) Trade name b) Formulation as purchased c) Restricted-use pesticide (yes/no) d) EPA registration number e) Common name of chemical(s) f) AI, AE, IU, or PIB expressed as % or concentration	
3) TYPE OF APPLICATION a) Method b) Equipment	
4) FIELD APPLICATION INFORMATION a) Formulation of material to be applied b) Planned application rate c) Dilution rate d) Diluent e) Pounds of AI or AE per acre (or other applicable rate) f) Other pesticides being applied to proposed treatment site(s)	
5) TREATMENT AREA DESCRIPTION a) Targeted treatment area b) State and county c) Site description d) Estimate of acres (or other unit) to be treated e) Number of applications f) Month(s) and year(s) of application	
6) SENSITIVE AREAS a) Special designated area (if applicable) b) Areas to be avoided c) Areas to be treated with caution	
7) PROJECT IMPLEMENTATION a) Trained/certified personnel to be used b) Personal safety c) State and local coordination d) Best management practices e) Monitoring f) Additional project information	
For Official Use Only	
8) REVIEWER(S) SIGNATURE(S) a) Pesticide use coordinator b) Other reviewer(s) (as necessary)	Date: Date:

9) APPROVAL (signature of approving official) Date:

Burden Statement

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0241. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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PESTICIDE-USE PROPOSAL (Reference FSM 2150)

To complete this form, see Instructions for Form FS-2100-2, Pesticide-Use Proposal

AGENCY / COOPERATOR	CONTACT NAME, PHONE NUMBER, and E-MAIL	REGION	FOREST / DISTRICT	DATE SUBMITTED

How would you like to be informed of the decision on your proposal?	Please choose one: __ telephone __ email __ both

1) OBJECTIVE a) Project name and/or identifier b) Specific target pest(s) c) Purpose	a) b) c)	
2) PESTICIDE PRODUCT a) Trade name	a)	a)
b) Formulation as purchased c) Restricted-use pesticide (y/n) d) EPA registration number e) Common name of chemical(s) f) AI, AE, IU, or PIB expressed as % or concentration	b) c) d) e) f)	b) c) d) e) f)
3) TYPE OF APPLICATION a) Method b) Equipment	a) b)	a) b)
4) FIELD APPLICATION INFORMATION a) Formulation of material to be applied b) Planned application rate c) Dilution rate d) Diluent e) Pounds of AI or AE per acre (or other applicable rate)	a) b) c) d) e)	a) b) c) d) e)

5) TREATMENT AREA DESCRIPTION a) Targeted treatment area b) State and county c) Site description d) Estimate of acres (or other unit) to be treated e) Number of applications f) Month(s) and year(s) of application	*a)* *b)* *c)* *d)* *e)* *f)*
6) SENSITIVE AREAS a) Special designated area (if applicable) b) Areas to be avoided c) Areas to be treated with caution	a) b) c)
7) PROJECT IMPLEMENTATION a) Trained/certified personnel to be used b) Personal safety c) State and local coordination d) Best management practices e) Monitoring f) Additional project information	a) b) c) d) e) f)
8) REVIEWER(S) SIGNATURE(S) a) Pesticide use coordinator b) Other reviewer(s) (as necessary)	Date: Date:
9) APPROVAL (signature of approving official)	Date:

PESTICIDE-USE PROPOSAL (Reference FSM 2150)

To complete this form, see Instructions for Form FS-2100-2, Pesticide-Use Proposal

AGENCY / COOPERATOR	CONTACT NAME, PHONE NUMBER, and E-MAIL	REGION	FOREST / DISTRICT	DATE SUBMITTED

How would you like to be informed of the decision on your proposal? Please choose one: __ telephone __ email __ both

1) OBJECTIVE a) Project name and/or identifier b) Specific target pest(s) c) Purpose	a) b) c)			
2) PESTICIDE PRODUCT a) Trade name	a)	a)	a)	a)
b) Formulation as purchased c) Restricted-use pesticide (y/n) d) EPA registration number e) Common name of chemical(s) f) AI, AE, IU, or PIB expressed as % or concentration	b) c) d) e) f)	b) c) d) e) f)	b) c) d) e) f)	b) c) d) e) f)
3) TYPE OF APPLICATION a) Method b) Equipment	a) b)	a) b)	a) b)	a) b)
4) FIELD APPLICATION INFORMATION a) Formulation of material to be applied b) Planned application rate c) Dilution rate d) Diluent e) Pounds of AI or AE per acre (or other applicable rate)	a) b) c) d) e)	a) b) c) d) e)	a) b) c) d) e)	a) b) c) d) e)

5) TREATMENT AREA DESCRIPTION a) Targeted treatment area b) State and county c) Site description d) Estimate of acres (or other unit) to be treated e) Number of applications f) Month(s) and year(s) of application	*a)* *b)* *c)* *d)* *e)* *f)*
6) SENSITIVE AREAS a) Special designated area (if applicable) b) Areas to be avoided c) Areas to be treated with caution	a) b) c)
7) PROJECT IMPLEMENTATION a) Trained/certified personnel to be used b) Personal safety c) State and local coordination d) Best management practices e) Monitoring f) Additional project information	a) b) c) d) e) f)

8) REVIEWER(S) SIGNATURE(S)

a) Pesticide use coordinator Date:

b) Other reviewer(s) (as necessary) Date:

9) APPROVAL

(signature of approving official) Date:

PESTICIDE-USE PROPOSAL (Reference FSM 2150)

To complete this form, see Instructions for Form FS-2100-2, Pesticide-Use Proposal

AGENCY / COOPERATOR	CONTACT NAME, PHONE NUMBER, and E-MAIL	REGION	FOREST / DISTRICT	DATE SUBMITTED

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8) REVIEWER(S) SIGNATURE(S) a) Pesticide use coordinator b) Other reviewer(s) (as necessary)	Date: Date:
9) APPROVAL (signature of approving official)	Date:

PESTICIDE-USE PROPOSAL (Reference FSM 2150)

To complete this form, see Instructions for Form FS-2100-2, Pesticide-Use Proposal

AGENCY / COOPERATOR	CONTACT NAME, PHONE NUMBER, and E-MAIL	REGION	FOREST / DISTRICT	DATE SUBMITTED

How would you like to be informed of the decision on your proposal? Please choose one: __telephone __email __both

1) OBJECTIVE a) Project name and/or identifier b) Specific target pest(s) c) Purpose	a) b) c)							
2) PESTICIDE PRODUCT a) Trade name	a)	a)	a)	a)	a)	a)	a)	a)
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3) TYPE OF APPLICATION a) Method b) Equipment	a) b)	a) b)	a) b)	a) b)	a) b)	a) b)	a) b)	a) b)
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8) REVIEWER(S) SIGNATURE(S) a) Pesticide use coordinator b) Other reviewer(s) (as necessary)	Date: Date:
9) APPROVAL (signature of approving official)	Date:

APPENDIX B

Roadwaste Management Chart

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2020

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ODOT Roadwaste Management Chart

	Landfill	Other Disposal	Fill on ODOT ROW	Non-residential Fill	Clean Fill	Quarry Reclamation	Other Uses
			Stockpiling is allowed if actively managing material for future use. Remove visible litter and organics. No obvious signs of contamination. Use erosion and sediment control as needed. Follow Blue Book guidance for uses and placement.				
Litter **- Includes personal property stored beyond hold time**	Yes	Recycling center	NA	NA	NA	NA	NA
Shoulder soils **- Soil outside of the highway pavement and within the ROW**	Yes	NA	Pre-approved*	Pre-approved in most areas	Pre-approved in limited locations	Pre-approved statewide	Contact MOB or HazMat
Pickup sweeping **– Material picked up from the pavement that is not recovered abrasives.**	Yes	NA	Possible depending on contaminant level – not pre-approved	Possible depending on contaminant level – not pre-approved	NA	Possible depending on contaminant level – not pre-approved	Fines are pre-approved for use as absorbent Contact MOB or HazMat for other uses
Recovered abrasives **- Recovered material that is at least 90% coarse grain**	Yes	NA	Possible depending on contaminant level – not pre-approved	Possible depending on contaminant level – not pre-approved	Possible depending on contaminant level – not pre-approved	Possible depending on contaminant level – not pre-approved	Pre-approved for use as sanding material Contact MOB or HazMat for other uses
Catch basin cleaning **- Material removed sumps that is not recovered abrasives**	Dried solids	Liquids: sanitary sewer or evaporation or limited infiltration	NA	NA	NA	NA	Contact MOB or HazMat for other uses and decant options
Slide debris	NA	NA	Yes	Yes	Yes	Yes	NA
Stripe grindings **– stripe is removed separately from the pavement**	Testing required	Possible HazWaste	NA	NA	NA	NA	NA
Asphalt grindings **– may include striping removed with pavement**	NA	NA	Pre-approved as fill from centerline to edge of ROW	NA	NA	NA	Pre-approved for asphalt pavement
Brush and Woody Debris	Yes	Recycling center Limited burning	NA	NA	NA	NA	Compost / mulch Riparian habitat
Noxious weeds	Yes	NA	NA	NA	NA	NA	NA
Roadkill	Where available	Drag & drop Incinerator Compost	NA	NA	NA	NA	NA

*Material collected in proximity to contaminant sources has potential to be hazardous waste or potentially unsafe for workers. Using hazardous waste as fill is not allowed under any circumstances.

ODOT Roadwaste Management Chart

ACTIVITY	RULES	CONCERNS	MANAGEMENT
Litter **- Includes personal property stored beyond hold time**	Litter is solid waste. Solid waste must be taken to a permitted landfill or recycling facility. Solid waste cannot be stockpiled longer than 6 months without DEQ approval or a permit.	Stockpiling, storing, or burying litter can pose risks to human health and the environment. Public perception and nuisance conditions are also concerns.	• Take to a permitted landfill, transfer station, or recycling facility as appropriate. Where practical collect litter separately from other highway waste. • Keep sorting operation and stockpiles of litter well managed and tidy. • Bulk materials (highway shoulder soils, catch basin cleaning, street sweepings, etc.) that contain visible litter are classified as solid waste unless litter is removed/screened from the pile. In many cases reuse options are available after the litter is removed.
Shoulder soils - ODOT and DEQ have defined shoulder soil as soil outside of the highway pavement and within the highway right-of-way.	DEQ has approved the beneficial use of highway shoulder soil as fill. General use limitations and allowances differ by physiographic provinces. Refer to BUD – 20181204. DEQ Clean Fill Internal Management Directive (IMD) provides guidance on making Clean Fill Determinations. DSL Removal Fill may apply when placing shoulder soil in wetlands or waters of the State. Erosion/sediment control may be required. Under limited circumstances shoulder soil that has been identified as appropriate for fill in residential zones may be placed on private property with the permission of the landowner.	Regulated pollutants can be present in shoulder soils. ODOT has found contaminant levels vary widely in shoulder soils. ADT is not a good indicator of contaminant level. Sampling has identified that surface soil (0-1.5 feet) adjacent to state highways have potential to contain contaminants exceeding DEQ's clean fill values regardless of ADT. Increased contamination may be present from small, non-reportable spills over long periods. Material collected from areas in proximity to known contaminant sources may increase soil contamination levels. Potential contaminate sources include town centers, fuel stations, industrial facilities, or commercial crop land.	• Stockpiling is allowed if material will be used as fill. Erosion and sediment control may be necessary at stockpiles or fill areas. • ODOT REC should assess storage and fill sites for environmental concerns (removal fill permits, wetland impacts, etc.). • Screening may be needed to remove litter or excessive amounts of organic debris. • Shoulder soils may be reused within the ODOT right-of-way without testing. • Soils from all areas including from the Portland Basin province have been approved by DEQ for use as mine reclamation fill.

ODOT Roadwaste Management Chart

ACTIVITY	RULES	CONCERNS	MANAGEMENT
	DOGAMI regulates the reclamation of mines. The ODOT Routine Road Maintenance Guide (Blue Book) contains BMPs for maintenance actions. Storage or fill sites must be suitable (proximity to wetlands or streams). Shoulder soils that will not be used as fill are classified as solid waste and must be taken a permitted landfill or recycling center. Bulk materials (highway shoulder soils, catch basin cleaning, street sweepings, etc.) that contain visible litter are classified as solid waste unless litter is removed/screened from the pile. Stockpiling is not allowed unless future use is planned. Solid waste (material with visible litter or material that will not be used as fill) cannot be stockpiled longer than 6 months without DEQ approval.	Proper stockpile placement and erosion/sediment control are concerns even if material is clean.	• Shoulder soils may be used as fill in non-residential zones (e.g. transportation, commercial, industrial, non-food crop agriculture) with the following exceptions: a. Shoulder soils collected in proximity to potential contaminate sources are allowed as fill on a case-by-case basis. Pollutant testing/waste characterization is required to determine if material collected in proximity to potential contaminate sources is can be used as fill. Contact HazMat for assistance. b. Shoulder soils outside of town centers from Blue Mountain and Basin and Range provinces are allowed to be used as fill in residential zones as well as non-residential zones. c. Shoulder soils outside of town centers collected 15-feet or more from the edge of pavement in Deschutes Columbia, Coast Range, High Lava Plains, and South Willamette Valley provinces are allowed to be used as fill in residential zones as well as non-residential zones with the exception of near surface soil (0 - 0.5 foot) in Deschutes Columbia and South Willamette Valley. Near surface soil in Deschutes Columbia and South Willamette Valley can be used in non-residential zones. d. Shoulder soils from the Portland Basin province are allowed as fill on a case-by-case basis. Supplemental, pile specific, sampling is required to determine if material can be used as fill.

ODOT Roadwaste Management Chart

ACTIVITY	RULES	CONCERNS	MANAGEMENT
Street Sweepings – Material picked up from the pavement that is not recovered abrasives.	Classified as industrial process waste. Materials must be must be taken to a permitted landfill or recycling facility unless future use is planned. Bulk materials (highway shoulder soils, catch basin cleaning, street sweepings, etc.) that contain visible litter are classified as solid waste unless litter is removed/screened from the pile. DSL Removal Fill may apply when placing street sweeping in wetlands or waters of the State. Erosion/sediment control may be required. Stockpiling is not allowed unless future use is planned. Solid waste (material with visible litter or material that will not be used as fill) cannot be stockpiled longer than 6 months without DEQ approval. The ODOT Routine Road Maintenance Guide (Blue Book) contains BMPs for maintenance actions. Storage or fill sites must be suitable (proximity to wetlands or streams).	Hydrocarbons (oil, diesel, gasoline) and heavy metals are common pollutants in sweepings. These pollutants are regulated and can pose health risks to humans and the environment. If pollutant contamination levels are high, special management or disposal may be required. Proper stockpile placement and erosion/sediment control are concerns even if material is clean. Sweepings that are high in organic levels (leaves, twigs, etc.) can make poor fill. As organics break down material shrinks and bacteria and nitrates can become pollutant problems	• Work with HazMat or MOB to determine contaminant levels, methods for reducing contaminants (screen trash, stockpile for natural break down of hydrocarbons), and use options (e.g. concrete manufacture, fill, shoulder repair, quarry reclamation, compost, or soil amendment). Testing may be necessary. • ODOT REC should assess storage and fill sites for environmental concerns (removal fill permits, wetland impacts, etc.). • Sort sweepings for disposal or use. • Screening may be needed to remove litter or excessive amounts of organic debris. • Stockpiling for more than 6 months is allowed if use is planned. BMPs may be needed to ensure contaminants do not migrate into the environment or the ground (store on pavement, cover storage piles, etc.). • Erosion and sediment control may be required for stockpiles and fill areas. • Dispose of sweepings that are not suitable for future use at a permitted landfill or incinerator.

ODOT Roadwaste Management Chart

ACTIVITY	RULES	CONCERNS	MANAGEMENT
Catch basin / sump cleaning – Material removed from a sump that is not recovered abrasives.	Sump debris is a solid waste unless stockpiled for future use. Solid waste must be taken to a permitted landfill or recycling facility. Material collected from areas where chemical spills, roadway accidents, or illicit dumping occurred has potential to be hazardous waste.	The waste is typically not structurally suitable for use as fill. Material recovered from cleaning catch basins, sumps, and culverts has not been pre-approved by DEQ for use as fill. Functional options for future use are very limited. Urban vactor solids typically contain high pollutant levels. Regulated toxic pollutants such as hydrocarbons and heavy metals are common in sump debris. Clay and fine soil is more likely to bind with chemical pollutants than coarse soil or sand and gravel. If pollutant contamination levels are high enough special management or HazWaste disposal may be required. Catch basin/sump material collected in highly urbanized areas or maintenance compounds may have high pollutant levels that pose health risks to humans and exceed DEQ pollutant clean-up stand. Catch-basins that are frequently cleaned the lower the pollutant levels.	• Take to a permitted landfill, transfer station, or recycling facility. Where practical collect litter separately from other highway waste. • Liquids and solids must be separated prior to disposal. Solids typically go to a landfill or incinerator. Liquids typically go to a sewerage treatment facility or are evaporated off a paved surface. • ODOT REC should assess storage and fill sites for environmental concerns (removal fill permits, wetland impacts, etc.). Use erosion and sediment control where necessary. • Partner with local jurisdictions and develop waste management options (construct decant facilities, share disposal contracts, etc.). Contaminated waste is primarily an urban issue. Local transportation agencies often share ODOT's need for waste management. • Work with ODOT staff to identify appropriate areas to decant water and methods reduce contaminants and dispose of waste.
Recovered sand and gravel - Recovered sand and gravel has at least 90% coarse grain material.	DEQ has pre-approved the use of recovered sand provided the material is picked up within 6 months of application (or re-exposure after snow melt) and separated from street sweepings. The material may not be reused if there a known source of contamination (e.g. fuel spill) within the material.	Recovered sand and gravel typically has low pollutant levels if it is picked up quickly. The presence of litter, brush, or chemical pollutants limit future use options.	• If recovered abrasives meet specifications the material may be placed back on the pile and used for sanding rock. • ODOT REC should assess storage and fill sites for environmental concerns (removal fill permits, wetland impacts, etc.). Erosion and sediment control may be required for stockpiles and fill areas.

ODOT Roadwaste Management Chart

ACTIVITY	RULES	CONCERNS	MANAGEMENT
	The material is solid waste if regulated pollutants are present. However, these materials can often meet clean fill requirements. DEQ has not pre-approved the use of recovered sand for fill. DSL Removal Fill may apply when placing recovered aggregate in wetlands or waters of the State. Erosion/sediment control may be required. Under limited circumstances clean surplus materials generated through the operation and maintenance of State Highways may be placed on private property with the permission of the landowner. The ODOT Routine Road Maintenance Guide (Blue Book) contains BMPs for maintenance actions. Storage or fill sites must be suitable (proximity to wetlands or streams).	Proper stockpile placement and erosion/sediment control are concerns even if material is clean. Material collected from areas in proximity to known contaminant sources may increase contamination levels. Potential contaminate sources include town centers, fuel stations, industrial facilities, or commercial crop land.	• Screening may be needed to remove litter or excessive amounts of organic debris. • Stockpiling for more than 6 months is allowed if use is planned. BMPs may be needed to ensure contaminants do not migrate into the environment or the ground (store on pavement, cover storage piles, etc.). • Testing is needed if pollutants are suspected.
Slide Debris	Placement rules apply (erosion, cut/fill, wetlands, etc.) when storing and using material. Erosion/sediment control may be required. DEQ considers slide material to be clean fill unless obviously contaminated or containing non-native debris. Under limited circumstances surplus materials generated through the operation and maintenance of highways may be placed on private property with the	There is a shortage of suitable disposal locations for landslide material in some areas. Material can be difficult to manage and reuse because of excess mud, organics, etc. Proper stockpile placement and erosion/sediment control are concerns even if material is clean. Turbidity can also be an issue.	• Stockpiling is allowed if material will be used as fill. Erosion and sediment control may be necessary at stockpiles or fill areas. • Use as clean fill.

ODOT Roadwaste Management Chart

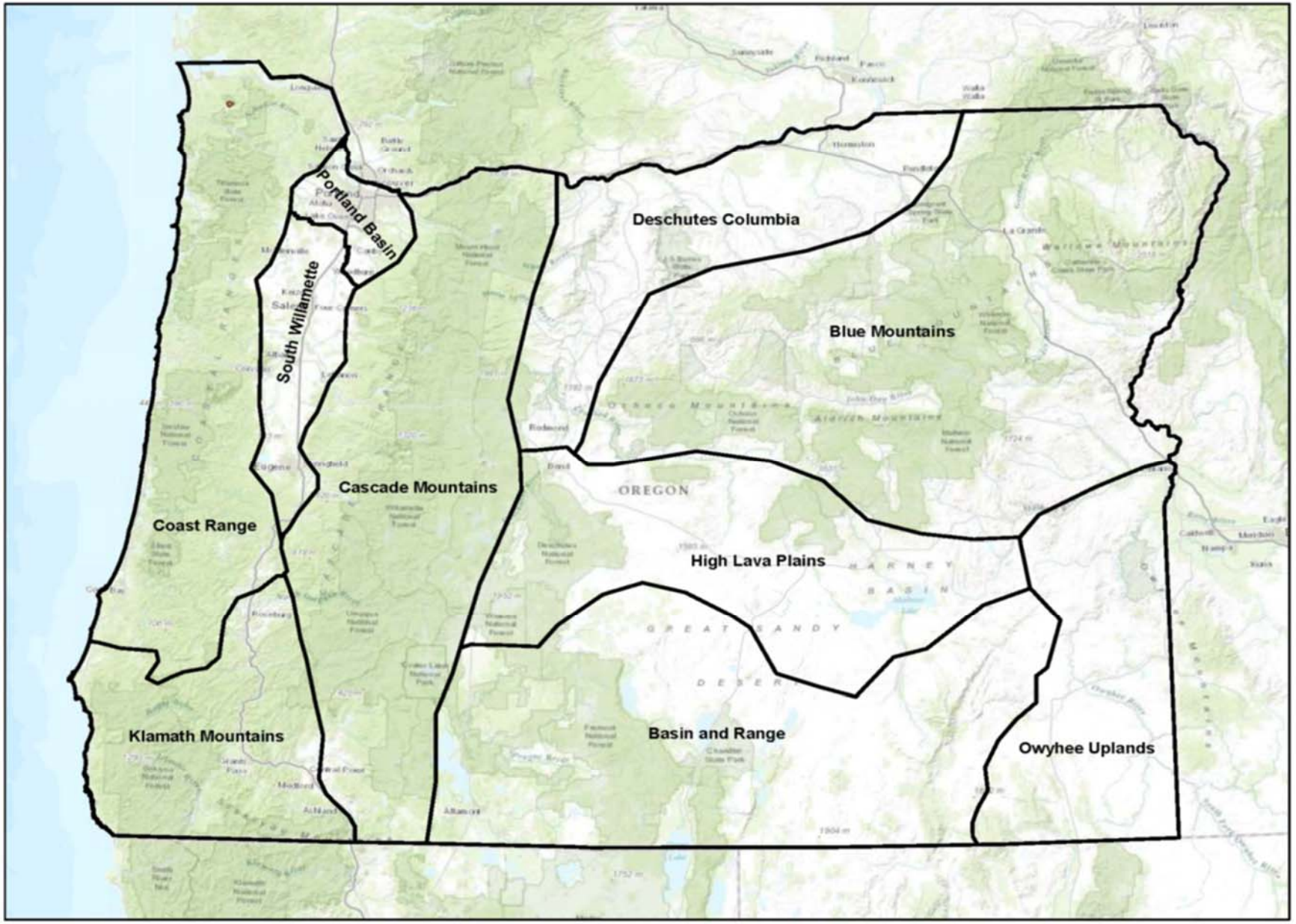
ACTIVITY	RULES	CONCERNS	MANAGEMENT
	permission of the landowner. The ODOT Routine Road Maintenance Guide (Blue Book) contains BMPs for maintenance actions. Storage or fill sites must be suitable (proximity to wetlands or streams).		
Stripe grindings **– stripe is removed separately from the pavement**	Classified as a solid waste. Must be managed at permitted landfill.	Stripe grindings may be classified as hazardous waste because of concentration of metals in old highway paints. Level may remain high even if lead-free paint has been placed over old striping.	• Dispose at a landfill (or other permitted waste facility). • Test material prior to disposal to determine if hazardous waste.
Asphalt grindings **– may include striping removed with pavement**	DEQ has approved the beneficial use of asphalt grindings as fill within the road prism. DEQ's definition of road prism includes from centerline to edge of right-of-way. DEQ has also approved the beneficial use of asphalt grinding in the production of new asphalt pavement.	Material must be proper placed (no impact to wetlands or streams). Some crews are not allowed to stockpile on Forest Service land (Forest Service does not accept DEQ's clean fill determination)	• Use as fill within the road prism. • Use in the production of new asphalt
Brush and woody debris	Brush and woody debris is solid waste. Solid waste must be taken to a permitted facility (landfill or composter) or a recycling facility. Within specific restrictions brush and woody debris is also allowed to be burned, composted, or used for habitat improvement. Organic wastes are regulated as potential health hazards. Local county health	Solid waste cannot be stored in one location for longer than 6 months. Stockpiling is allowed for longer period if use or recycling Large quantities of decomposing organic waste are associated with a number of pollutants including bacteria, methane, nitrogen, nutrients, and low oxygen levels.	• Separate brush and reuse or dispose at a landfill (or other permitted waste facility). • Grind or chip brush and woody debris. Use for compost or mulch. • Coordinate placing large woody debris in waterways to improve fish habitat with ODOT REC and ODFW.

ODOT Roadwaste Management Chart

ACTIVITY	RULES	CONCERNS	MANAGEMENT
	departments usually regulate the management of organic wastes and many offer management assistance. DEQ prohibits burning in certain parts of the State and may restrict open burning anywhere in the state on a day-to-day basis depending on air quality and weather conditions. Composting more than 20 tons/year requires a DEQ permit Noxious weeds (including seeds) are regulated by ODA. The disposal of brush and cuttings from suspected diseased plants and trees must be coordinated with ODA, USFS, or ODF.	Decomposing vegetation is associated with a number of water quality pollutants including bacteria, nutrients, and low oxygen levels. Permits may be required. Noxious weeds may be present. Follow District IVM Program.	• Burning is allowed only in limited areas: outside riparian corridors, where air quality allows, etc. Various permits may be required. • Bag noxious weeds and dispose at a permitted landfill.
Roadkill	The disposal of dead animals is regulated by DEQ and ODA. The restrictions on legal burial of animals make this disposal option functionally impractical. DEQ Air discharge permits are required for the operation of animal carcass incinerator. Animal carcasses cannot be open burned. Composting more than 20 tons/year requires a DEQ permit.	Organic wastes are regulated as potential health hazards. Local county health departments usually regulate the management of organic wastes and many offer management assistance. Improper disposal of animal carcasses can pollute ground water and surface water. Improper disposal can also jeopardize the health of livestock, wildlife and pets. Carcasses left on the ground or buried in shallow pits may pose a threat to ground or surface water or jeopardize the health of domestic animals or wildlife.	• Allowed management practices o Drag and drop o Composting o Incineration o Burial at permitted landfills • Supplemental information on composting, incineration, and burying on ODOT property is located in separated documents in Appendix M of the EMS Manual. • Limit the number of carcasses dropped in the same location.

ODOT Roadwaste Management Chart

Physiographic Provinces in Oregon



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APPENDIX C

ODFW In-Water Work Window

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2020

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OREGON GUIDELINES FOR TIMING OF IN-WATER WORK TO PROTECT FISH AND WILDLIFE RESOURCES

June, 2008

Purpose of Guidelines - The Oregon Department of Fish and Wildlife, (ODFW), under its authority to manage Oregon's fish and wildlife resources has updated the following guidelines for timing of in-water work. The guidelines are to assist the public in minimizing potential impacts to important fish, wildlife and habitat resources.

"The guidelines are to assist the public in minimizing potential impacts...".

Developing the Guidelines - The guidelines are based on ODFW district fish biologists' recommendations. Primary considerations were given to important fish species including anadromous and other game fish and threatened, endangered, or sensitive species (coded list of species included in the guidelines). Time periods were established to avoid the vulnerable life stages of these fish including migration, spawning and rearing. The preferred work period applies to the listed streams, unlisted upstream tributaries, and associated reservoirs and lakes.

"The guidelines are based on ODFW district fish biologists' recommendations".

Using the Guidelines - These guidelines provide the public a way of planning in-water work during periods of time that would have the least impact on important fish, wildlife, and habitat resources. ODFW will use the guidelines as a basis for commenting on planning and regulatory processes. There are some circumstances where it may be appropriate to perform in-water work outside of the preferred work period indicated in the guidelines. ODFW, on a project by project basis, may consider variations in climate, location, and category of work that would allow more specific in-water work timing recommendations. These more specific timing recommendations will be made by the appropriate ODFW district office through the established planning and regulatory processes.

"These guidelines provide the public a way of planning in-water work during periods of time that would have the least impact on important fish, wildlife and habitat resources".

Modification of Guidelines - There may be limited situations where minor modification of the timing guidelines is warranted. ODFW may consider new information, the need for greater detail, or other factors that would generally improve the quality and usefulness of these guidelines. ODFW through the appropriate district office may modify or clarify timing guidelines within the district as needed. Statewide updates to guidelines will occur on a periodic basis.

"ODFW through the appropriate district office may modify or clarify timing guidelines within the district as needed".

Public Comments - A limited technical public review of these updated guidelines was conducted. A few responses provided specific biological information and recommendations for changing in-water work periods. Applicable ODFW districts reevaluated their timing recommendations based on this public response. Other comments concerned format and application of the timing guidelines. Some responses stated that different types of in-water activities should have different timing guidelines. ODFW recognizes there will be occasions that more specific timing guidelines may need to be established for specific activities. The established planning and regulatory processes can accommodate that need.

"A limited technical public review of these updated guidelines was conducted".

WATERWAY	PREFERRED WORK PERIOD [1]
Columbia River Management (971) 673-6000	
Columbia River Estuary (Mouth to Tongue Pt.)	November 1 – February 28 (MAR,SHL,CHF,CHS,SS,CO,STW,STS,CT*)
Columbia River (Tongue Pt. to Bonneville Dam)	November 1 – February 28 (CHF,CHS,SS,CO,STW,CS,CHR,CT,STS*)
Northwest Region	
North Coast Watershed District	
Tillamook Office - (503) 842-2741	
Pacific	
Columbia River (See Columbia River Management)	
Youngs River	July 15 - September 30 (CO,STW *)
Young's Bay Tributaries	July 1 – September 15 (CO,CT,STW)
Wallooskee River	June 1 - September 30 (CO,CT*)
Other Columbia R. Est. Tribs. (Mouth to Tongue Pt.)	July 1 - September 15 (CHF,STW*)
Other Columbia R. Est. Tribs (Tongue Pt. to Hunt Creek)	July 15 - September 15 (CHF, STW*)
Necanicum	
Necanicum River & tributaries	July 1 - September 15 (CO,CHF,STW*)
Necanicum and Neawanna Estuary	November 1-February 15 (MAR,SHL,CO,CHF,STW)
Ecola Creek and Tributaries	July 1-September 15 (CO,CT,STW)
Nehalem	
Nehalem Estuary	November 1 - February 15 (MAR,SHL,CHS,CHF,CO,STW,*)
Lower Nehalem River (below Hwy 26 at Elsie)	July 1 - September 15 (CHF*)
N. Fk. Nehalem River	July 1 - September 15 (CHF,STW*)
Cook Creek	July 1 - September 15 (CHF,STW*)
Salmonberry River	August 15 - September 15 (CHS,STW*)
Other Lower Nehalem River Tributaries	July 1 - September 15 (CHF,CO,STW*)
Upper Nehalem River and Tribs. (above Hwy 26 at Elsie)	July 1 - August 31 (CHS,STW*)
Tillamook	
Tillamook Estuary	November 1 - February 15 (MAR,SHL,CHF,CHS,STW,CO,CS*)
Miami,Kilchis,Wilson,Trask,Tillamook Rivers & Tribs.	July 1 - September 15 (CHF,CHS,STW,CO,CS*)
Other Tillamook Bay Tributaries	July 1 – September 15 (CO,CT)
Netarts Bay	November 1 - February 15 (MAR,SHL,CHF,STW,CO,CS*)
Sand Lake	November 1 - February 15 (MAR,SHL,CHF,STW,CO,CS*)
Nestucca	
Nestucca Estuary	November 1 - February 15 (MAR,SHL,CHF,CHS,STW,CO,CS*)

[1] Work period is established for named stream, all upstream tributaries, and associated lakes within the watershed unless otherwise indicated.

WATERWAY	PREFERRED WORK PERIOD [1]
Nestucca River & Tributaries	July 1 - September 15 *(CO,CHS,CHF,CS,STW*)*
Little Nestucca River & Tributaries	July 1 – September 15 (*CO,CHS,CHF,CS,STW*)
Neskowin Creek and Tributaries	July 1 - September 15 *(CO,CS,STW*)*
Other North Coastal Tributaries (Columbia River to Neskowin Cr.)	July 1 – September 15 (*CO,CT*)
Coastal Lakes	October 1 – February 15 (*CT*)
Coastal lake Tributaries	July 1 – September 15 (CT)
Newport Office - (541)-867-4741	
Pacific	
Salmon	
Salmon River Estuary	November 1 - February 15 *(MAR,SHL*)*
Salmon River	July 1 - September 15 *(CHF,CO,CS,STW,CT*)*
Siletz	
Siletz River Estuary	November 1 - February 15 (MAR,SHL*)
Siletz River	July 1 - August 31(CHF,CHS,CO,CS,STW,STS,CT*)
Yaquina	
Yaquina River Estuary	November 1 - February 15 (MAR,SHL*)
Yaquina River	July 1 - September 15 *(CHF,CO,STW,CT*)*
Alsea	
Alsea River Estuary	November 1 - February 15 (MAR,SHL*)
Alsea River	July 1 - August 31 *(CHF,CHS,CO,STW,CT*)*
Yachats River	July 1 - September 15 *(CHF,CO,STW,CT*)*
Siuslaw	
Siuslaw River Estuary	November 1 - February 15 *(MAR,SHL,CHF,CO,STW,CT*)*
Siuslaw River	July 1 - September 15 *(CHF,CO,STW,CT*)*
Other Coastal Tributaries	July 1 - September 15 *(CO,STW,CT*)*
Coastal Lakes	October 1 – February 15 (*STW,CO,CT*)
Coastal Lake Tributaries	July 1 – September 15 (STW,CO,CT)

North Willamette Watershed District

Clackamas Office (971) 673-6000	
Columbia	
Columbia River (Hunt Creek to Bonneville Dam) See Columbia River Management	
Columbia River (Within District above Bonneville Dam)	November 15 - March 15 *(CHF,CHS,CHR,SS,CO,CS,STW,STS,CT*)*
Columbia R. Tribs. (Hunt Creek to St. Helens)	July 15 - September 15 *(CHF,STW*)*
Clatskanie River	July 15 - September 15 (CHF,STW*)

[1] Work period is established for named stream, all upstream tributaries, and associated lakes within the watershed unless otherwise indicated.

WATERWAY	PREFERRED WORK PERIOD [1]
Willamette	
Multnomah Channel (including Scappoose Bay)	July 1 - October 31 & December 1 - January 31[2] (CHF,CHS,CO,STW,STS,CT,WW *)
Milton Cr. & Scappoose Cr.	July 15 - August 31 (CO,STW,JUV,WW*)
Willamette River (mouth to Willamette Falls)	July 1 - October 31 & December 1 - January 31[3] (CHF ,CHS,CO,STW,STS,CT,WW *)
Columbia Slough	June 15 - September 15 (JUV,WW)
Johnson	
Johnson Creek	July 15 - August 31 (STW,CO,CT,CHF*)
Johnson Cr. Tribs.	July 15 - August 31 (CT,STW,CHF,CO*)
Kellogg Creek	July 15 - September 30 (STW,CO,CT*)
Tryon Creek	July 15 - September 30 (STW,CO,CT*)
Clackamas River	July 15 - August 31 (CHF,CHS,STW,CO,STS,CT*)
Abernethy Creek	July 15 - September 30 (CO,STW,CT*)
Other Willamette River tribs.	July 15 – September 30 (CT*)
Willamette River (Will. Falls to Newberg)	June 1 - October 31 & December 1 - January 31 (CHS,STW*)
Tualatin	
All Tualatin River Tributaries	July 15 - September 30 (CO,STW,CT,WW*)
Tualatin River (below Scoggins Cr.)	June 1 - September 30 (CO,STW,CT,WW*)
Tualatin River (above Scoggins Cr.)	July 15 - September 30 (CO,STW,CT,WW*)
Beaver Creek	July 15 - September 30 (CT*)
Molalla/Pudding River	
Molalla River (below Hwy 213)	June 1 – September 30 (STW,CT*)
Other Molalla River Tributaries (below Hwy 213)	July 15 - September 30 (CT*)
Molalla River (above Hwy 213)	July 15 - August 31 (CHS,STW,CT,RB*)
N. Fk & M. Fk Molalla	July 15 - August 31 (CHS,STW,CT,RB*)
Other Molalla River Tributaries (above Hwy 213)	July 15 - September 30 (STW,CT*)
Pudding River	June 1 - September 15 (CHS,STW,CT*)
Butte Creek	July 15 - September 30 (STW,CT*)
Abiqua Creek	July 15 - August 31 (CHS,STW,CT,RB*)
Silver Creek	July 15 - September 30 (STW,CT*)
Other Pudding River Tributaries	June 1 - September 30,STW,CT,RB*)
Other Willamette River tribs.	July 15 – October 15 (CT*)
Willamette River (Newberg to Yamhill River)	June 1 – September 30 (CHS,STW,CT,RB*)
Chehalem Creek	July 15 - September 30 (CT*)
Yamhill River	July 15 - September 30 (STW,CT*)
Other Willamette River tribs.	July 15 – September 30 (CT*)
Fairview Cr.,Arata Cr., Salmon Cr.	June 15 - September 15 (CT,WW*)
Sandy River	July 15 - August 31 (CHS,CHF,CO,STW*)
Tanner Creek	July 15 - August 15 (CHF,CHS,CO,STW*)
Columbia River Tributaries (St. Helens to Sandy River)	July 15 - August 31 (CHF,CO,STW,CT *)
Columbia River Tributaries (Sandy River to Herman Cr.)	July 15 - August 31 (CO,STW,STS,CT *)

[1] Work period is established for named stream, all upstream tributaries, and associated lakes within the watershed unless otherwise indicated.
[2] Winter window only for activities below -20'Columbia River Datum
[3] Winter window only for activities below -20' National Geodetic Vertical Datum 1947

WATERWAY	PREFERRED WORK PERIOD [1]
South Willamette Watershed District	
Corvallis Office - (541) 757-4186	
Willamette	
Willamette River (Yamhill River to McKenzie River)	June 1 – October 15 (CHS,STW,CT,RB*)
Spring Valley Creek	July 1 - October 15 (CT*)
Glenn Creek	July 1 - October 15 (CT*)
Mill Creek	June 1 – October 15 (CT,RB*)
Rickreall Creek	July 1 – October 15 (STW,CT*)
Luckiamute River	July 1 - October 15 (STW,CT*)
Santiam River	June 1 – October 15 (CT*)
North Santiam River (below Big Cliff Dam)	July 15 - August 31 (CHS,STW,CT,RB*)
Stout Cr., Rock Cr., & Mad Cr.	July 15 - October 15 (STW,CT,RB*)
Lt. N. Fk. Santiam River	July 15 - August 31 (CHS,STW,CT,RB*)
Sinker, Elkhorn Cedar Creeks & tributaries	July 15 - October 15 (STW,CT,RB*)
Other Tributaries	June 1 - October 15 (CT*)
Other Santiam River Tributaries (below Big Cliff Dam)	June 1 - October 15 (CT*)
North Santiam River (above Detroit Dam)	June 1 - August 31 (CHS, K,CT,RB*)
Breitenbush River	June 1 - August 31 (CHS, K,CT,RB*)
South Santiam River (below Foster Dam)	July 15 - August 31 (CHS,STW,CT,RB*)
Crabtree Cr.,Thomas Cr. & Wiley Cr.	July 15 - August 31 (CHS,STW,CT,RB*)
McDowell Cr.	July 15 - October 15 (STW,CT*)
Other South Santiam River Tributaries (below Foster Dam)	June 1 - October 15 (CT*)
South Santiam River (above Foster Dam)	July 15 - August 31 (CHS,STW,CT,RB*)
Middle Santiam River & Quartzville Creek	June 1 - October 15*(K,CT,RB*)
Marys River	July 1 - October 15 (CT*)
Long Tom River	July 1 - October 15(CT*)
Other West Bank Will. R. Tribs. (Will. Falls to McKenzie R.)	July 1 - October 15 (CT*)
Calapooia	
Calapooia River (below Holley)	June 1 - October 15 (CT*)
Calapooia River (above Holley)	July 15 - August 31 (CHS,STW,CT,RB*)
Other East Bank Will. R. Tribs. (Will. Falls to Harrisburg)	June 1 - October 15 (CT*)
Springfield Office - (541) 726-3515	
Willamette	
Willamette River (above McKenzie River)	June 1 - October 31(CHS,RB*)
McKenzie River Basin	
McKenzie River (below Leaburg Dam)	by specific arrangement (CHS,CT,RB,BUT,OC*)
Tributaries of McKenzie River (below Leaburg Dam)	June 1 - October 31 (CT,RB, OC*)
McKenzie River (above Leaburg Dam)	July 1 - August 15 (CHS,BUT,CT,RB*)
Blue River (above Blue River Dam)	June 1 - October 31 (CT,RB*)
Middle Fork Willamette River Basin	
Middle Fork Willamette River (Confluence with the	
Coast Fork Willamette to Dexter Dam)	by specific arrangement (CHS,STW,CT,RB,OC*)
Fall Creek & Little Fall Creek	July 1 - August 31 (CHS,STW,CT,RB*)
Lost Creek	July 1 - August 31 (CHS,STW,CT,RB*)
Rattlesnake Creek	by specific arrangement (STW,CT,RB,OC*)

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WATERWAY	PREFERRED WORK PERIOD [1]
Other Middle Fork Willamette River tributaries (Confluence with the Coast Fork Willamette to Dexter Dam)	June 1 – October 31 (CT,RB*)
Middle Fork Willamette River Basin (Dexter Dam to Hills Creek Dam)	by specific arrangement (CHS,CT,RB,OC*)
North Fork Middle Fork Willamette River	July 1 – August 31 (CHS, CT,RB*)
Salmon Creek	July 1 – August 31 (CHS, CT,RB*)
Salt Creek	July 1 – August 31 (CHS, CT,RB, OC*)
Middle Fork Willamette River (above Hills Creek Dam)	July 1 - August 15 (CHS,BUT,CT,RB*)
Coast Fork Willamette River Basin	
Coast Fork Willamette River (Confluence with the Middle Fork Willamette to Cottage Grove Dam)	by specific arrangement (CHS,RB,OC*)
Coast Fork Willamette River (above Cottage Grove Dam)	May 15 – November 30 (CT*)
Row River (below Dorena Dam)	June 1 - October 31(CHS,CT,RB*)
Row River (above Dorena Dam)	May 15 – November 30 (CT*)

Southwest Region

Umpqua Watershed District

Roseburg Office - (541) 440-3353

Pacific	
Umpqua River	
Umpqua River Estuary & Smith Est.	November 1 –January 31 (MAR,SHL,CHS,CHF,CO,STW,STS,,CT*)
Umpqua River (Scottsburg and above)	July 1 - August 31(CHS,CHF,CO,STW,STS,CT*)
Umpqua River Tribs.	July 1 - September 15 (CHF,CO,STW,CT*)
North Umpqua	
North Umpqua River (below Soda Springs Dam)	by specific arrangement (CHF,CHS,CO,STW,STS,CT*)
Tribs. North Umpqua (below Soda Springs)	July 1 - September 15 (CHS,CO,STW,STS,CT*)
North Umpqua River (above Soda Springs Dam)	June 15 - October 15 (RB,BT,BR*)
South Umpqua	
South Umpqua River	July 1 - August 31(CHF,CHS,CO,STW,CT*)
South Umpqua Tribs.	July 1 - September 15 (CHF,CO,STW,CT*)

Charleston Office - (541) 888-5515

Pacific	
Coos	
Coos Bay Estuary and River (to Millicoma R./S. Coos R. confluence)	October 1 - February 15 (MAR,SHL,JUV,CHF,CO,STW,CT *)
Millicoma River, S. Coos R. and tribs.	July 1 – September 15 (CHF,CO,STW,CT,MD*)
Coquille	
Coquille River Estuary (Mouth to Bear Creek)	October 1 – February15 (MAR,SHL,JUV,CHF,CO,STW,CT *)
Coquille River and tribs. (Bear Creek and above)	July 1 - September 15 (CHF,CO,STW,CT*)
Other Coastal Tributaries	July 1- September 15 (CHF,CO,STW,CT*)
Coastal Lakes	July 1 – September 15 (CO,STW,CT*)
Coastal Lake Tributaries	July 1 - September 15 (CO,STW,CT*)

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WATERWAY	PREFERRED WORK PERIOD [1]
Rogue Watershed District	
Gold Beach Field Office – (541) 247-7605	
Pacific	
New	
New River	October 1- May 31 (JUV CHF*)
New River Tributaries	July 15 - September 30 (CO,STW,CT*)
Floras Creek Estuary	October 1- May 31 (JUV CHF*)
Floras Creek (above Hwy 101 bridge)	July 15 - September 30 (CHF,CO,STW,CT*)
Sixes	
Sixes River Estuary	October 1- May 31 (JUV CHF*)
Sixes River (above Hwy 101 bridge)	July 15 - September 30 (CHF,CO,STW,CT*)
Elk	
Elk River Estuary	October 1- May 31 (JUV CHF*)
Elk River (above Hwy 101 bridge)	July 15 - September 30 (CHF,CO,STW,CT*)
Euchre/Coastal Tributaries	
Euchre Creek Estuary	November 1 - May 31 (JUV CHF*)
Euchre Creek (above County bridge)	July 15 - September 30 (CHF,CO,STW,CT*)
Hubbard Cr., Brush Cr.	July 15 - September 30 (CO,STW,CT*)
Mussel Cr.	July 15 - October 31 (STW,CT*)
Rogue	
Rogue River Estuary	October 1 - May 31 (JUV CHF*)
Rogue River (Elephant Rock to Marial)	May 1 - September 30 (CHF*)
Rogue River Tributaries (below Marial)	July 15 - September 30 (CHF,CO,STW,CT*)
Hunter	
Hunter Creek Estuary	November 1 - May 31 (JUV CHF*)
Hunter Creek (above County bridge)	July 15 - September 30 (CHF,CO,STW,CT*)
Pistol	
Pistol River Estuary	November 1 - May 31 (JUV CHF*)
Pistol River (above County bridge)	July 15 - September 30 (CHF,CO,STW,CT*)
Chetco/Coastal Tributaries	
Chetco River Estuary	Oc tober 1 - May 31 (JUV CHF*)
Chetco River (above Tide Rock)	July 15 - September 30 (CHF,CO,STW,CT*)
Meyers Cr., Thomas Cr., Whalehead Cr.	July 15 - October 31 (STW,CT*)
Winchuck	
Winchuck River Estuary	October 1 - May 31 (JUV CHF*)
Winchuck River (above South Fork)	July 15 - September 30 (CHF,CO,STW,CT*)
Other Coastal Tributaries	July 15 - October 31 (CT*)
Central Point Office (541) 826-8774	
Rogue	
Rogue River (Marial to William Jess Dam)	June 15 - August 31 (CHS,STW*)
Illinois River	June 15 - September 15 (CHF,STW*)
Applegate River	July 1 - September 15 (CHF,STW*)
Other Rogue River Tributaries (above Marial).	June 15 - September 15 (CHS,STW*)
Rogue River (above William Jess Dam)	June 15 - September 15 (BT,CT*)

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WATERWAY	PREFERRED WORK PERIOD
High Desert Region	
Deschutes Watershed District	
The Dalles Office - (541) 296-4628	
Columbia	
Columbia River (Within District Bonneville to John Day Dam)	November 15 - March 15 (CHF,CHS,SS,CO,STW,STS*)
Columbia River Tributaries	July 15 - September 30 (STW,CO,RB*)
Fifteenmile Creek	July 15 - October 31 (STW,RB*)
Hood River	
Hood River	July 15 - August 31 (CHF,CHS,CO,STS,STW*)
East Fork Hood River & Tribs.	July 15 – August 31 (CHF,CO,STS,STW*)
Middle Fork Hood River & Tribs.	July 15 – August 15 (STW,CHS,BUT*)
West Fork Hood River & Tribs.	July 15 – August 15 (CHS,STS,STW*)
Deschutes	
Deschutes River (below Pelton Dam)	February 1 - March 15 (CHF,STS,RB*)
White River	July 1 - October 31 (RB*)
Buckhollow Cr.	July 1 - October 31 (STS,RB*)
Bakeoven Cr.	July 1 - October 31 (STS,RB*)
Trout Cr.	July 1 - October 31 (STS,RB*)
Bend Office - (541) 388-6363	
Deschutes	
Metolius	
Metolius River	by specific arrangement (K,RB,BR,BUT*)
Spring Creek	by specific arrangement(K,RB*,BUT)
Lake Creek	by specific arrangement (K,RB)
Deschutes River (Pelton Dam through Lake Billy Chinook)	July 1 - September 30 (RB,BR*)
Crooked River	
Crooked River (below Prineville Dam)	July 1 - October 31 (RT*)
Prineville Reservoir Ju	ly 1 - October 31 (RT*)
Crooked River (above Prineville Dam)	July 1 - October 31 (RT*)
N.Fk. Crooked River (above Big Summit Prairie)	July 1 - September 30 (RT*)
Deschutes River (Lake Billy Chinook to Bend)	July 1 - September 30 (RB,BR,BUT,K*)
Whycus Creek	July 1 - October 15 (RB,BR,BUT*)
umalo T	July October 15 RB,BR*)
Deschutes River (Bend-North Canal Dam to Benham Falls)	July 1 - October 15 (RB,BR*)
Deschutes River (Benham Falls to Wickiup Dam)	July 1 - October 15 (RB,BR*)
Little Deschutes River	July 1 - October 15 (RB,BR*)
Fall River	July 1 - October 15 (RB,BR*)
Deschutes River(Wickiup Reservoir to Crane Prairie Dam)	July 1 - August 31 (RB,BR,K *)
Deschutes River (Crane Prairie Reservoir to Little Lava Lake)	July 1 - August 31 (RB,BT,K*)
Odell/Davis Lake and Tributaries	by specific arrangement (K,RB,BUT*)
Klamath Watershed District	
Klamath Falls Office - (541) 883-5732	
Klamath	
Klamath River (below Keno)	July 1 - September 30 (RB*,SUSP,RB,RT)
Cottonwood Creek	July 1 – September 30 (STW*)
Jenny Creek	July 1 – January 31 (SCRT,JCS*)
Klamath River (above Keno)	July 1 – January 31 (SNS,BCHUB,RT*)
Lost River above Bonanza	July 1 – January 31 (RT,SNS
Lost River below Bonanza	July 1 - March 31 (RT*)
Williamson River	August 1 - September 30 (BT,BR,RT,SNS,LRS,KLS*)

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WATERWAY	PREFERRED WORK PERIOD [1]
Klamath River (above Keno)	July 1 – January 31 (SNS,BCHUB,RT*)
Lost River above Bonanza	July 1 – January 31 (RT,SNS*)
Lost River below Bonanza	July 1 - March 31 (RT*)
Williamson River	August 1 - September 30 (BT,BR,RT,SNS,LRS,KLS*)
Sprague River	August 1 - September 30 (BUT,LRS,SNS,RT,BT,BR *)
Sycan River	August 1 - September 30 (RT,BT,BR,BUT,LRS,SNS*)
Wood River	August 1 - September 30 (RT,BR,BUT,SNS*)
Sevenmile Creek	August 1 - September 30 (RT,BR*)
Klamath Lake and Agency Lake	July 1 - January 31 (RT,LRS,SNS,BCHUB*)
Silver Lake tributaries	July 15 - September 30 (RT,BT*)
Summer Lake and tributaries	July 15 - September 30 (TCHUB,RT *)
Chewaucan River	July 15 - September 30 (RT*)
Goose Lake tributaries	July 15 - September 30 (GRT,GLAM,SSUC,GCB,PRCH,PSCL,MSUC*)
Warner Valley tributaries	July 15 - September 30 (WSUC,FD,RT*)

Malheur Watershed District

Hines Office - (541) 573-6582

Columbia	
Snake	
Snake River (Malheur County)	Open
Malheur	
Malheur River (below Namorf Dam)	Open
Willow Cr. (below Malheur Res.)	Open
Willow Cr. (above Malheur Res.)	October 1 - March 31 (RB,RT*)
Cottonwood, Cr., Squaw Cr	October 1 - March 31 (RB,RT*)
Other Tributaries	October 1 - March 31 (RB,RT*)
Malheur River (Namorf Dam to Wolf Creek)	November 1 - March 31 (RT*)
North Fork Malheur (mouth to Beulah Res.)	November 1 - March 31 (RT,RB*)
North Fork Malheur (above Beulah Res.)	July 1 - August 31 (BUT,RT,BT*)
South Fork Malheur	October 1 - March 31 (RT*)
Malheur River (Including Wolf Creek and above)	July 1 - August 31 (BUT,RT,BT*)
Owyhee River	
Owyhee River (below dam)	November 1 - March 31 (RB,BT*)
Owyhee River (above dam)	October 1 - March 31 (RB,RT*)
Succor Creek	October 1 - March 31 (RT*)
Silvies River (above 5mi dam)	October 1 - March 31 (RT,*)
Silver Creek (above Hwy 45)	October 1 - March 31 (RT*)
Donner Blitzen River (Steen Mtns)	October 1 - March 31 (RT*)
Alvord Basin	October1-March31(LCT,AC*)
Catlow Valley tributaries	October 1 - March 31 (LCT,CTC,RT*)
Trout Creek Mountains streams	October 1 - March 31 (LCT,AC,RB,CT*)
Quinn River	October 1 - March 31 (LCT,RB,CT*)

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WATERWAY	PREFERRED WORK PERIOD [1]
Northeast Region	
John Day Watershed District	
John Day Office - (541) 575-1167	
Columbia River	
Lower John Day	
John Day River (below John Day)	July 15 - August 31 (STS,RT*)
Rock Creek	
Rock Creek (Gilliam Co.)	July 15 - September 30 (STS,RT*)
North Fork John Day	
North Fork John Day River (below U.S. 395)	July 15 - August 31 (STS,RT*)
Middle Fork John Day	
Middle Fork John Day River (below US 395)	July 15 - August 31 (STS,RT*)
Middle Fork John Day River (above US 395)	July 15 - August 15 (CHS,STS,RT,BUT*)
North Fork John Day River (above U.S. 395)	July 15 - August 15 (CHS,STS,BUT*)
Upper John Day	
South Fork John Day River	
South Fork John Day River	July 15 - August 31 (STS,RT*)
John Day River (above John Day)	July 15 - August 15 (CHS,STS,BUT,RT,CT*)
Canyon Creek	July 15 - August 31 (STS,RB,CT*)
Pendleton Office - (541) 276-2344	
Columbia	
Columbia River (John Day Dam upstream)	December 1 – March 31 (CHF,CHS,CO,STS*)
Willow Creek	July 1 - December 31 (RT, STS*)
Umatilla	
Umatilla River (below Cayuse)	July 15 - September 30 (CHF,CHS,CO,STS,RT, BUT*)
Butter Creek	July 1 - December 31 (RT*)
Birch Creek	July 1 - October 31 (STS,RT*)
McKay Creek	
McKay Creek (below reservoir)	December 1 - March 31 (CHF,CHS,CO,STS,RT,BUT*)
McKay Creek (above reservoir)	July 1 - December 31 (RT*)
Wildhorse Creek	July 1 - October 31 (CHF,CHS,CO,STS,RT*)
Umatilla River (above Cayuse)	July 1 - August 15 (CHS,CHF,STS,RT,CO,BUT,WF*)
Meacham Creek	
Meacham Creek (below north fork)	July 1 - August 15 (CHS,STS,RT,BUT, WF*)
Meacham Creek (above north fork)	July 1 - October 31 (STS,RT,BUT,WF*)
Cold Spring Creek	June 1 - December 31
Walla Walla	
Walla Walla River (below forks)	July 1 - September 30 (CHS,STS,RT,BUT,WF*)
Pine Creek	July 1 - October 31 (STS,RT*)
Little Walla Walla Distributary System	
Little Walla Walla (above Ferndale Rd)	December 1 – March 31(STS,RT,BUT*)
Little Walla Walla (below Ferndale Rd)	July 1 - October 31 (STS,RT,BUT*)

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WATERWAY	PREFERRED WORK PERIOD [1]
Mill Creek	July 1 - August 15 (CHS,STS,RT,BUT,WF*)
Cottonwood Creek	July 1 - October 31 (STS,RT*)
Birch Creek	July 1 - October 31 (STS,RT*)
Couse Creek	July 1 - October 31 (STS,RT*)
South Fork Walla Walla River	July 1 - August 15 (CHS,STS,RT,BUT,WF*)
North Fork Walla Walla River	
NF Walla Walla River (below Little Meadows Cyn)	July 15 - September 30 (STS,RT,BUT,WF)
NF Walla Walla River (above Little Meadows Cyn)	July 1 - August 31 (STS,RT,BUT,WF)

Grande Ronde Watershed District

Enterprise Office - (541) 426-3279

Columbia	
Snake River (state line to Hells Canyon Dam)	July 1 - October 15 (CHF,CHS,SS,STS*)
Grande RondeGrande Ronde River (below Wallowa River)	July 1 - September 15 (CHF,STS*)
Wenaha River Ju	ly 1 - August 15 (CHS,STS,BUT*)
Joseph Creek Jul	y 1 - March 31 (STS*)
Wallowa River Ju	ly 15 - August 15 (CHS,STS,RB,BT,BUT *)
Imnaha River (above Big Sheep Creek)	July 15 - August 15 (CHS,STS,BUT*)
Imnaha River (below Big Sheep Creek)	July 1 – October 15 (CHF,STS*)

La Grande Office - (541) 963-2138

Columbia	
Snake	
Grande Ronde	
Grande Ronde River (Wallowa River to Highway 244 Bridge)	July 1 - October 15 (CHS,STS,RB,BUT*)
Minam River	July 1 – August 15 (CHS,STS,RB,BUT*)
Lookingglass Creek	July 1 - August 15 (CHS,STS,RB,BUT*)
Catherine Creek	
Catherine Creek (to, and including Little Creek)	July 1 - October 15 (CHS,STS,RB,BUT*)
Catherine Creek (above Little Creek)	July 1 – August 15 (CHS,STS,RB,BUT*
Grande Ronde River (above highway 244 bridge)	July 1 - July 31 (CHS,STS,RB,BUT*)
Snake River Reservoir	July 1 - November 30 (WW*)
Snake River Reservoir Tributaries	July 1 - October 31 (RB*)
Burnt River	July 1 - October 31 (RB,BT*)
Pine Creek	July 1 – August 31 (RB,BUT *)
Powder River (mouth to Phillips Reservoir)	July 1 - October 31 (RB*)
Anthony Creek	July 1 – August 31 (RB,BUT*)
North Powder R. (above Dutch Flat Cr.)	July 1 – August 31 (RB,BUT*)
Wolf Creek (above Wolf Creek Res.)	July 1 – August 31 (RB,BUT*)
Big Muddy Creek (above Foothill Rd.)	July 1 – August 31 (RB,BUT*)
Pine Creek (above North Fork Pine Cr.)	July 1 – August 31 (RB,BUT*)
Salmon Creek (above Pocahontas Road)	July 1 – August 31 (RB,BUT*)
Powder River (above Phillips Reservoir)	July 1 – August 31 (RB,BUT*)
Deer Creek (above Phillips Reservoir)	July 1 – August 31 (RB,BUT*)

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*Coded fish species defined below provide the primary basis for timing guidelines. The species list should be considered general information and is not necessarily comprehensive nor accurate.

AC - Alford chub
BCHUB – blue chub
BR - brown trout
BT - brook trout
BUT - bull trout
CR – crappie
CHF - Chinook salmon, fall
CHR - Chinook salmon, summer
CHS - Chinook salmon, spring
CO - coho salmon
CS - chum salmon
CT - cutthroat trout (includes sea run)
CTC - Catlow tui chub
GCB - goose lake chub
FD – Foskett speckled dace
GLAM - Goose Lake lamprey
GSUC - Goose Lake sucker
JCRT – Jenny Creek red band trout
JCS – Jenny Creek sucker
JUV - juvenile salmonids
K – kokanee
KLS – Klamath largescale sucker
LCT - Lahontan cutthroat trout
LRS – Lost River sucker
MAR - various marine species of fish
MD – Millicoma dace
MMS - Malheur mottled sculpin
MSUC – Modoc sucker
OC – Oregon sucker
PRCH - pit roach
PSCL - pit sculpin
RB - rainbow trout
RT - red band trout
SHL - various marine shell fish
SNS shortnose sucker
SS - sockeye salmon
SSUC – Sacramento sucker
STS - steelhead summer
STW - steelhead winter
SUSP – sucker species
TCHUB – tui chub
WF – mountain white fish
WSUC – Warner sucker
WW - various warm water game fish

[1] Work period is established for named stream, all upstream tributaries, and associated lakes within the watershed unless otherwise indicated.

APPENDIX D

NMFS Fish Screen Criteria

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2020

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NMFS Guidelines for Water Diversions when conducting Routine Road Maintenance

Created: December 15th, 2009

These guidelines are a condensed version of those guidelines relevant to ODOT's Routine Road Maintenance found within the National Marine Fisheries (NMFS) northwest region's *Anadromous Salmonid Passage Facility Design* (February, 2008):

The screening of pump intakes is required. If pumps are used to temporarily divert a stream (to facilitate construction), an acceptable fish screen must be used to prevent entrainment or impingement of small fish. At no time must construction or construction staging activity disrupt continuous streamflow downstream of the construction site.

The use of pumps and their intake design shall be designed according to the following:

Construction

• Circular Mesh Screens: openings must not exceed 3/32 inch in diameter. Perforated plate must be smooth to the touch with openings punched through in the direction of approaching flow.

• Slotted Screens: Slotted screen face openings must not exceed 1.75 mm (approximately 1/16 inch) in the narrow direction.

• Square Mesh Screens: Square screen face openings must not exceed 3/32 inch on a diagonal.

• The screen material must be corrosion resistant and sufficiently durable to maintain a smooth uniform surface for the duration of its use.

• Other Components: Other components of the screen facility (such as seals) must not include gaps greater than the maximum screen opening defined above.

• Unobstructed Screen Area: The percent open area for any screen material must be at least 27%

• No single pump may withdraw more than 3 cfs.

Placement

• If multiple pumps are used that draw >3cfs place pumps so that a single point of attraction flow does not occur.

• End of pipe screens must be placed in locations with sufficient ambient velocity to sweep away debris removed from the screen face, or designed in a manner to prevent debris re-impingement and provide

for debris removal.

• End of pipe screens must be submerged to a depth of at least one screen radius below the minimum water surface, with a minimum of one screen radius clearance between screen surfaces and natural or constructed features. For approach velocity calculations, the entire submerged effective screen area may be used.

• A clear escape route should exist for fish that approach the intake volitionally or otherwise. For example, if a pump intake is located off of the river (such as in an intake lagoon), a conventional open channel screen should be placed in the intake channel or at the edge of the river to prevent fish from entering a lagoon.

• If possible, utilize an underground infiltration gallery. Coordinate with REC to be considered.

APPENDIX E

Special Management Area Highway Directive

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2020

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Oregon Department of Transportation

Highway Division DIRECTIVE

NUMBER	SUPERSEDES
MAI- 131-01	New
EFFECTIVE DATE: 01FEB08	PAGE NUMBER: 1 of 4
REFERENCE	
SUBJECT: **Special Management Areas**	APPROVED SIGNATURE

PURPOSE:

To establish guidelines and direction for Region Technical Staff, Central Geo/Environmental Staff and Maintenance Staff in designating and managing Special Management Areas to meet applicable state and federal regulations.

This directive is not intended to provide guidance or direction in the creation and management of compensatory wetland mitigation sites.

BACKGROUND:

A Special Management Area (SMA) is an identified location along an ODOT right-of-way where sensitive natural or cultural resources are found. These resources are protected under state or federal law and require unique or modified maintenance actions to ensure continued viability of the resource.

The location of a resource and the potential need for a SMA often is established during project development, when ODOT enters into agreements with resource regulatory agencies to avoid protected resources or minimize impacts as a result of a project. In addition, a potential SMA may be identified because of a survey, previous knowledge, or information provided by external entities.

Designation of a SMA will involve resource verification, and agreement and understanding between Region Environmental Managers and District Managers that routine maintenance activities negatively impact the resource, that there are best management practices (BMPs) or practicable modifications to routine maintenance activities that can be implemented to aid the resource, and that these modified activities do not compromise public health and safety.

This directive outlines the process and criteria, described through roles and responsibilities and management expectations, for designating and managing SMAs along the ODOT right-of-way.

RESPONSIBILITIES:

Region Environmental Staff

1. *SMA Nomination Process*

   Identify the location of a resource proposed for a SMA through project development, acquired knowledge, or information provided by an external entity.

   Upon identification of a potential SMA, coordinate with local District Manager to determine if maintenance activities negatively impact the site, and to develop methods to minimize impacts to the resource until a determination on the suitability of the site for SMA status is reached.

   Gather the following information on the proposed SMA for inclusion in a SMA nomination packet:
   - Verification of the nature of the resource (e.g., species, presence of artifact) by a third party expert.
   - Description of the needs of the resource that include requirements for continued existence.
   - Citation of the appropriate state and/or federal law that outlines required protection of the resource.
   - Demonstration that the resource is located within ODOT right-of-way including maps and/or survey results.
   - Review of existing documents that indicate that guidance for managing the resource is not included in any existing ODOT Maintenance guidance document (e.g., Routine Road Maintenance Guide (Blue Book), Archaeological Guidance for Hazardous Materials Spills and Emergency Situations).
   - Description of the detrimental effects on the resource by routine maintenance activities that occur at the site. Routine maintenance activities are defined in the ODOT Routine Road Maintenance Guide.
   - Description of proposed reasonable and safe BMPs or conservation measures to protect the resource, citing supporting documentation when possible, and how to implement these practices or measures.
   - Input and potential concerns from Oregon Department of Agriculture, US Fish and Wildlife Service, and State Historic Preservation Office, where appropriate.

   Submit the SMA nomination documentation to the Region Environmental Manager.

2. *Post-SMA Nomination Process*

   SMA Designated Site. If a site is designated a SMA by the Region Environmental Manager and the District Manager:
   - Coordinate development of BMPs or changes to maintenance activities, as needed, based on agreement by the Region Environmental Manager and the District Manager.

- Coordinate stakeholders with vested interest in success of the SMA (e.g., Maintenance, regulatory agencies, Project Development Team) and develop a site management plan for the SMA to include:
    - □ Picture(s) of the resource.
    - □ Description of resource, including location and resource boundaries.
    - □ Size of impacted area.
    - □ Specific needs of resource.
    - □ BMPs or modifications to maintenance activities necessary to maintain the resource at existing level, including, but not limited to, descriptions of timing, equipment modifications, start/stop locations, and buffers, if needed.
    - □ Monitoring and reporting requirements of resource, and roles and responsibilities for monitoring.
    - □ Draft budget for implementing changes to maintenance activities or BMPs, and any monitoring requirements.
    - □ Identification and list of competing maintenance requirements (e.g., noxious weed management, local government mowing requirements) and agreement on how to manage competing requirements within the constraints of the SMA.
    - □ Location of SMA signs and agreed upon management designations on the signs. NOTE: Management designations on signs must match descriptions in the site management plan, and every sign must indicate every right-of-way maintenance activity modification.
- Coordinate SMA sign designations and placement with the District Manager.
- Perform yearly review of SMA sites and identify needed changes to SMA management plans. Coordinate with stakeholders on needed amendments to SMA management plans based on changes in resource regulatory status, SMA Program criteria, or monitoring information.
- Obtain approvals from the Regional Environmental Manager and the District Manager for any management changes. Notify Central Geo/Environmental and the State Maintenance and Operations Engineer (Office of Maintenance) of approved changes to SMA management plans.

Non-Designated Site. If a site is not designated a SMA by the Region Environmental Manager and the District Manager:

- Coordinate with the appropriate regulatory agency/agencies and prepare required documentation as needed.
- Coordinate with the District Manager for any required mitigation.

Region Environmental Manager with the District Manager

Review each SMA nomination with the proposing environmental staff, and make a determination on the suitability of the site for SMA status based on the following criteria:

- Upon review, it is determined and agreed that routine maintenance activities do not adversely affect the site, and changes in routine activities are not needed to protect the resource. **No SMA designation**.
- Upon review, it is determined and agreed that routine maintenance activities negatively affect the site. The District Manager believes that routine maintenance activities can be modified to incorporate proposed changes or BMPs without compromising public health and safety. **SMA designation.**
- Upon review, it is determined and agreed that routine maintenance activities negatively affect the site. The District Manager believes that reasonable modifications cannot be made to routine maintenance activities to protect the resource without negatively impacting public health and safety. **No SMA designation.**

Approve any proposed changes to management plans developed for SMA sites.

Region Environmental Manager

Following each SMA designation decision, document the review decision and agreement reached between the Region Environmental Manager and District Manager. The review decision and agreement will be maintained in Region files with copies submitted to the Central Geo-Environmental Section and the State Maintenance and Operations Engineer (Office of Maintenance).

If a site will not be designated a SMA because reasonable modifications cannot be made to routine maintenance activities to protect the resource without negatively impacting public health and safety, work with the appropriate regulatory agency/agencies and technical staff to develop the required environmental documents as necessary for the impacts. Environmental documents developed will be maintained in Region files with copies submitted to the Central Geo-Environmental Section and the State Maintenance and Operations Engineer.

District Manager

When a potential SMA has been identified, work with local Environmental staff to identify if maintenance activities impact site and to develop methods to minimize resource impacts until the SMA designation process is completed.

Ensure maintenance and management of agreed upon SMA in accordance with site Management Plans; maintain SMA management plans.

Coordinate SMA sign designations and placement with Region Environmental Staff; install and maintain SMA signs.

Work with Region environmental staff to implement required mitigation.

Central Geo/Environmental Section

As situations warrant (e.g., change in routine road maintenance procedures or resource regulatory status), perform review of known resource sites to ensure that SMA designations remain appropriate.

Submit SMA change-in-status nominations, based on the SMA designation criteria outlined above, to the Region Environmental Manager and District Manager for SMA designation review and determination.

Maintain statewide files of SMA review decisions and agreements, monitoring reports, and other associated environmental documentation.

Assemble and compile BMPs that encourage viability of the resources. Maintain database of resource requirements and BMPs for use by Region technical staff.

Develop template for SMA management plans with input from Region technical staff and appropriate regulatory agencies.

Maintain SMA database; update SMA database as new information is received from Regions.

Maintain database of regulated resources not associated with SMAs, including any mitigation commitments.

Manage and provide funding to Regions for monitoring SMAs, and for monitoring resources not associated with SMAs but that have regulatory monitoring requirements.

Prepare statewide summary reports as necessary on SMAs and regulated resources not associated with SMAs managed by ODOT.

Serve as the contact for regulatory agencies on issues related to the SMA Program that have statewide implications.

Office of Maintenance

Coordinate with the Central Geo/Environmental Section to facilitate annual reviews of the SMA Program to ensure that SMAs are adaptively managed.

Maintain files of SMA management plans and agreements.

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APPENDIX F

Pesticide-Treated Wood

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2020

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Pesticide-Treated Wood Installation

(A) Use of lumber, pilings, or other wood products treated or preserved with pesticidal[1] compounds may not be used below ordinary high water, or as part of an in water or over water structure, except as described below;

(B) Pesticide-treated wood shipped to the project area must be stored out of contact with standing water and wet soil, and protected from precipitation;

(C) Each load and piece of pesticide-treated wood must be visually inspected and rejected for use in or above aquatic environments if visible residue, bleeding of preservative, preservation-saturated sawdust, contaminated soil, or other matter is present;

(D) Use prefabrication when possible to ensure that cutting, drilling and field preservative treatment is minimized;

(E) When field fabrication is necessary, all cutting and drilling of pesticide-treated wood, and field preservative treatment of wood exposed by cutting and drilling must occur above the ordinary high water to minimize discharge of sawdust, drill shavings, excess preservation and other debris in riparian or aquatic habitats;

(F) Use tarps, plastic tubs or similar devices to contain the bulk of any fabrication debris, and wipe off any excess field preservative;

(G) All pesticide-treated wood structures, including pilings, must have design features to avoid or minimize impacts and abrasion that would deposit pesticide-treated wood debris and dust in riparian or aquatic habitats; and

(H) Pesticide-treated wood may be used to construct a bridge, overwater structure, or an in-water structure; if all surfaces exposed to leaching by precipitation, overtopping waves, or submersion are coated with paint, opaque stain, or barrier that will be maintained for the life of the project. Coating and any painted-on field treatment must be carefully applied and contained to reduce contamination. Surfaces that are not exposed to precipitation or wave attack, such as parts of a timber bridge completely covered by a roadway wearing surface of the bridge deck, are exempt from this requirement.

[1] E.g., chromated copper arsenate (CCA), ammoniacal copper zinc arsenate (ACZA), alkaline copper quat (ACQ-B and ACQ-D), ammoniacal copper citrate (CC), copper azole (CBA-A), copper dimethyldithiocarbamate (CDDC), bromate preservatives, and oil-type wood preservatives, such as creosote, pentacholophenol, and copper naphthenate. For alternative source of structural lumber and piling designed for industrial and marine applications, but not based on pesticide-treated wood, including silica-based wood preservation, improved recycled plastic technology, and environmentally safe wood sealer and stains, see, e.g., American Plastic Lumber (Shingle Springs, California) and Resco Plastics (Coos Bay, Oregon)for structural lumber for plastic; Plastic Pilings, Inc. (Railto, California) for structurally reinforced plastic marine products; Timbersil (Springfield, Virginia) for structural lumber from wood treated with silica-based fusion technology; and Timber Pro Coatings (Portland, Oregon) for nonpetroleum based wood sealer and stains. The use of trade, firm, or corporation name is for the information and convenience of the agency and does not constitute and official endorsement or approval of any product or service to the exclusion of other that may be suitable.

Pesticide-Treated Wood Removal

(A) Project that require removal of pesticide-treated wood must ensure that, to the extent possible, no wood debris falls into the water. If wood debris does fall into the water, remove it immediately;

(B) After removal, place wood debris in an appropriate dry storage site until it can be removed for the project area;

(C) Do not leave wood construction debris in the water or stacked on the streambank at or below the ordinary high water; and

(D) Evaluate wood construction debris removed during a project, including pesticide-treated wood pilings, to ensure proper disposal of debris.

APPENDIX G

Emergency Authorization Form

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2014

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DEPARTMENT OF STATE LANDS EMERGENCY AUTHORIZATION APPLICATION
AND EXPEDITED CORPS PCN/REQUEST FOR EMERGENCY PROCEDURES

Corps #:_____ DSL#:_____(If applicable)

DATE: _____Time_____(AM/PM)
APPLICANT NAME: _____ PHONE: _____
Other Contact(s)/Phone #s:_____
ADDRESS: _____

PROJECT LOCATION INFORMATION:

Waterway: _____ River Mile: _____ County:_____

Section: _____ Township:_____ Range:_____ Tax Lot: _____

Nearest City_____ Lat./Long._____

ESA Species Present? ____Y ____N If yes, please list, if known: _____

ESH? ____Y ____N Federal Wild/Scenic River? __Y __ N State Scenic Waterway? __Y __N

[**NOTE:** If State Scenic Waterway, contact with Oregon Department of Fish & Wildlife and Oregon Parks and Recreation Department is required.]

Removal/Fill JD? ____Y ____N Section 404? __Y __ N Section 10? __Y __N

Archy Issues? ___Y ___N If yes, please list, if known: _____

Driving Directions: _____

DESCRIBE PURPOSE AND NEED FOR THE PROJECT AND POTENTIAL CONSEQUENCES OF NO ACTION:_____
_____
_____

(*Describe the nature of the emergency—specifically the nature of the threat to public health, safety, or property, and the immediacy of the threat and need to act promptly. State why the proposal is the minimum necessary to address the immediate threat, other fixes considered, or dropped)*

OTHER AGENCY NOTIFICATION

☐ Oregon Dept. of Fish and Wildlife Biologist: _____ Phone No._____ Fax: _____
Date of Contact: _____
☐ Others (eg. NMFS, DEQ, EPA, DLCD, tribes):
Brief summary of agency comments: _____
_____

PROPOSED PROJECT INFORMATION:

Removal-fill activity type: _____ Waste Material Disposal Location: _____

Type of fill material used: _____ Volume of fill to be placed below OHWL (cy): _____

Volume of material to be removal below OHWL (cy):_____

Footprint (acreage/sq ft) of removal/fill or linear feet of project below OHWL or in wetlands:_____

Brief Description of Project (*include whether the proposed fix is temporary to get through the season or if intended to be a longer term fix and rationale; also include the schedule for the work and how the work will be accomplished; attach separate sheet if necessary)*:
_____
_____
_____

Attachments:

☐ Photos (if available)
☐ Project drawings REQUIRED: location map, sketches/PowerPoint drawings showing plan and cross-sectional views—show OHWL, intended work, site preparation, staging areas and temporary impacts
☐ Other: _____
☐ **DSL TELEPHONE/VERBAL APPROVAL BY:**_____ Date:_____
☐ **SITE INSPECTION CONDUCTED BY**:_____ Date:_____
☐ **SPECIAL PERMIT CONDITIONS:** _____

_____
Applicant Signature **Date**

Agency Disclaimer: Corps and DSL have discretionary authority to add special conditions after the fact that may require additional site work.

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APPENDIX H

Section 10 Waters
(Rivers and Harbors Act)

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2020

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U.S. Army Corps of Engineers
Portland District

Navigable Waters Lists*

* The navigable waters lists identify waters regulated under Section 10 of the Rivers and Harbors Act. These are waters that are subject to the ebb and flow of the tide and/or are presently used, have been used in the past or could be used to transport interstate or foreign commerce. The lists are not based on the size or type of vessel that could utilize the waterway. Consult the appropriate navigation chart to ensure safe navigation.

NAVIGABLE RIVERWAYS WITHIN THE STATE OF OREGON .

Portland District - Corps of Engineers

October 1993

Waterway	Navigable Length (Miles)	Authorized Project(Miles)	Remarks†
Alsea River	11.2	None	Flows into Pacific Ocean at Waldport, Oregon. Head at footbridge at mile 11.2.
Barrett Slough	0.1	None	Tributary of Lewis & Clark River. Mouth 1.1 miles upstream of old US 101 Bridge. Head at levee.
Bear Creek (Clatsop)	0.7	None	Tributary of Columbia River (Svenson Slough). Head at US 30 Bridge.
Beaver Slough (Including 0.7 in Wallace Slough)	3.8	2.3	Tributary of Columbia River at Clatskanie, Oregon. Includes waters surrounding Anunde Island and in Kinnunen Cut.
Big Creek (Clatsop)	0.5	None	Tributary of Columbia River (Knappa Slough). Head 0.6 mile downstream of county road bridge at mile 1.1.
Binder Slough	0.4	None	Tributary of Youngs River. Mouth 1.4 miles upstream of Walluski River. Head at road fill.
Blind Slough (Columbia R)	2.5	None	Tributary of the Columbia River at Knappa, OR. Head at Gnat Creek.
Boonville/Middle Channel	7.0	None	Side channel of Willamette River. Three miles upstream from Corvallis, OR.
Butler Creek	1.1	None	Tributary of Smith River. Mouth 1 mile from Reedsport, OR. Head at road bridge at mile 1.1.
Calapooia River	0.5	None	Tributary of Willamette River. Mouth at Albany, OR. Head 0.1 mile downstream of OEER Bridge at mile 0.6.
Cary Slough	0.3	None	Tributary of Columbia R at Prescott, OR Head at railroad fill.
Catching Slough	7.0	None	Tributary of Coos River. Mouth 2 miles east of Coos Bay, OR. Head at Lone Tree Bridge.
Chetco River	3.5	0.3	Flows into Pacific Ocean at Brookings, OR. Head at mouth of Carey Creek.
Clackamas River	0.4	None	Tributary of the Willamette River at Oregon City, OR. Head 0.1 mile upstream of Highway 99E Bridge.
Clatskanie River	1.4	1.4	Tributary of Beaver Slough at Clatskanie, Oregon. Head at US Highway 30 Bridge at mile 1.4.
Coalbank Slough	2.2	None	Tributary of Isthmus Slough at Coos Bay, OR. Head is distinct.
Columbia River	309	309	To Washington State boundary. Portland District upstream boundary limit is 290.5, up to but not including Umatilla Interstate Bridge
Columbia Slough	8.4	7.7	Tributary of Willamette River. Mouth at Willamette River mile 1.2. Head at Canal Closure No. 2.
Coos River	15.6	15.6	Includes South Fork. Flows into Coos Bay at Coos Bay, OR. Head at Coos River Fish Hatchery.
Coquille River	36.3	24.0	Flows into Pacific Ocean at Bandon, OR. Head at confluence of North and South Forks.
Croisan Slough (See Willamette Slough)			
Dairy Creek	8.3	None	Tributary of Tualatin R; Mouth 1 mile south of Hillsboro, OR; head at Verboort Road Crossing.
Davis Slough	1.0	None	Tributary of Isthmus Slough. Head at tidegate.
Dean Creek	1.5	None	Tributary of Umpqua River 5.5 miles upstream of Reedsport, OR. Head 0.5 mile downstream of Johnson Creek at mile 2.0.
Depoe Slough	1.1	0.3	Tributary of Yaquina River at Toledo, OR. Head at road bridge 1.1.
Dougherty Slough	1.7	None	Tributary of Trask River at Tillamook, OR. Head at railroad crossing at mile 2.5.
Drift Creek (Alsea)	2.7	None	Tributary of Alsea River. Mouth 1 mile east of Waldport, OR. Head at road bridge.

NAVIGABLE RIVERWAYS WITHIN THE STATE OF OREGON
Portland District - Corps of Engineers

October 1993

Waterway	Navigable Length (Miles)	Authorized Project(Miles)	Remarks†
Drift Creek (Siletz)	1.0	None	Tributary of Siletz Bay. Mouth 1 mile south of Taft, OR. Head 0.2 mile upstream of road bridge at mile 0.8.
Driscoll Slough	0.3	None	Tributary of Columbia River at Westport, OR. Head 0.1 mile downstream of the railroad crossing at mile 0.4.
Duncan Inlet	4.5	None	Side channel of Siuslaw R; 5 miles upstream from Florence, OR
Elk Creek (Yaquina)	4.0	None	Tributary of Yaquina River. Mouth at Elk City, OR. Head 0.4 mile downstream of road bridge at mile 4.4.
Flesher Slough	0.5	None	Tributary of Yaquina River. Mouth 5 miles downstream from Toledo, OR. Head is distinct.
Frantz Creek	0.5	None	Tributary of Smith River. Mouth 2.0 miles from Reedsport, OR. Head 0.2 mile upstream of railroad crossing.
Gilbert River	5.8	None	On Sauvie Island. Tributary of Multnomah Channel.
Goble Creek	0.2	None	Tributary of Columbia River at Goble, OR. Head at US 30 bridge.
Green Slough	0.2	None	Tributary of Lewis and Clark River. Mouth 1.4 miles upstream of old US 101 bridge. Head at levee.
Grizzly Slough	0.4	None	Tributary of Blind Slough (Columbia River). Head at levee.
Hathaway Slough	0.4	None	Tributary of Tillamook Bay. Mouth 1 mile SE of Bay City, OR. Head at fork in slough.
Haynes Inlet	2.0	None	Tributary of Coos Bay. Mouth 2 miles north of North Bend, OR
Hoquarton Slough	2.0	None	Tributary of Dougherty Slough at Tillamook, OR. Head at railroad crossing at mile 1.5
Hudson Slough	1.0	None	Tributary of Smith River. Mouth 3 miles NE of Reedsport, OR. Head at road crossing at mile 1.0.
Isthmus Slough	9.9	3.3	Tributary of Coos Bay with mouth at Coos Bay, OR. Head at road causeway at Green Acres, OR.
Jeffries Slough	0.1	None	Tributary of Lewis and Clark River. Mouth 0.6 mile upstream of old US 101 bridge. Head at levee.
Joe Ney Slough	2.2	None	Tributary of South Slough (Coos Bay). Mouth at Charleston, OR. Head is distinct.
John Day River (Clatsop)	4.3	None	Tributary of Lower Columbia River. Mouth 3 miles east of Astoria, OR. Head at unnamed fork.
John Slough	0.5	None	Tributary of Columbia River (Bradbury Slough). Head at railroad fill.
Kilchis River	1.4	None	Tributary of Tillamook Bay. Mouth two and one-half miles north of Tillamook, OR. Head at county road bridge.
King Slough	1.4	None	Tributary of Yaquina Bay. Mouth 2 miles SE of Newport, OR.
Klaskanine River	1.6	None	Tributary of Youngs River. Mouth 7 miles SE of Astoria, OR. Head at county road bridge.
Larson Slough	0.1	None	Tributary of Haynes Inlet. Head at road bridge.
Lawson Creek	0.5	None	Tributary of Duncan Inlet (Siuslaw River). Mouth 3 miles upstream from Florence, OR.
Lewis and Clark River	8.0	2.7	Tributary of Youngs Bay. Mouth 2 miles south of Astoria, OR. Head 0.4 mile upstream of county road bridge at mile 7.6.
Lint Slough	0.5	None	Tributary of Alsea Bay at Waldport, OR. Head at road fill.
McCaffery Slough	1.0	None	Tributary of Yaquina River. Mouth 3 miles SE of Newport, OR.

NAVIGABLE RIVERWAYS WITHIN THE STATE OF OREGON

Portland District - Corps of Engineers

October 1993

Waterway	Navigable Length (Miles)	Authorized Project(Miles)	Remarks†
McIntosh Slough	0.5	None	Tributary of Umpqua River at Reedsport, OR. Mouth adjacent to and upstream of Scholfield Creek.
McKenzie River	37.0	None	Tributary of Willamette River. Confluence 7 miles north of Eugene. Head at "Dutch Henry Rock" approximately 1.2 miles downstream of Leaburg Dam. Declared navigable by 9th Circuit Court decision in 1982
Mill Creek (Umpqua)	1.7	None	Tributary of Umpqua River. Mouth 12 miles upstream from Reedsport, OR. Head at fork of creek.
Millicoma River	8.7	8.7	Branch of Coos River. Head at confluence of west & east forks at Allegany, OR.
Multnomah Channel	21.8	21.8	Side channel of Columbia and Willamette Rivers.
Neawanna Creek	2.0	None	Tributary of Necanicum River at Seaside, OR. Head at 2nd Avenue in Seaside, OR.
Necanicum River	3.0	None	Flows into Pacific Ocean at Seaside, OR. Head at foot bridge for golf course.
Nehalem River	7.3	None	Flows into Pacific Ocean 3 miles SW of Wheeler, OR. Head of Nehalem Bay at upper end of Lazarus Island. Head of river at county road bridge at river mile 7.3.
Nehalem River, North Fork	5.1	None	Tributary of Nehalem River. Mouth 1.0 mile from Nehalem, OR. Head at Boukin Creek.
Nestucca River	7.0	None	Flows into Pacific Ocean, 2 miles south of Pacific City, OR. Mouth of Nestucca River on Nestucca Bay 1.4 miles downstream of bridge at Pacific City, OR. Head of river at Cloverdale-Woods bridge, river mile 7.0.
Nestucca River, Little	1.6	None	Flows into Nestucca Bay 2 miles SE of Pacific City, OR. Head 1.0 mile upstream of US 101 bridge at mile 1.6.
North Slough	3.0	None	Tributary of Coos Bay. Mouth 2 miles north of North Bend, OR. Head at US 101 bridge at Hauser.
Olalla Creek	1.5	None	Tributary of Yaquina River at Toledo, OR. Head at section line between sections 8 and 17.
Oswego Canal	1.5	None	Connects head of Lake Oswego with Tualatin River at Mile 6.
Oswego Lake	Public Law 94-587 §154 (Water Resources Development Act of 1976) removed Lake Oswego from Section 10 jurisdiction		
Otter Slough	1.0	None	Tributary of Smith River. Mouth 5 miles upstream from Reedsport, OR. Head is distinct.
Pacific Ocean	--	--	Navigable water in Pacific Ocean along approximately 296 miles of Oregon Coast.
Palouse Slough	0.1	None	Tributary of Haynes Inlet. Head at road bridge.
Pony Slough	1.2	None	Tributary of Coos Bay at North Bend, OR. Head at road crossing.
Pooles Slough	3.5	None	Tributary of Yaquina River. Mouth 4 miles upstream from Newport, OR. Head at power line crossing.
Powder River	10.3	None	Tributary of Snake River. Backwater of Brownlee Reservoir.
Rinearson Slough	0.4	None	Tributary of Columbia River. Mouth 3.0 miles downstream of interstate bridge at Rainier, OR. Head at levee.
Rogue River	27.1	0.8	Flows into Pacific Ocean at Gold Beach, OR. Head at Agnes, mile 27.1.
Salmon River	4.3	0.5	Inactive project. Mouth 4 miles north of Lincoln City, OR. Head at US 101 Bridge at mile 4.3.

NAVIGABLE RIVERWAYS WITHIN THE STATE OF OREGON .

Portland District - Corps of Engineers

October 1993

Waterway	Navigable Length (Miles)	Authorized Project(Miles)	Remarks†
Sandy River	3.1	None	Tributary of Columbia River. Mouth across Columbia River from Camas, WA. Head at Crown Point Highway bridge.
Santiam River	9.6	None	Tributary of Willamette River. Mouth 23 miles upstream from Salem, OR. Head at highway bridge at Jefferson at mile 9.6.
Santosh Slough	1.4	--	Tributary of Multnomah Channel. Mouth 3 miles south of St. Helens, OR. Head at end of barge canal.
Scholfield Creek	5.3	None	Tributary of Umpqua River. Mouth at Reedsport, OR. Head at railroad crossing at mile 5.3.
Siletz River	22.6	None	Flows into Pacific Ocean at Taft, OR. Head of bay 0.5 mile downstream of Kernville, OR. Head of river at Cedar Creek, river mile 22.6.
Siuslaw River	21.5	8.0	Flows into Pacific Ocean 5 miles downstream from Florence, OR. Head is 0.9 mile upstream of Mapleton, bridge at mile 20.6.
Siuslaw River, North Fork	4.3	None	Tributary of Siuslaw River. Mouth 1 mile from Florence, OR. Head at mouth of Lindsley Creek on right bank at mile 4.3.
Skipanon River	4.5	4.5	Tributary of Columbia River at Warrenton, OR. Head 0.3 miles downstream of Old Skipanon Creek at mile 4.8.
Smith River	23.1	21.0	Tributary of Umpqua River upper six miles of project is inactive. Mouth is 1 mile north of Reedsport, OR. Head at mouth of Spencer Creek at mile 23.
Smith River, North Fork	1.2	None	Tributary of Smith River. Mouth 17 river miles from Reedsport, OR. Head at mouth of Railroad Creek at mile 1.2.
Snake River	233.5*	None	Mile 176.0 to 409.5 forms Oregon-Idaho border. *(This is the length that is adjacent to Oregon border)
South Inlet	1.3	None	Tributary of Siuslaw River mouth 2 miles upstream from Florence, OR. Head at road crossing at mile 1.3.
South Slough (Coos Bay)	7.9	1.3	Trib of Lower Coos Bay mouth 1 mile north of Charleston, OR
South Slough (Siuslaw)	1.8	--	Tributary of Siuslaw River. Mouth 1 mile upstream of Florence, OR. Head at railroad crossing.
South Yamhill River	5.6	5.6	Tributary of Yamhill River; mouth 6 river miles downstream of McMinnville, OR; Head at Three Mile Lane Bridge.
Swan Island Lagoon	1.1	1.1	Part of Willamette River in City of Portland, OR.
Tillamook River	5.0	None	Tributary of Tillamook Bay at Tillamook, OR. Head at mouth of Beaver Creek, left bank at mile 5.0.
Trask River	3.5	None	Tributary of Tillamook Bay at Tillamook, OR. Head at US 101 bridge at mile 3.5.
Tualatin River	56.8	None	Tributary of Willamette River; mouth 2 miles upstream of Oregon City Locks; head at mouth of Gales Creek.
Umpqua River (Including South Umpqua River)	122.2	11.9	Flows into Pacific Ocean 11 river miles from Reedsport, OR. Head at I-5 bridge in Roseburg, OR.
Walluski River	2.8	None	Tributary of Youngs River. Mouth 2 miles south of Astoria, OR. Head at first westward bend of river.
Walluski River, Little	0.2	---	Tributary of Walluski River. Mouth 1.9 miles upstream of mouth of Walluski River. Head at road fill.
Warren Slough	1.7	--	Tributary of Columbia River (Knappa Slough).Included the entire loop of the stream plus the northern and southern projecting arms.
Westport Slough	4.7	0.7	Tributary of Columbia River at Westport, OR. Head 0.4 mile upstream of county road bridge at Woodson.

NAVIGABLE RIVERWAYS WITHIN THE STATE OF OREGON
Portland District - Corps of Engineers

October 1993

Waterway	Navigable Length (Miles)	Authorized Project(Miles)	Remarks†
Willamette River	183.2	183.2	Tributary of Columbia River. Portland to Eugene, OR. Head 1 mile upstream of I-5 bridge. Contains Willamette Falls Locks at mile 26.3.
Willamette Slough (Croisan Slough)	1.4	None	Tributary of Willamette River (Croisan Slough) at Salem, OR. Head distinct.
Willanch Slough	0.4	None	Part of Coos Bay. Mouth opposite North Bend, OR. Head at road crossing.
Wilson River	3.9	None	Tributary of Tillamook Bay at Tillamook, OR. Head at mouth of Beaver Creek.
Winchuck River	0.6	--	Tributary of Pacific Ocean immediately north of Oregon California border. Head at US 101 bridge.
Yachats River	1.0	--	Tributary of Pacific Ocean at Yachats, OR. Head 0.2 mile downstream of Salmon Creek at mile 1.2.
Yamhill River (also see South Yamhill R)	11.2	11.2	Tributary of Willamette River Mouth 29 river miles above Oregon City locks. Mouth 29 river miles above Oregon City Locks. Head at confluence of north and south forks.
Yaquina River	22.3	10.0	Flows into Pacific Ocean at Newport, OR. Head of bay at Yaquina, OR. Head of river at Elk City bridge, mile 22.3.
Youngs River	12.4	4.2	Tributary of Columbia River at Astoria, OR. Head of bay and mouth of river at old US 101 bridge. Head of navigation at county road bridge mile 12.4.

† Head refers to head of navigation not headwater

Information contained in this table was obtained from a Public Notice issued 1 May 1981 entitled "Declaration of Navigable Waters of the United States." Three rivers, McKenzie, Powder, and Snake, were added to this table that were not included in the 1981 notice.

Public Law 94-587 §154 (Water Resources Development Act of 1976) Section 10 permits are not required to construct wharves and piers in a navigable water body is located entirely within one state and if navigability is based solely on the historical use to transport interstate commerce. Such historical navigable water courses in Oregon are: Dairy Creek, Oswego Canal, South Yamhill River, Yamhill River (mile 7 to 11.2), Tualatin River, and Umpqua River (mile 25 (Scottsburg) to 122.2). The historical navigability of these rivers (and their referenced reaches) is based on anecdotal information and file information.

NAVIGABLE HARBORS AND BAYS WITHIN THE STATE OF OREGON
Portland District - Corps of Engineers

October 1993

Waterway	Authorized Project(Miles) Main Channel/Sailing Course Length (Miles)		Remarks†
Alsea Bay	3.0	None	Flows into Pacific Ocean at Waldport, Oregon. Head at footbridge at mile 11.2.
Coos Bay	13.7	13.7	Flows into Pacific Ocean 13.7 miles downstream of Coos Bay, OR. Head at confluence of Isthmus Slough and Coos River.
Depoe Bay	0.3	0.2	Cove of Pacific Ocean at Depoe Bay, OR. Head at check dam.
Nehalem Bay	5.4	None	Flows into Pacific Ocean 3 miles SW of Wheeler, OR. Head of Nehalem Bay at upper end of Lazarus Island. Head of river at county road bridge at river mile 7.3.
Nestucca Bay	3.0	None	Flows into Pacific Ocean, 2 miles south of Pacific City, OR. Mouth of Nestucca River on Nestucca Bay 1.4 miles downstream of bridge at Pacific City, OR. Head of river at Cloverdale-Woods bridge, river mile 7.0.
Netarts Bay	5.5	None	Flows into Pacific Ocean. Mouth at Netarts, OR.
Pacific Ocean	296	None	Navigable water in Pacific Ocean along Oregon coast.
Port Orford	0.2	0.1	Bay on Pacific Ocean at Port Orford, OR.
Sand Lake	2.0	--	Tributary of Pacific Ocean near Tierra Del Mar, OR.
Scappoose Bay	1.7	None	Tributary of Multnomah Channel. Mouth is 1 mile upstream from St. Helens, OR. Head at Port of St. Helens public boat dock. (''Bayport'').
Siletz Bay	2.0	None	Flows into Pacific Ocean at Taft, OR. Head of bay 0.5 mile downstream of Kernville, OR. Head of river at Cedar Creek, river mile 22.6.
Tillamook Bay	9.0	3.2	Flows into Pacific Ocean 2 miles west of Garibaldi, OR. Head at confluence of Trask and Tillamook Rivers.
Winchester Bay	0.9	0.6	Tributary of Umpqua River at Winchester Bay, OR. Head at county road bridge at boat basin.
Yaquina Bay	4.3	4.3	Flows into Pacific Ocean at Newport, OR. Head of bay at Yaquina, OR. Head of river at Elk City bridge, mile 22.3.
Youngs Bay	2.9	2.9	Tributary of Columbia River at Astoria, OR. Head of bay and mouth of river at old U.S. 101 bridge. Head of navigation at county road bridge mile 12.4.

† Head refers to head of navigation <u>not</u> headwater

Information contained in this table was obtained from a Public Notice issued 1 May 1981 entitled ''Declaration of Navigable Waters of the United States.''

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APPENDIX I

Beaver Dam Modification Flowchart

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2020

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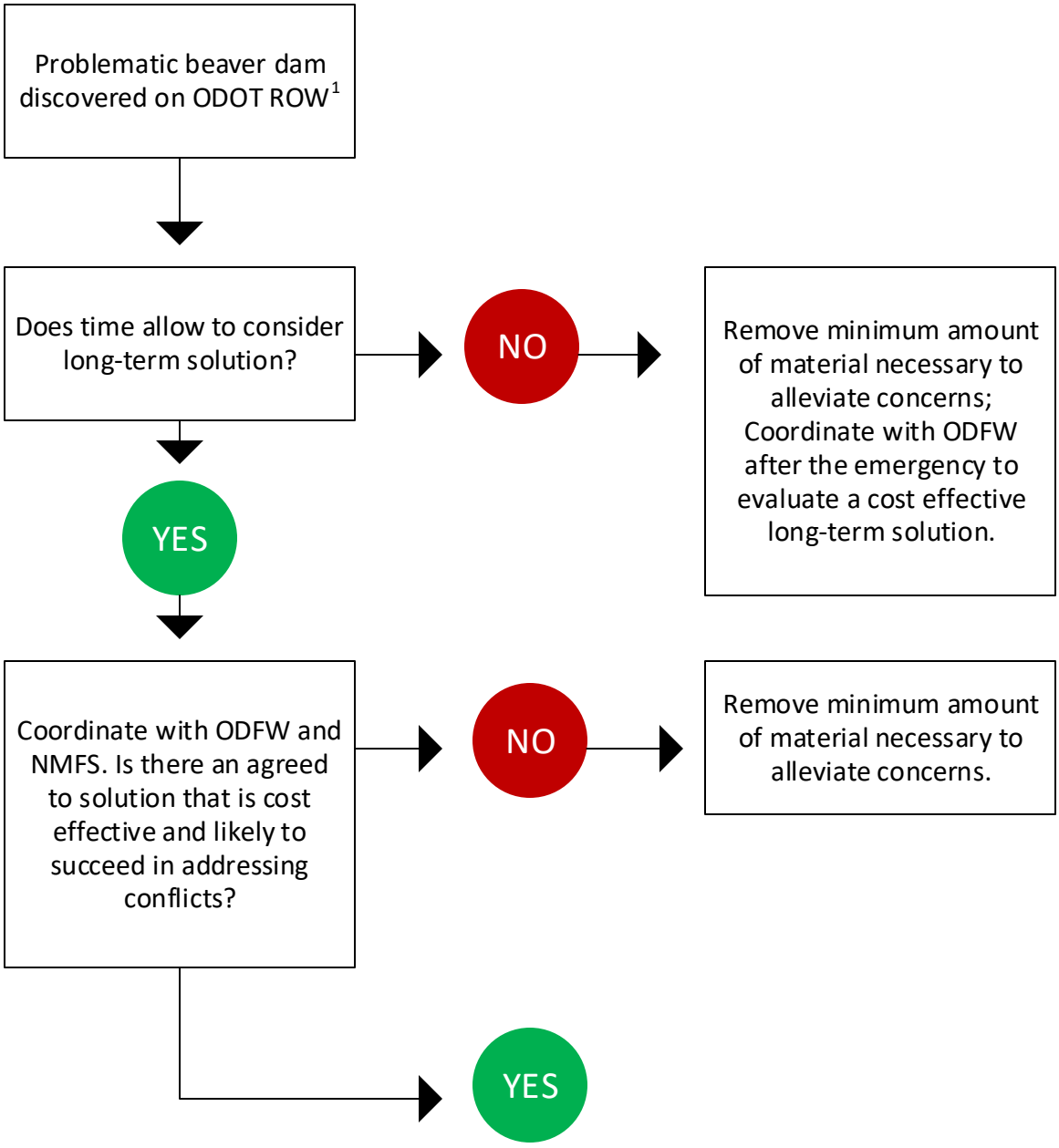
Beaver Dam Modification Flowchart



[1] .Problematic beaver dams are those that cause a risk to highway safety or may damage infrastructure if left in place. ODOT may be liable for offsite flooding of private property if caused by beaver dams on ODOT property. ODOT, if contacted by the landowner may need to remove enough to alleviate the flooding. Beaver dams built in culverts (corrugated metal, box culvert, etc.),

Time allows means nothing needs to happen right away (days). If time doesn't allow, the minimum amount of beaver dam should be removed and if it's in a location that recurrence is likely, a long term solution should be evaluated after the beaver dam material is removed so that planning a solution can occur when there isn't damage occurring.

Long term solution = a device that alleviates ODOT's concerns while leaving the beaver and their dams in place. Examples are beaver deceivers and pond levelers, but could be any new technology developed.

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