Oregon Department of Transportation

Routine Road Maintenance

Water Quality and Habitat Guide
Best Management Practices

Revised 2014

Version 2.0

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Oregon
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FILE CODE:

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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 early 2014. In the past, ODOT has requested a formal reauthorization of the program after each five-year review and program update. This most recent review resulted in confirmation that the best management practices continue to be effective but some reformatting to enhance the flow would be beneficial. Therefore, rather than requesting a formal reauthorization from NMFS we are sending the attached copy of the updated version for your records.

The intent of the five-year review is to evaluate the program and make any necessary changes to the BMPs based on biological need or technological and equipment changes. This review is conducted in conjunction with NMFS and the Oregon Department of Fish and Wildlife (ODFW) and includes a statewide cross section of maintenance managers and staff, bridge, environmental and other technical experts.

Since this latest (fourth) update did not result in significant modifications, we seized the opportunity to re-format the Blue Book to improve readability and flow by incorporating several appendices (bridge washing guidelines, archaeological memo, Corps jurisdictional diagram), into the body of the document for ease of reference. A summary of key 2014 updates is on page 14 of the revised Blue Book (attached).

This update serves as a commitment from the Oregon Department of Transportation to NMFS to implement the measures and abide by the commitments described in the guide 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,

Luci Moore
State Maintenance & Operations Engineer

Enclosure

Cc Kim Kratz

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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 (the Guide). The Guide is considered the cornerstone of the ODOT Maintenance Environmental Program.

This fourth iteration of the Guide 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 used. The final rule (65 FR 42422) recognizes the Program as adequate to protect and conserve salmon and steelhead within Oregon's waters that are listed as threatened. Therefore ODOT Maintenance employees, Maintenance contractors, and municipal partners implementing the BMPs are exempt from 'take' under the ESA for threatened salmon and steelhead 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 to review the road maintenance program and incorporate improvements and refinements to the Guide learned over the past five years. Incorporated into this document as well are commitments to other environmental resource management agencies listed below. These commitments are included in the Guide as well since the document serves as the Program's overarching field manual and are based upon the following partnerships:

- **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 Act 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 to fish for spawning, breeding, feeding, or growth to maturity." In Oregon, this includes several marine species and two anadromous species – Chinook and Coho.

- **Oregon Department of Fish and Wildlife (ODFW)** – The Guide 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 Guide. ODFW, by letter, has recognized the Guide as a tool for ODOT maintenance forces to minimize impacts to fish and wildlife habitat across the state and meet the elements of the State Endangered Species Act.
- **Oregon Department of Environmental Quality (DEQ)** – The Guide includes BMPs to minimize impacts to water quality and meet requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separated Storm Sewer (MS4) permit issued to ODOT by DEQ under requirements of the Clean Water Act.
- **US Fish and Wildlife Service (USFWS)** – The Guide reflects the partnership with USFWS on the Program. USFWS acknowledges the BMPs in the Guide as minimizing impacts to habitat for aquatic and terrestrial species. The Guide also references the Highway Directive on the Migratory Bird Treaty Act and the Highway Directive for Special Management Areas. These Directives, developed in partnership with USFWS, provide guidance to Maintenance personnel on how to minimize impacts to birds protected under the Migratory Bird Treaty Act and plants protected under the Endangered Species Act. Copies of the Directives are located in the appendices. ODOT and USFWS, in partnership with the Oregon Department of Agriculture, are developing a Habitat Conservation Plan that will provide additional guidance and BMPs for butterflies and plants listed under the state and federal ESA.
- **US Forest Service (USFS)** – The Guide includes the Memorandum of Understanding (MOU) between the USFS and ODOT (see Appendix A). The USFS MOU identifies the coordination between ODOT and USFS. The MOU acknowledges partnerships ODOT Maintenance has with other agencies for compliance to 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 the appendices as a reference document.
- **State Historic Preservation Office (SHPO)** – The Guide includes unique BMPs for activities that have potential to impact archeological or cultural resources. BMPs previously located in the Memorandum on Archeological/Cultural Requirements and ODOT Maintenance Activities have been incorporated in the body of this Guide. This change reflects the strong partnership between the two agencies.

USE OF DOCUMENT

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

The maintenance activities identified in the Guide represent activities determined by ODOT technical staff, with input from the regulatory agencies, to have the most potential to impact natural and cultural resources. Consequently, not all maintenance activities are depicted. Activity codes reflect those listed in the 2013 version of the Maintenance Management System, which has changed since the last version of the Guide. Therefore some activities have been renumbered or grouped, as appropriate.

If for any reason the minimization and avoidance measures and BMPs are determined to be inappropriate for a given situation, or there are problems with the BMP, the employee will contact the Transportation Maintenance Manager (TMM) for advice and direction.

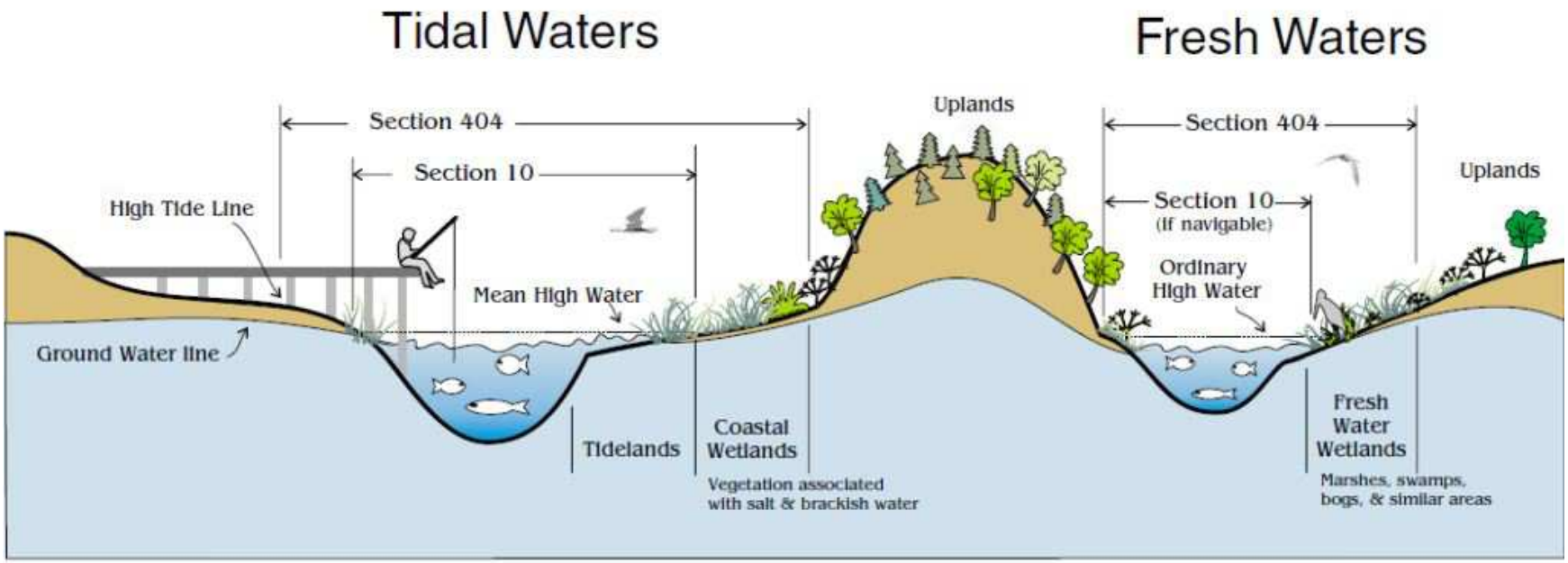
Information regarding BMP modification and implementation problems as well as a description of methods used to ensure the goal for the given activity was still met are promptly forwarded to the Maintenance and Operations Branch for compilation and annual reporting to NMFS.

ACTIVITIES REQUIRING CORPS PERMIT

Maintenance activities that require a US Army Corps of Engineers (Corps) Permit are not included in the 4(d) Limit 10 coverage. Activities in tidal waters may need a Corps permit. However, ODOT has worked with DEQ, Corps, the 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 Guide 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 money, either of which would ‘kick’ the activity out of the 4(d) coverage provided by the Guide. 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 180 Emergency Maintenance activity. These BMPs reference the federal permit requirements and are at the end of each activity discussion.

CORPS OF ENGINEERS REGULATORY JURISDICTION



	Section 103	Section 404	Section 10
	Ocean Discharge of Dredged Material	Disposal of Dredged or Fill Material (all waters of the U.S.)	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 Guide, 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: 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 this Guide 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 Guide 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 Guide.

Defining professional judgment is difficult. It is developed over time through implementation of the Guide, 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

Throughout the Guide, reference is made to coordinating with the Region Environmental Coordinators (REC). The RECs have a very critical job in working with Maintenance in implementing the BMPs in the Guide and ensuring the success of the Guide.

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 Guide such as the Oregon Fish Passage Law, NMFS fish passage design criteria, and other NMFS programmatic design criteria. In addition, 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.

In addition to the REC, reference is made throughout the Guide 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 regard to the Guide. 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 this Guide are provided to the agencies upon request. ODOT will continue to communicate and coordinate with ODFW as outlined in the Guide although, at this writing, ODFW has acknowledged that budget concerns will result in reduced or delayed ODFW involvement. As necessary, ODOT will rely upon ODOT technical specialists, NMFS, and USFWS for input regarding BMP implementation. This version of the Guide reflects this reduced capacity and limits references to ODFW providing technical guidance on issues that relate directly to ODFW regulatory authority.

The District Manager and the District Management Team are responsible for ensuring that appropriate communication and coordination occur with the REC.

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

RESOURCE AND RESTRICTED ACTIVITY ZONE MAPS

Considerable effort has and continues to be made to provide Maintenance personnel information on the natural, historical, and cultural resources within each District. To ensure preservation and conservation of natural resources ODOT created and continues to update the Resource (RES) Map and the Restricted Activity Zone Map (RAZ). These maps include a straight-line map of the highway, an aerial view of the highway, and 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. Maintenance personnel are expected to review the RAZ Maps while planning work and determining appropriate BMPs for each activity. This review will help determine whether sensitive resources are present in the activity area.

In addition, through a partnership with the State Historic Preservation Office (SHPO), certain staff has been provided lists of known (buffered) archaeological/cultural resources within each Maintenance District. Site information is considered confidential and protected. All care must be taken to protect the information. Staff that has been provided this information has been trained on the sensitive nature of the information and have acknowledged the sensitivity of the information and the protection requirements. Maintenance personnel are expected to identify if there are any known sites within the planned work area, and make contacts as appropriate. The buffered site list should be checked for activities as noted in the BMPs.

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:

- Maintenance Academy – training for new employees that includes presentation of the Guide and other environmental issues
- 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
- Team meetings
- Environmental Learning Program 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
- Trac 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

To review the changes and improvements made to this Guide, District Managers will schedule work sessions with the appropriate District staff. These sessions will include the REC, the program manager from the Maintenance and Operations Branch, and ODFW / NMFS / USFWS staff as appropriate and available. The intent of each session is to review expectations, intent, and changes made to the BMPs, definitions, etc. Following initial roll out of the new Guide, these discussions on the Guide can be made available as needed and requested by the District Managers.

DOCUMENTATION AND REPORTING

ODOT submits an annual report to NMFS as part of the 4(d) exemption and to the DEQ as part of its Municipal Separate Storm Sewer System (MS4) permit under the NPDES requirements. 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.
- 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 killed.
- Summary of corridor tree plans developed.

- Updates on any newly adopted Highway Directive that provides guidance to Maintenance on managing natural resources on the right-of-way.
- A summary of concerns with regard to application of the Guide raised by others.
- A summary of the annual multi-agency meeting to discuss the effectiveness of the Guide, 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 Guide will remain adaptive.

MONITORING

Every Maintenance employee is responsible for knowing, implementing, and monitoring the BMPs outlined in the Guide. During annual performance reviews, each Maintenance employee is evaluated on how the employee adheres to standards of providing services in ways that protect 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 these ODOT research projects include:

- Collecting rain fall data to aid in calculation of runoff and the design of stormwater systems and facilities
- Evaluation of a stormwater treatment facility designed to protect salmon by removing dissolved copper.
- Development of a testing facility designed to evaluate the maintenance of stormwater treatment facilities

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 Department of State Lands (DSL).

ODOT will document the complaints received from or by ODOT staff, 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. Managers may coordinate with representatives including ODOT Region Environmental Manager, Central Geo/Environmental, or ODFW, NMFS, and USFWS in responding to the complaint. The documentation will include the basis of the complaint, results of an investigation, resolution and any recommendations.

MAINTENANCE ENVIRONMENTAL PROGRAM

This Guide 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 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 past 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 Guide, elements of the ODOT Maintenance Environmental Program that are critical to Maintenance include:

- 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.
- The National Pollutant Discharge Elimination System (NPDES) MS4 permit
- The Highway Directive on the Migratory Bird Treaty Act
- The RES/RAZ maps
- Spill Prevention Control and Countermeasure plans for yards that meet federal requirements. The program includes site-specific structural improvements for secondary containment.

PROCESS FOR REVIEW

Every five years, ODOT will evaluate the need to rewrite the Guide. The need to rewrite the Guide will be determined in collaboration with NMFS, ODFW, and USFWS by the amount of substantiative changes needed, new technologies available, lessons learned over the 5 years, available resources and value added to Maintenance with a rewrite. Modifications to the Guide, in concurrence with NMFS and Maintenance managers, may occur annually, and be documented to NMFS in the annual report.

ODOT Maintenance has significantly increased its environmental awareness. This awareness and knowledge has been reflected and incorporated into this most recent version of the Guide.

KEY 2014 UPDATES

The 2014 version of the Guide was reformatted to differentiate it from previous versions. BMPs from several appendices (bridge washing guidelines, archaeological memo, ODFW fish passage rules, tide gate policy, and Corps jurisdictional diagram) were moved into the body of the document for easier use.

The two substantive changes include: extending the bridge washing window to April 30 to accommodate late season winter conditions and stripping several references to ODFW support or review. BMPs addressing water quality protection while washing bridges still apply. Due to staff and budget reductions ODFW will focus future support on Blue Book activities that emphasizes the ODFW core function of fish protection. For example, in-water work window extensions will continue to be coordinated with ODFW. However, tree corridor plan reviews and herbicide spray recommendations will not be a priority for ODFW.

ACKNOWLEDGMENTS

Since it was first developed and implemented in 1999, the Guide has resulted in an increased level of environmental awareness. ODOT Maintenance acknowledges the valuable input and contribution from NMFS, ODFW, and USFWS to this iteration of the Guide. ODOT appreciates the keen insight, knowledge, and experience of Maintenance employees and technical experts to ensure BMPs remain technically sound, safe, and practical. 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 of concern, 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 this Guide.

Minimization Measures, Avoidance Measures, and BMPs:

1) If planning (non-routine) maintenance that alters impervious area (new chain up areas, pullouts, etc.) or changes existing drainage (new curbing, culverts, catch basins, etc.) coordinate with REC to determine if stormwater management is required. Track new drainage structures at the District level. 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 mitigations.
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 for inventoried water quality features (in the Maintenance Guide) where appropriate; refer to Section 11 – Water Quality Features (Activity 125). If available, consult the facility specific Operations and Maintenance Plan for additional information.

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. 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 archaeological/cultural resources and to ensure material stays within right-of-way.

Minimization Measures, Avoidance Measures, and BMPs:

1) Develop site plans and/or implement erosion control plans, as appropriate, for areas adjacent to or near riparian areas. The plan should identify erosion and sediment control needs and ensure stability of the stockpiled material. Avoid wetland, waterbodies, and archaeological/cultural resources when evaluating sites for potential use as a stockpile site.
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.
4) Coordinate with REC for site-specific requirements, including the location of potential archaeological/cultural resources, when new stockpile sites or modifications to existing sites are proposed.

Surface

3. SURFACE WORK (ACTIVITITES 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. ODOT Pavement Production/Pavement Installation

Description: Asphalt plant production includes staging, moving, stockpiling, and setup of asphalt plants for production of asphalt for paving and patching materials.

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 riparian corridors, wetlands, or known archaeological/cultural resource site. The location to be approved by the REC with the 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 SMAs.
5) Protect inlets and catchments from green concrete.
6) Perform surface work in dry weather to minimize any runoff of potentially hazardous material, where possible.
7) Refer to the 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) Use a non-toxic dye test whenever a void is within 300 feet of a waterbody or the TMM or Maintenance Coordinator cannot positively determine if the void can be filled without impacting a waterbody.
2) Use foam or other quickset material designed for use in water to plug the void or prior to using concrete, if the void is connected to a waterbody (observed visually or through the use of non-toxic dye). The intent of the plug is to prevent concrete from entering a waterbody.
3) Contact the REC if any concrete enters a waterbody. Follow the reporting and tracking requirements outlined in the Documentation and Reporting section of the Guide. Restoration and mitigation may be required.
4) Use good housekeeping practices including erosion control and spill containment as appropriate.

Shoulders

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-off's; 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 (previously Activity 111)

Minimization Measures, Avoidance Measures, and BMPs:

1) Install erosion control measures (such as check dams in roadside ditches) when appropriate. See the ODOT Hydraulics Manual, Volume 2 and the ODOT Field Manual, Erosion and Sediment Control, June 2006 (or most recent edition) for information about the construction and installation of erosion 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 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 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 Roadwaste Management Chart in Appendix B for additional information reusing and recycling sweeping and grinding materials.
2) Consult the 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 control measures such as check dams in roadside ditches when and where appropriate. See the ODOT Field Manual, Erosion and Sediment Control, June 2006 for information regarding the use and installation of erosion 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 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.

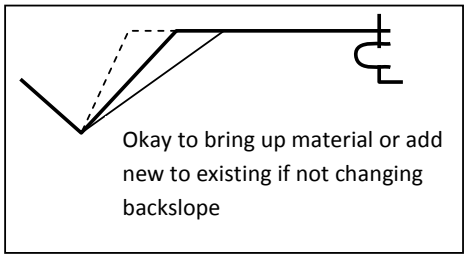
8) Incorporate this activity into local IVM plans to coordinate activities.

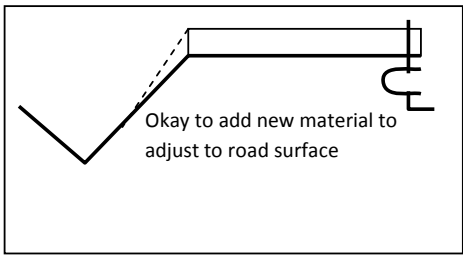
9) Permanently stabilize disturbed soils using BMPs (seeding, plants, etc.) where appropriate.

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.

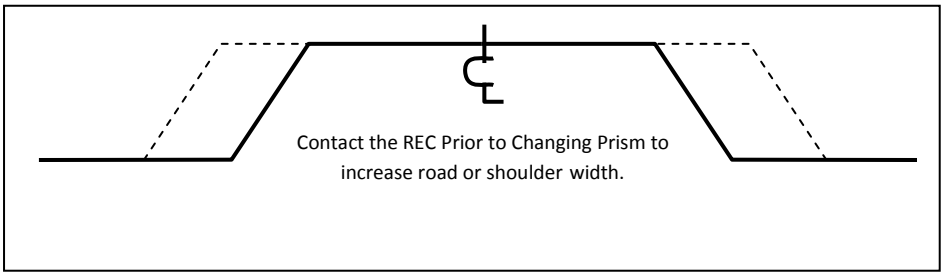
Activities covered by this Guide.





Any shoulder work that includes adding material to widen or increase existing road prism, including shoulder widening done as restoration work to improve water quality, control vegetation, etc. is <u>not covered</u> by the practices identified in this Guide.

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 Guide. Widening or increasing the shoulder has the potential to change site hydrology, ditch hydrologic capacity, and stream dynamics.



4.3. Erosion Repair (Previously Activity 122)

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 list of known archaeological sites 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) Coordinate with the REC on erosion repair activities that cause significant changes (as determined by the maintenance manager) in the topography or vegetation within the riparian area.

4) 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.

5) 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.

6) 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 Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

7) Install erosion control measures in a timely manner where appropriate such as where they 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 erosions 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) Reference the ODOT Field Manual, Erosion and Sediment Control, June 2006 for guidance and selection of erosion control devises.

11) Replacement of gabion baskets should be avoided unless no other alternative is appropriate. Replacement of gabion baskets in kind will require prior approval by NMFS.

Installation of new material that exceeds the material removed by bank erosion (below OHWL) will constitute a significant action. Increases in the material profile will require additional coordination with regulating agencies, may require permits, and are <u>not covered</u> by the Guide. Coordinate with the REC if repairs exceed the original profile or slope.

5. SWEEPING/FLUSHING (NON-PICKUP) (ACTIVITY 116)

Description: Activity includes sweeping and flushing of roadways, curbs, and bridge decks to remove dirt and debris. Materials are sidecast (not recovered) under this activity. Activity also includes scupper (weep holes or direct drains on bridges) cleaning. Scupper cleaning involves unplugging the scuppers with a rod, sweeping excess material away from the scupper, and then cleaning with high-pressure water. 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. Cleaning scuppers allows water to drain off the bridge decks.

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) Complete bridge sweeping/flushing activities prior to bridge washing when feasible. By removing excess sediment on bridges by sweeping there will be less sediment to be washed off the bridge.
3) 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.
4) Recycle sweeping materials where practical. Refer to the Roadwaste Management Chart in Appendix B for reuse or disposal of materials.
5) Plant or maintain vegetation buffers to catch sanding material and other pollutants where appropriate to protect the water quality of nearby waterbodies.
6) 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 and shoulders 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. Materials should not be stockpiled within a riparian area, wetland, stream, channel to the top-of-bank, or a floodway.
3) Recycle sweeping materials where practical. Refer to the Roadwaste Management Chart in Appendix B for reuse or disposal of materials.
4) Complete bridge sweeping/flushing activities prior to bridge washing when feasible. By removing excess sediment on bridges by sweeping there will be less sediment to be washed off the bridge.
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).

Drainage

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 in all weather.

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" on page 26. Coordinate with the REC as needed.
2) Review list of known archaeological sites 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 control devices (such as check dams and silt mats) and other erosion control measures when the potential exists to have sediment (or other materials) enter waters of the State. Reference the ODOT Field Manual Erosion and Sediment Control, June 2006 for guidance on selection and installation of erosion control measures.
4) Use BMPs identified in the local IVM plan.
5) Re-seed drainage ditches and steep slopes as appropriate. Ditches functioning as rock fall areas (as determined by the ODOT District Manager) will not be re-seeded.

6) 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. Consult with the REC if erosion control devices are inadequate to filter water prior to discharging to waterbodies.

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

8) Place excess material above the OHWL where there is no opportunity for material to reach a waterbody or wetland.

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

10) Near riparian corridors determine if there is an existing barrier or natural bench to protect waterbodies from fallback material.

11) 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.

12) If have reason to believe fish may be present in a ditch consult the REC. Review Section 7.1 – When is a Waterway (Corps/DSL) Permit Needed for Ditch Maintenance on page 26.

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.

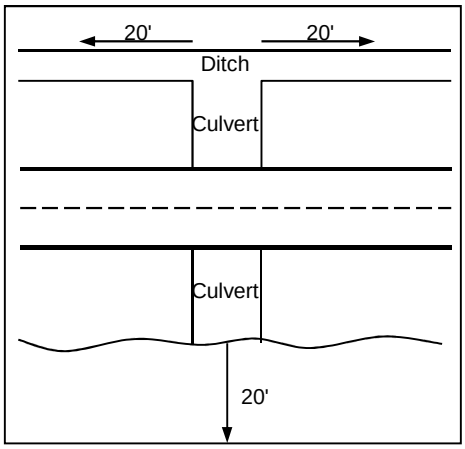
8. CULVERT AND INLET CLEANING / HAND CLEANING (ACTIVITY 121 / 626)

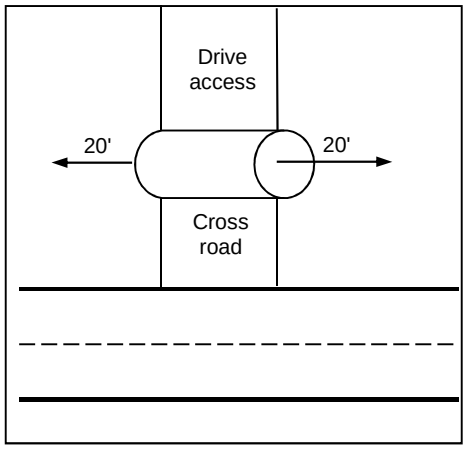
The section previously included Activity 129 – Miscellaneous Hand / Minor Repair. The activities have been consolidated in the MMS system.

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 use 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 below diagram). Before removing beaver dams consult the beaver dam removal subsection on page 29. 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 for fish salvage can require 75 days or more.

8.1. Culvert Cleaning and Debris Dam Removal

Minimization Measures, Avoidance Measures, and BMPs:

1) Install erosion control measures during culvert or trash rack cleaning where erosion control devices can feasibly be installed. Place excess material above the OHWL where there is no opportunity for material to reach waterways or wetlands.
2) Perform work at low flow, and divert flow to minimize turbidity, when and where possible.
3) 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, and
    d. cut and turn drift to float.
4) 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.
5) Where feasible mimic natural stream channel conditions inside and outside the culvert.
6) Minimize or eliminate jumps created during culvert cleaning that may impact fish passage where practical. Repair modifications to the culvert that aid fish passage (such as weirs or baffles). Repair damage to the culvert that may have occurred during cleaning (such as bent ends, disconnected joints, etc.). Check ODFW list of problems culverts, if available, for any special instruction on cleaning.

8.2. Trash Rack Maintenance/Cleaning

Minimization Measures, Avoidance Measures, and BMPs:

1) Visually inspect trash rack for debris buildup.
2) When cleaning, where practical, ensure the elevation of the stream on either side of trash rack mimics natural stream slope where fish passage may be impacted.
3) Where practical, minimize jumps associated with the trash rack that could impact fish passage.

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)
2) 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.
3) Consider installing deterrents to beavers, in appropriate locations.
4) If practicable, minimize impacts to sensitive life-stages and seasonal stressors to beavers during removal or relocation activities. Trapping or relocation of beaver may require ODFW permits.
5) Coordinate with the REC before removal if water is impounded above the stream banks.

8.4. Temporary Water Withdrawal (when cleaning culverts)

Minimization Measures, Avoidance Measures, and BMPs:

1) Install erosion control devices prior to culvert work when there is flowing or stagnant water in the culvert.
2) Complete work performed in flowing water that is connected to waters of the state during the ODFW in-water work period for that system or as coordinated with ODFW or NMFS.

3) Coordinate with the REC on the removal of material from culverts when work is performed in stream reaches that ODFW or NMFS has determined support sensitive fish species or where there are habitat limitations for species.
4) Work with REC to review resource maps to identify sensitive areas, if any.

8.5. Tidegate Maintenance

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 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 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.

ODFW in-water work guidelines are located in Appendix C.

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) Contact the REC when planning work to identify fish passage issues, size of replacement culvert to facilitate NMFS and ODFW fish passage requirements, and to determine if work zone isolation techniques are needed.

2) Review list of known archaeological sites 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.

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, and fish passage. 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) Cross reference practices for Activity 162 – Bridge Repair, as appropriate.
4) Restore diversions as appropriate.
5) Work during the in-water work window or as coordinated with ODFW or NMFS. ODFW in-water work guidelines are located in Appendix C.
6) 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 form debris flows, wood and debris jams, landslides, streambed aggradations, etc. It may 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 permit is required the work is not covered by the Guide.

2) Review list of known archaeological sites 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) 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 RECs 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, and

    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.

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

11) Work in the dry where practicable.

Installation of new sections of riprap in channels will be considered a significant action and is <u>not covered</u> by the Guide.

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:

1) Implement maintenance procedures described in the Maintenance Guide and feature specific Operations and Maintenance manual (if available).
2) Place excess or removed material at appropriate sites above OHWL. Refer to the Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

Roadside and Vegetation

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.

For the past several years, ODOT has required that each Maintenance District develop 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,
- Coordination with other maintenance activities as appropriate.

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

13. TREE MANAGEMENT

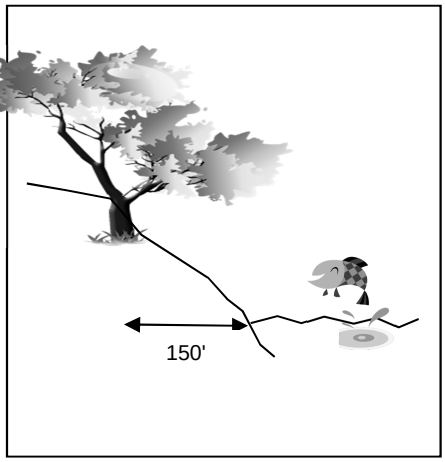
ODOT incorporates tree management into its vegetation management program. ODOT Maintenance Managers determine immediate tree hazards and remove the tree. ODOT Foresters, working with ODOT Maintenance, also remove trees from unstable slide areas that are forested, where the trees or slide have the potential to reach the highway. ODOT Maintenance occasionally removes trees threatening to fall, and in the process, may remove large portions of bank areas.

Description: Tree management activities are designed to eliminate hazard trees, restore sight distance, minimize or remove shading that may cause icy road conditions, and control or prevent slope failure, remove fire danger or fire impacted trees, reduce snowdrift accumulation near roadways, and to maintain a clear zone along the roadway.

ODOT manages tree species vegetation greater than 6" diameter at breast height (dbh) is trees. Tree species vegetation with 6" dbh or less is managed as brush.

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

Minimization Measures, Avoidance Measures, and BMPs:



1) Maintain buffer strips along scenic highways as appropriate. Scenic highways are identified in the Forest Practices Act. Contact the ODOT Forester for roads that meet this definition. Coordinate vegetation removal based on visual or scenic requests with the REC and the Forester.
2) Maintain riparian trees along streams and rivers, unless trees are hazard trees (as determined by an ODOT Forester), could potentially impact bridge structures, or could impact the line of sight. Coordinate with the Forester and the REC on the removal of hazard trees that provide shade or bank stabilization located within 150 horizontal feet of streams. Trees determined by local TMM to be immediate hazard will be removed immediately

and any needed coordination and communication will occur following the tree removal.

3) Trees felled within 150 horizontal feet of a stream may be retained within the riparian area, any portion of a stream channel, or used for bioengineering, where feasible.

4) Coordinate with the REC and Forester prior to removing trees within a riparian area to reduce weight on a failing slope. Develop an erosion control plan as appropriate. Give significant consideration to retaining trees that provide stream shading (e.g. within 150 feet of the active channel).

5) Replant two seedlings or other agreed to woody vegetation (species and quantity) within the riparian area for every tree (that provides shade or bank stabilization) removed when removing trees over 12-inch (30cm) diameter at breast height (dbh) in riparian areas. Trees will not be planted in areas with a low suspected survival rate or areas prone to removal through maintenance (e.g. culvert or bridge clear areas). Coordinate with the REC or Forester on the species and location of seedling/cuttings/brush species to be replanted within the same watershed. Locate the replanted trees so the trees will not pose a future threat to the transportation system.

6) Use appropriate site-specific practices in Special Management Areas (SMAs) where threatened or endangered plant species are present within ODOT right-of-way. (Refer to Highway Division Directive on Special Management Areas in Appendix E.)

7) Coordinate with ODFW, as appropriate, on incorporating downed trees into fish and wildlife habitat restoration projects.

8) Develop corridor tree management strategies as authorized by District Managers, in consultation with an ODOT Forester and the REC. These strategies will define which trees along an ODOT corridor need to be removed based on health, location, species, etc; develop a time line for removal; a mitigation plan that reflects appropriate conditions for the area; and a disposal plan. A blank worksheet for developing corridor tree plans is located on page 36.

9) Trees may be removed and brush cut-back to 20 feet on either end and under all maintained bridges for access or repair. In some instances road access under or adjacent to the structure will be outside the 20 foot buffer.

10) Review the Highway Directive on the Migratory Bird Treaty Act in Appendix F.

13.1. Tree Work Checklist[1]

District: _____ Date: _____

Project Name: _____ HWY: _____ Project Limits; Mileposts: _____

District Contact: _____ Phone: _____

ODOT Forester: _____ Phone: _____

Project Description:

_____

_____

Number of Trees Involved in Project: _____

Resource Contacts:

REC	_____	Date Contacted	_____	Phone #	_____
ODFW Biologist	_____	Date Contacted	_____	Phone #	_____
District Manager	_____	Date Contacted	_____	Phone #	_____
ODF	_____	Date Contacted	_____	Phone #	_____
Utilities	_____	Date Contacted	_____	Phone #	_____

Trees to be Removed:

Reason for Removing:

☐ Hazard ☐ Excessive Shading ☐ High Windthrow Potential

☐ Construction ☐ Sight Distance ☐ History of Accidents

☐ Other (list) _____

General Remarks: _____

_____

Disposal of Removed trees:

Non-Marketable

☐ Donated to ODFW or other Governmental Agency ☐ Left on Site

☐ Other (list) _____

Marketable

Timber Sale Contract #: _____ Signatures _____

Number of Bids Solicited: _____ Operator _____ Phone # _____

☐ ODF Notification ☐ Written Plan

☐ Scenic Highway ☐ ODOT Permit Specialist _____

Is Replanting Required? ☐ YES ☐NO

Number of Trees to be Mitigated[2] _____

Location of Mitigation _____

Species _____

Contact Person Responsible for Replanting _____

General Remarks: _____

_____

[1] This checklist/corridor plan should be reviewed annually until implemented.

[2] 2:1Tree mitigation is required in riparian area per the Guide. Individual corridor plans may have different mitigation requirements depending on negotiations and agreements.

14. MOWING (ACTIVITY 130), BRUSH MOWING (ACTIVITY 132), BRUSH CUTTING (BY HAND) (ACTIVITY 133) 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.

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:

1) Maintain existing mowing plans identified in District IVM plans. District IVM Plans identify mowing areas and are designed to minimize impact to receiving waters while still maintaining grassed areas.

2) Leave cut brush, in riparian areas, in places where doing so does not interfere with sight distance, create safety issues, cause fire hazards, involve noxious weeds, encourage problematic beaver dam building, or impact the proper functioning of highway features (e.g. drainage). *Additional information on problematic beaver dams is located on page 29.*

3) Limit mowing to no more than 8 feet off the edge of pavement in significant resource areas, unless needed to maintain proper functioning of highway features (e.g. drainage). Describe areas where this is impossible due to physical constraints, safety, local conditions, traffic management issues, etc., in the District IVM plans with alternate BMPs.

   When mowing in corridors where the distance to a stream is less than 8 feet:

   a. avoid mowing, or

   b. mow level with the roadway surface to maximize the ability for vegetation to persist.

4) Retain riparian trees along streams and rivers unless trees are hazard trees (as determined by an ODOT Forester), could potentially impact bridge structures, or could impact the line of sight. Coordinate with the Forester and the REC on the removal of hazard trees that provide shade or bank stabilization located within 150 horizontal feet of streams. Trees determined by local TMM to be immediate hazards will be removed immediately and any needed coordination and communication will occur following the tree removal.

5) Brush may be cut down within 20 feet of either end and under all maintained bridges for access or repair. In some instances road access under or adjacent to the structure will be beyond the 20 feet. Only noxious weeds will be grubbed out. Leave brush not within the clearzones in its current condition, unless the brush interferes with sight distance, shades the structure, or the brush is a noxious weed so as to maintain functional fish and wildlife habitat. RAZ maps may identify other areas where brushing around structures should be minimized.

6) Replant two seedlings or other agreed to woody vegetation (species and quantity) within the riparian area for every tree (that provides shade or bank stabilization) removed when removing trees over 12-inch (30cm) diameter at breast height (dbh) in riparian areas. Trees will not be planted in areas with a low suspected survival rate or areas prone to removal through maintenance (e.g. culvert or bridge clear areas). Coordinate with the REC or Forester on the species and location of seedling/cuttings/brush species to be replanted within the same watershed. Locate the replanted trees so the trees will not pose a future threat to the transportation system. Review the Highway Directive on the Migratory Bird Treaty Act located in Appendix F.

7) Use appropriate site-specific practices in Special Management Areas (SMAs) where threatened or endangered plant species are present within ODOT right-of-way. Refer to Highway Division Directive on Special Management Areas in Appendix E.

8) Review and implement the mowing requirements, if appropriate. 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.

15. 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.

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

Minimization Measures, Avoidance Measures, and BMPs:

1) Follow a District IVM program. The local IVM Plan maps locations of sensitive natural resources and identifies areas where spraying does not occur. The local IVM Plan 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) Use appropriate site-specific practices in Special Management Areas (SMAs) where threatened or endangered plant species are present within ODOT right-of-way. (Refer to Highway Division Directive on Special Management Areas in Appendix E.)

Herbicide application is not included in ODOT's 4(d) exemption, consequently, any 'take' occurring as part of maintenance operations resulting from herbicide application would not be permitted.

Traffic Services

16. 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) Dispose of grindings at appropriate landfill.
2) Contain all waste from equipment clean outs and dispose appropriately.
3) Store materials appropriately. Use containment as necessary.
4) Use environmentally safe products.

17. FENCE / SIGN INSTALLATION (ACTIVITIES 138, 142, AND 143)[3]

Description: Activity includes washing, locating, installing, repairing, and replacing fences and signs along the rights of way.

Goal: To ensure that fences and signs that provide information to the public are in good repair and legible.

Minimization Measures, Avoidance Measures, and BMPs:

1) Use best professional judgment on installing erosion control and implementing good housekeeping practices for fences and signs that are placed within cut faces, fill slopes, or are replaced in kind.
2) Review the list of known archaeological sites when installing a new fence/sign or when repair involves ground disturbance. If in doubt, coordinate with the REC.
3) Avoid wetlands where possible. Coordinate with REC if new sign is to be installed in wetland area. Install new fences and signs using non-treated timber or other nontoxic alternative, where feasible.
4) Install erosion control devices where appropriate to prevent work from possibly impacting wetlands, stormdrains, etc.
5) Coordinate with REC if clearing, grubbing, or grading for access road.
6) 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, post type) coordinate with the REC.
7) Coordinate with REC in SMAs and review the SMA Management plan for special BMPs. Coordinate with REC on any installation of permanent variable message signs. Refer to Highway Division Directive on Special Management Areas in Appendix E.
8) Provide upland areas for truck chute cleanout with proper containment of green concrete. Clean out will not occur over waterbodies.
9) Protect inlets, catchments, wetlands and waterways from green concrete.

[3] This activity was updated in 2016 to include fencing.

18. 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.

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.
5) Review Operational Notice on Archaeological Guidance for Hazardous Material Spills and Emergency Situations located in Appendix G.

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

19. GUARDRAIL REPLACEMENT AND CLEANING (ACTIVITY 151)

Description: Activity involves repair and replacement of existing guardrail 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.

19.1. Guardrail Replacement

Minimization Measures, Avoidance Measures, and BMPs:

1) Review the Highway Directive on Migratory Bird Treaty Act in Appendix F.
2) Install erosion control measure (silt fences, etc.) in unstable areas to protect the down slope during guardrail replacement, as appropriate, to minimize adding sediment into aquatic systems.
3) Contain all green concrete to prohibit it from coming into contact with the aquatic system.
4) Match new guardrail with the existing material, where possible, which may include the use of treated guardrail posts. (See Appendix H)
5) Limit the use of creosote or other treated woods (See Appendix H).

19.2. Guardrail Cleaning (previously Activity 152)

Minimization Measures, Avoidance Measures, and BMPs:

Contain material to prevent material from entering streams or waterbodies.

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

Recycle and/or reuse recovered material when feasible. Refer to the Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

20. 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 compact, sometimes releasing fluid (often ethylene glycol) which 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 the 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.

Structures

21. 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. Pesticides are applied to bridges occasionally. 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 resources.

21.1. Drift Removal

Minimization Measures, Avoidance Measures, and BMPs:

1) Perform work within the flowing channel of any aquatic system during the appropriate in-water work window for that system, or as coordinated with ODFW or NMFS (except when there is imminent danger to life, limb, or structure).
2) Refer to the ODFW in water work windows (located in Appendix C).
3) 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, and
    d. cut and turn drift to float.
4) 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 the Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

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

6) Contact the REC if drift is buried in the mud in tidally influenced areas and mainstem rivers in Western Oregon. A Corps permit may be required.

21.2. Bridge Cleaning and Maintenance

Minimization Measures, Avoidance Measures, and BMPs:

1) 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.

2) 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.

3) 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 Roadwaste Management Chart in Appendix B for reuse or disposal of materials.

4) 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 left in place if this would be less destructive to fisheries habitat.

5) 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.

6) To minimize the risk of encountering nesting birds protected under the Migratory Bird Treaty Act, washing/cleaning of bridges (including joints and/or bearings) should be done between September 15 and April 30.

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 nesting migratory birds (or maternal or overwintering bat colonies), stop work and contact the REC.

9) Review the Highway Directive on Migratory Bird Treaty Act in Appendix F.

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

11) Minimize or eliminate jumps created during bridge cleaning that may impact fish passage, where practical. Repair modifications to the bridge that aid fish passage (such as weirs, or baffles). Repair damage to the bridge that may have occurred during cleaning, such as bent ends, disconnected joints, etc. Check ODFW list of problem bridges, if available, for any special instruction on 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.

21.3. Water Withdrawals and Use

Minimization Measures, Avoidance Measures, and BMPs:

1) Use non-chlorinated water where practical.
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.

22. 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. These actions may trigger state fish passage laws.

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

Minimization Measures, Avoidance Measures, and BMPs:

1) Coordinate with the REC when planning work. These activities may require a permit, temporary water management, and fish salvage. Activities that occur in the stream channel or below the OHWL may require permits. Activities that occur on the deck, superstructure, or other parts of the bridge structure outside the stream channel and above OHWL do not require permits. In some instances, a flood plain review may be required (e.g. when constructing a permanent road access).
2) Review list of known archaeological sites (prior to ground disturbing activities) 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) If stream channel is disturbed, where feasible, mimic natural stream channel conditions upstream and downstream of bridge.
4) Repair any modifications to the bridge that aid fish passage, such as weirs, or baffles.
5) Consider use of 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.
6) Coordinate bridge repairs that require in-water work with the REC. Structural repairs need to be coordinated with the responsible engineer to minimize impacts. These actions may require a Biological Assessment and consultation with NMFS/USFWS. If activities are required to be performed outside the in-water work window, coordinate timeframes with ODFW or NMFS.
7) 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 ODOT Hydraulics.
8) Remove and dispose of repair material and debris appropriately. Refer to the Roadwaste Management Chart in Appendix B for reuse or disposal of materials.
9) Ensure green concrete does not come into contact with waterbodies.
10) Provide a stable, appropriate concrete truck chute clean-out area (and require the contractor to use it) to keep material from being deposited in riparian corridors, wetlands, or in an area where it can be washed into a stream or wetland.
11) Use cofferdams for structural repairs as appropriate.
12) Contain saw chips from treated wood where feasible.

13) Review the guidelines for Pesticide-Treated Wood (located in Appendix H) when in-kind replacement of creosote or pressure treated wood is necessary for integrity of the structure or the safety of the traveling public.
14) Delay bridge repair work if birds are found nesting in or on the structure. In an emergency, notify REC.
15) Coordinate with REC on timing and possible options to the work if bats are present on structure.
16) Install floating absorbent boom, where feasible, when treated pile is cut for repair.
17) Coordinate with REC on noise reduction requirements for pile driving contracts.
18) Use a non-toxic dye test whenever a void is within 300 feet of a waterbody or the TMM or Coordinator cannot positively determine if the void can be filled without impacting a waterbody.
19) Use foam or other quickset material approved for use in water to plug the void prior to using concrete, if the void is connected to a waterbody (observed visually or through the use of non-toxic dye). 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 Guide. Restoration and mitigation may be required.
21) Use good housekeeping practices including erosion control and spill containment as appropriate when using a dry product to fill voids.
22) Screen any intake pump per NMFS screening criteria during operation. See Appendix D for screening criteria.

23. BRIDGE VEGETATION (ACTIVITIES 160 AND 133)

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:

1) Brush may be cut down within 20 feet of either end and under all maintained bridges for access or repair. In some instances road access under or adjacent to the structure will be beyond the 20 feet. Only noxious weeds will be grubbed out. Leave brush not within the clearzones in its current condition, unless the brush interferes with sight distance, shades the structure, or the brush is a noxious weed so as to maintain functional fish and wildlife habitat. RAZ maps may identify other areas where brushing around structures should be minimized.
2) Replant two seedlings or other agreed to woody vegetation (species and quantity) within the riparian area for every tree (that provides shade or bank stabilization) removed when removing trees over 12-inch (30cm) diameter at breast height (dbh) in riparian areas. Trees will not be planted in areas with a low suspected survival rate or areas prone to removal through maintenance (e.g. culvert or bridge clear areas). Coordinate with the REC or Forester on the species and location of seedling/cuttings/brush species to be replanted within the same watershed. Locate the replanted trees so the trees will not pose a future threat to the transportation system.
3) Review the Highway Directive on Migratory Bird Treaty Act in Appendix F.

24. FISH HABITAT RESTORATION (ACTIVITIES 160-162, 358 AND 359)

Description: Activities include any ODOT work that involves planting vegetation or placing large woody material (LWM- e.g. logs, rootwads) in or along a stream corridor (e.g. slope stabilization, replanting of removed vegetation).

Goal: To improve habitat conditions, 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, or fish salvage.
2) Install erosion control devices, such as check dams, silt mats and other erosion control measures. Reference the ODOT Field Manual Erosion and Sediment Control, June 2006 for guidance on selection and installation of erosion 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 removed material above OHWL away from waterway, wetland, greenway, park, riparian area, floodplain, or regulated area. If directed by ODFW or NMFS, material may be incorporated into fish habitat or fish passage structure. Obtain local, state, or federal permits if required.

Installation of new material that exceeds the material removed by bank erosion (below OHWL) will constitute a significant action. Increases in the material profile will require additional coordination with regulating agencies and are <u>not covered</u> in the Guide. Coordinate with the REC for Corps permits.

25. FISH HABITAT AND PASSAGE IMPROVEMENT (ACTIVITY 162)

Description: Activities include improvements, betterments, opportunities, or repairs to fish passage or fish habitat. Typical fish betterments may include: 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 restore fish passage (per ORS.509.585) and improve habitat conditions, as appropriate, while maintaining a safe and efficient transportation system.

Minimization Measures, Avoidance Measures, and BMPs:

1) Coordinate with the REC when planning work. This activity may require a permit, temporary water management, fish salvage, fish passage, or coordination with NMFS/USFWS/ODFW
2) Install erosion control devices prior to culvert work when there is flowing or stagnant water in the culvert.
3) Complete any work performed in flowing water connected to waters of the state 1) during ODFW in-water work period for that system or 2) as coordinated with ODFW or NMFS. ODFW in-water work guidelines are located in Appendix C.
4) Place excess material above the OHWL where there is no opportunity for material to reach waters of the state or impact a wetland. 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.

Snow and Ice

26. SNOW AND ICE REMOVAL (ACTIVITY 170)

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 Pacific Northwest Snowfighters, a consortium of states and Canada that 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 traffic allows.

27. SANDING AND PRE-WETTING (ACTIVITY 171)

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:

1) Follow the District Winter Maintenance Level of Service for use of sanding material and/or winter maintenance deicer products.
2) 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;

3) 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.
4) If applying deicer product to stockpiled material, prevent or capture runoff.
5) Keep accurate application records including when, where, and quantity of sanding material applied.
6) Place barriers in site specific locations to capture sanding material, where appropriate and practical, along streams or areas that drain directly to waterbodies.
7) Identify and create facilities to capture sanding material where appropriate and opportunity presents themselves.
8) Increase use of sand sheds.
9) Clean inlets prior to first rain as feasible.

28. ANTI-ICING AND DEICING (ACTIVITY 176)

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 Pacific Northwest Snowfighters specifications. All deicer products under price agreement to ODOT meet the specifications.
3) Maintain a quality assurance, quality control program. Crews will sample all anti-icing and deicing product shipments and send samples to the ODOT Maintenance and Operations Branch for testing.
4) Keep accurate application records including when, where, and quantity of deicer applied.

5) Routinely inspect equipment (including nozzles, storage tanks, and slip in tanks) for damage. Complete inspection forms located in the EMS Manual. Promptly repair or replace damaged equipment.
6) 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 preferred 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.
7) Provide an annual training and information sharing opportunity for ODOT crews.
8) Coordinate the trial of new or different deicer products with the ODOT Maintenance and Operations Branch.

Extraordinary Maintenance

29. 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 structures.

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

Minimization Measures, Avoidance Measures, and BMPs:

1) Provide quick response and first inspection. Notify appropriate resource staff in a timely manner using the Emergency Authorization Form in Appendix I.
2) The District Manager (or management designee) determines if the event warrants a declaration of an emergency. Review NMFS requirements and processes, as appropriate and applicable, described in bracketed text in this Section (page 54).
3) DM 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 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.

4) 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.

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

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

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) Coordinate with Maintenance and Operations Branch - Emergency Operations Section on FEMA issues for wild land fire reimbursements.

9) Explore alternatives to blasting in areas with bird presence, if appropriate and the emergency allows.

10) Review the Operational Notice on Archaeological Guidance for Hazardous Material Spills and Emergency Situations (located in Appendix G) and the list of Known Archaeology Sites.

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 'Major 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.

29.1. Extraordinary Maintenance (Previously Activity 189)

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 watercourses.
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.

29.2. 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 amount needed to restore the integrity of the structure.
3) When practicable, place riprap from the top of bank or bridge.
4) Place rock 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.
8) Incorporate appropriate vegetation, as practical, 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) When circumstances allow, work with the Hydraulic Engineer to incorporate large wood and other elements of bioengineering into slope stabilization project.
10) In situations where woody vegetation and large wood cannot be incorporated into the riprap, 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).

29.3. Pile Installation

Minimization Measures, Avoidance Measures, and BMPs:

1) In emergency situations (Major Hazard Response, SLOPES, USFWS Programmatic Agreement), where the installation of pile is required to restore the infrastructure, use a vibratory hammer where available.
2) Use steel or untreated wood as pile. Use treated timber ONLY if other materials are not available and timber will be sealed.
3) Document decision making process on the use of pile and BMPs.

29.4. Fish Passage, Screening, Capture and Removal

Minimization Measures, Avoidance Measures, and BMPs:

1) Screen water pumped from a stream for a repair or site with perforated plate or wire screen with openings that do not exceed 3/32 inch.
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. Be at least as wide as the active stream channel width. Where appropriate, install the culvert up to 1.5 times the active stream channel.
    b. Set at the same slope as the stream grade substrate upstream and downstream.
    c. Buried 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 capture and removal 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.

29.5. Temporary Access Roads

Minimization Measures, Avoidance Measures, and BMPs:

1) Minimize the number and size of entry points or access into the work area.
2) When the action is completed the temporary access routes may be obliterated, removed, or mitigated. Stabilize soil and restore vegetation if possible.

29.6. 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, cranes, or spider hoes) to minimize ground disturbance.
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) At the end of the work shift, park vehicles greater than 150 feet (horizontal) away from the OHWL or in an area approved by the Maintenance Manager.

29.7. 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, trimmed at ground level (not grubbed) unless noxious and unwanted vegetation is 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. Additional controls installed as needed.
7) Remove erosion control devices, where appropriate, following stabilization of the project and vegetation.

29.8. Drilling and Boring

Minimization Measures, Avoidance Measures, and BMPs:

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

30. 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) DM 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 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 bird presence, if appropriate and emergency allows.

10) Review list of known archaeological sites 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.

11) Review Operational Notice on Archaeological Guidance for Hazardous Material Spills and Emergency Situations in Appendix G, as appropriate.

12) 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.

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

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

15) Install erosion control methods 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.

16) 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.

17) Reference the ODOT Field Manual, Erosion and Sediment Control, June 2006 for guidance and selection of erosion control devises for disposal sites.

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.

31. 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. Apply materials in accordance with the manufacturers' recommendations.
5) Provide adequate spill containment materials onsite when palliatives are applied.
6) Dispose of excess materials per manufacturers' recommendations.

DEFINITION OF TERMS

Betterments: Opportunities to improve conditions that may benefit the transportation system and that may also benefit the resource. An example is the reconfiguration of a ditch to flatter slopes, wider, flatter bottom. The reconfiguration improves water quality, and makes the ditch easier to mow.

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.

Clearzone: A roadside area, cleared of obstruction, designed to allow for vehicular recovery. Design area is determined by traffic speed, actual daily traffic, horizontal curvature, and embankment slope (1996 AASHTO Roadside Design Guide).

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. , and 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 GeoEnvironmental 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.

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.

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: The land touching and immediately surrounding a stream, river, lake or other body of water. The riparian area usually consists of three elements:

1) the stream channel,

2) the flood plain, and

3) some of the upland area near the stream.

The riparian area is a minimum of 150 feet wide measured horizontally from edge of ordinary high water (OHWL).

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

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 6" 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).

Urgency: Repair work that must be completed to prevent further damage to the road and to prevent an emergency. The work may (or may not) be conducted within the in-water work window (depending on the severity of the urgency and how long the repair can be delayed). There may be sufficient time for some level of design, environmental review, and permitting prior to the repair. Although the amount of time also depends on when the repair is needed. There is not a clear distinction between what constitutes an urgency or emergency. Best professional judgment is used in making a call either way. ODOT Maintenance Managers will coordinate with GeoEnvironmental staff in determining the appropriate solution.

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

Water Diversion: A temporary water management strategy for removing water from a culvert, isolating the work zone, and re-establishing water strategy.

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.

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Appendix B: Management of Highway Maintenance Generated Materials

Appendix C: ODFW In Water Work Window

Appendix D: NMFS Fish Screen Criteria

Appendix E: Highway Division Directive on Special Management Areas

Appendix F: Highway Division Directive on Migratory Bird Treaty Act

Appendix G: Highway Division, MLT Operational Notice on Archaeological Guidance for Hazardous Material Spills and Emergency Situations (MAI 180-01)

Appendix H: Pesticide-Treated Wood

Appendix I: Emergency Authorization Form

Appendix J: Summary of Changes Since 2014

APPENDIX A

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2014

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FS Agreement No. 12-RU-11060051-003

ODOT Misc. Contracts & Agreements No. 28729

MEMORANDUM OF UNDERSTANDING
between the
STATE OF OREGON
DEPARTMENT OF TRANSPORTATION
ODOT Misc. Contracts & Agreements No. 28729
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: 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 highways on, or accessing, lands managed by the U.S. FOREST SERVICE in accordance with the following provisions.

2. The scope of this MOU is limited to construction activities, maintenance and operation of existing highways within the road easement or right of way. This MOU supersedes MOU 08-RU-11062751-019, ODOT Misc. Contracts and Agreements No. 24808, dated May 30, 2008. MOU 08-RU-11062751-019, ODOT Misc. Contracts and Agreements No. 24808 will terminate upon execution of this MOU.

3. 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.

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. ODOT and U.S. FOREST SERVICE will work with the Federal Highway Administration (FWHA) Federal Lands Highway Office to jointly develop a multi-year Forest Highway Program. Proposed projects will be submitted by U.S. FOREST SERVICE Forest Supervisors, ODOT Region Managers, and County Commissioners.
3. ODOT will consult with U.S. FOREST SERVICE in development of Public Lands Highway Program proposals. U.S. FOREST SERVICE will provide a statement of National Forest benefits on projects affecting National Forest lands.

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. ODOT will have the primary responsibility for highway related projects.

    b. ODOT and U.S. FOREST SERVICE will cooperate in development of a single set of environmental documents for each project and jointly seek public involvement when necessary.

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

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

    e. U.S. FOREST SERVICE will publish a decision notice of its intent to issue a Letter of Consent for easement.

f. ODOT and U.S. FOREST SERVICE will address prevention of spread of invasive plants in proposed projects.

VI. PRECONSTRUCTION

1. ODOT and U.S. FOREST SERVICE will coordinate designs 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, October 2005** , standards 2 (equipment washing), 3 (weed free straw and mulch), 7 (weed free gravel, fill, sand, and rock), and 13 (using 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.

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.
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 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.

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 Endangered Species Act requirements with respective regulating agencies such as the National Marine Fisheries Service (NOAA Fisheries) and US Fish and Wildlife (USFWS) on all maintenance activities.
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. Bald Eagle Technical Services Advisory
    d. Peregrine Falcon Management Plan
    e. 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.
    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" (Toupin, R., Filip, G., Erkert, T., and Barger, M., USDA Forest Service, USDI Bureau of Land Management, R6-NR-FP-PR-01-08, 64p.).
    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 classified as a Danger, which typically are those with Low or Likely Failure Potential, will be selected and marked jointly by ODOT and U.S. FOREST SERVICE personnel and removed under U.S. FOREST SERVICE timber sale program. When U.S. FOREST SERVICE cannot dispose of potential danger trees through its timber sale process, 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 2 above), should be consistent with NEPA decisions and Forest Land and Management Plans on each National Forest. Use of herbicides to treat invasive or native vegetation is subject to specific project design criteria that vary from Forest to Forest. Treatment of native vegetation should follow *"A Guide to Conducting Vegetation Management Projects in the Pacific Northwest Region."* Use of herbicides to treat invasive plants should follow "*Preventing and Managing Invasive Plants Record of Decision*" (Forest Service Region Six, October 2005)"

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 Exhibit A attached). ODOT will submit a pesticide use proposal to the Forest Service R6 Pesticide Use Coordinator at least one week 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 September 30 of each year.

X. SIGNS

1. Installing and Maintaining Signs. ODOT has authority and responsibility for the installation and maintenance of all signs within the right-of-way 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 (current version), 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 or 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 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 or at parking areas. A permit from ODOT is required for placement within the highway right-of-way. All signs within the highway right-of-way 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. Emergency, Construction and Maintenance Traffic Control Signs and Devices

d. 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 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. Signs installed off the right-of-way, 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 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 agency identification as approved by the U.S. FOREST SERVICE. U.S. FOREST SERVICE logo is not needed on a sign if specific words such as "National Forest" are used.

XI. INCIDENT MANAGEMENT

1. During an incident management activity such as a fire suppression emergency, 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 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, impacted by incident management activities such as wild land fire protection and/or suppression, shall comply with

the standards and guidelines of the MUTCD, ODOT supplements to the MUTCD, the Oregon Temporary Traffic Control Handbook (OTTCH), and the U.S. FOREST SERVICE-provided sign catalog and drawings, to the degree practicable.

ii. ODOT, the Incident Management Team 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 ISEA American National Standard for High Visibility Apparel and labeled as meeting the current ANSI 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 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 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 keep the road closed and any new closures will remain the responsibility of ODOT.

vi. All Parties will mutually work together within the Incident Command System (ICS).

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. In general, if an agency has a jurisdictional responsibility for carrying out a service that is provided in association with an incident that is not related to incident management activities, no payment will be made for that service. An incident management activity by the US Forest Service 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.

c. Payment will be made for the cost of services that are necessary due to US Forest Service incident management activities, such as a closure to enable a back burn or signing for establishment of a base camp (except as provided in this section under 3a).

d. An accurate record is defined as:

i. A detailed description of work ordered by the IMT (date, time and name of IMT member ordering the work)

ii. Inclusive dates and locations of work performed

iii. Number of ODOT resources (employees, signs, etc.) and rates of each involved

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.

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

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

2. 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 Incident Commander through the ODOT District Manager.

b. Coordinate with the appropriate ODOT District Manager 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, 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 if special circumstances or situations warrant posting advisory speeds below posted speeds on roads under ODOT jurisdiction

d. Notify the appropriate ODOT District Manager at the earliest time practicable of planned incident management activities including air operations or back burn, that can impact traffic on roads under the jurisdiction of ODOT, and include in its notification to the appropriate ODOT District Manager relevant information such as size and duration of the activity.

e. Provide a catalog of standard signs with approved messages conforming to the MUTCD, and provide standard drawings showing typical layout of the catalog signage for the most common incident activities needing temporary traffic control. The U.S. FOREST SERVICE sign catalog can be found on the following U.S. FOREST SERVICE web site: http://www.fs.fed.us/t-d/pubs/htmlpubs/em7100-15/

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.

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 U.S. FOREST SERVICE to furnish, install, and maintain at the US Forest Service expense, continued and any additional temporary traffic control signing as deemed necessary by the ODOT District Manager for US 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 US Forest Service incident management activities, such as smoke caused reductions of visibility.

c. Assume responsibility including financial for the establishment of long term temporary traffic control (including furnishing, installing and maintaining) **regulatory** signing such as speed zones, no stopping, and no parking signs on roads under the jurisdiction of ODOT during the duration of the incident unless as otherwise provided in this section under 1f, 1g, 2a and 2b.

d. Provide U.S. FOREST SERVICE with an electronic (pdf) map and supplemental documents that details ODOT:

   i. Maintenance Administrative areas.

   ii. ODOT District Manager names and phone numbers, district office, street addresses.

   iii. Maintained routes with route numbers and reference points.

   iv. RWIS (Remote Weather Information System) sites.

   v. Permanent variable message sign locations.

   vi. This map is to be updated by June of each year or as contact information changes.

e. Make available the 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 warrant in coordination with ODOT. Messages will be in compliance with "Guidelines for the Operation of Variable Message Signs on State Highways" (Oregon Department of Transportation, 2006 or most recent revision).

f. Grant limited authority to the Incident Commander 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 Incident Commander shall notify the ODOT District Manager as soon as feasible to coordinate additional legal closures if warranted.

g. Furnish liaison officer to the Incident Commander where substantial impacts from incident management activities are or may involve roads under ODOT jurisdiction.

XII. 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, the ODOT Right of Way procedures for temporary legal access will be followed.

XIII. 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 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, 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.

XIV. 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 Engineer Office of Maintenance and Operations 800 Airport Road Salem, OR. 97301-3871 Telephone: (503) 986-3005 FAX: (503) 986-3032 Email: lucinda.m.moore@odot.state.or.us	Name: Patti Caswell, Environmental Manager, Office of Maintenance and Operations Address: 800 Airport Rd City, State, Zip: 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
Jose Linares, Director of Engineering Pacific Northwest Region 333 SW First Ave., PO Box 3623 Portland, OR. 97208-3623 Telephone: (907) 586-8733 FAX: (503) 808-2511 Email: jlinares@fs.fed.us	Sheila Walker, Grants Management Spec. Olympic National Forest 1835 Black Lake Blvd SW, Suite A Olympia, WA 98512 Telephone: (360) 956-2298 FAX: (360) 956-2277 Email: swalker@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 and is effective through December 31, 2017, period of five (5) years, at which time it will expire, unless extended by an executed modification, signed and dated by all properly authorized, signatory officials.

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.

ODOT

7-3-12

for PAUL MATHER, HIGHWAY DIVISION ADMINISTRATOR, Date
Oregon Department of Transportation

for 07/09/12

KENT CONNAUGHTON, REGIONAL FORESTER Date
U.S. Forest Service, Pacific Northwest Region

APPROVAL RECOMMENDED:

ODOT

7/3/12

LUCINDA M. MOORE, STATE MAINTENANCE ENGINEER Date
Oregon Department of Transportation

7/3/12

PATTI CASWELL, MAINTENANCE ENVIRONMENTAL MGR Date
Oregon Department of Transportation

U.S. FOREST SERVICE

The authority and format of this agreement **(12-RU-11060051-003)** have been reviewed and approved for signature.

7/3/2012

SHEILA WALKER Date
U.S. Forest Service Grants Management Specialist

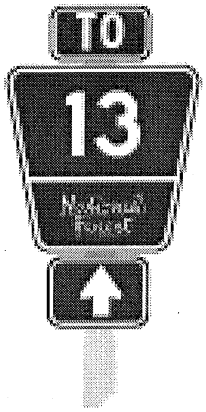
Burden Statement

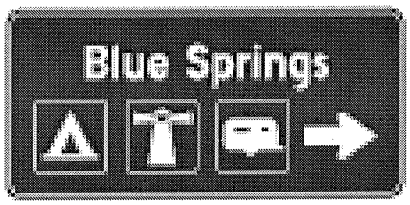
According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0217. The time required to 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.

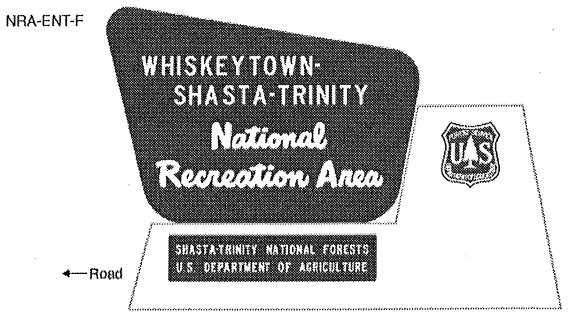
Appendix 1 – Examples of signs where ODOT is responsible for installation and maintenance



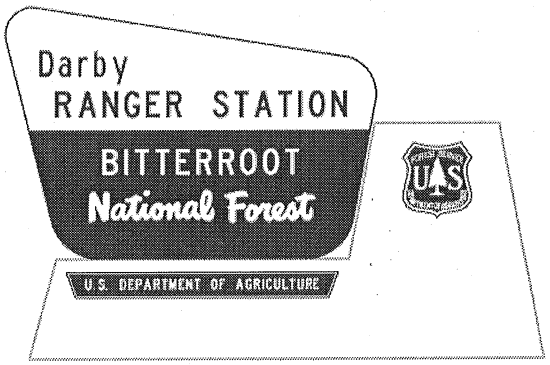


Appendix 2 – Example of signs where USFS is responsible for installation and maintenance.

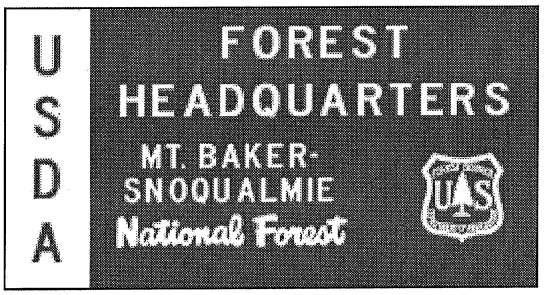
RS-Recreation Site Identification sign



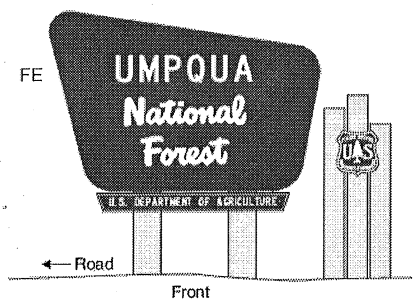
NRA-National Recreation Area sign



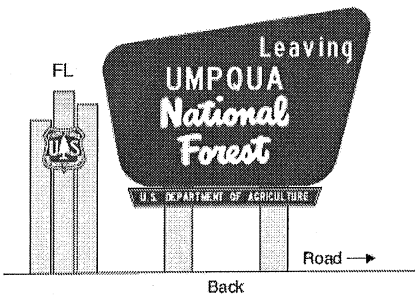
AS-Administrative Site Sign



Administrative Site Sign - Urban



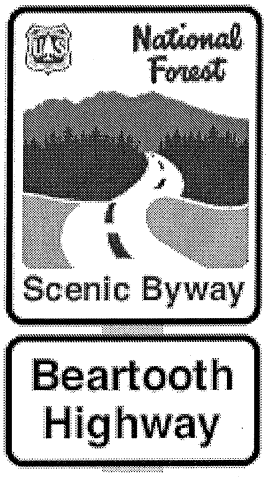
FE-National Forest Entrance Sign

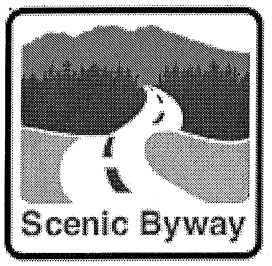


FL-Forest Boundary Leaving sign

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)





SBL

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

Exhibit A

PESTICIDE - USE PROPOSAL (Reference FSM 2150)	DEPARTMENT/AGENCY	CONTACT/PHONE NO.	
	REGION	FOREST	DATE SUBMITTED

1) OBJECTIVE a) Project No. b) Specific Target Pest c) Purpose	_____ _____ _____
2) PESTICIDE a) Common Name b) Formulation c) % AI,AE,or lb / Gal. d) Registration No.	_____ _____ _____
3) a) Form Applied b) Use Strength (%) or Dilution Rate c) Diluent	_____ _____ _____
4) lbs. AI Per Acre or Other Rate	_____
5) APPLICATION a) Method b) Equipment	_____ _____
6) a) Acres or Other Unit to be Treated b) Number of Applications c) Number of Sites d) Specific Description of Sites	_____ _____ _____ _____
7) a) Month(s) of Year b) States	_____ _____
8) SENSITIVE AREAS a) Areas to be Avoided b) Areas to be Treated with Caution	_____ _____
9) REMARKS a) Precautions to be Taken b) Use of Trained / Certified Personnel c) State and Local Coordination d) Other Pesticides Being Applied to Same Site e) Monitoring f) Other	_____ _____ _____ _____ _____ _____

APPENDIX B

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2014

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Roadwaste Management Chart

(See EMS Manual - Section 5.18 “Roadwaste” for BMPs)

Material	Rules	Concerns	Management
Litter	• Litter is waste and must be disposed of at a permitted waste facility (a landfill) unless recycling is planned. • 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. • Make sure stockpiles that contain litter and litter sorting operations are well managed and tidy. • Keep impacts from litter sorting operations to a minimum. Consider public access, views, noise, etc. when selecting sites where litter will be sorted for disposal.	• Separate litter from other highway waste through litter patrol, screening stockpiles, or other means. Landfill litter or recycle as appropriate. • If bulk materials (sweeping, vactor waste, land slide debris, etc.) contain visible litter, then all the bulk material is considered waste by DEQ and must be disposed of at a permitted waste facility. • Unless litter (or material that contains litter) is sorted for recycling, it cannot be stockpiled longer than 6 months without a DEQ permit.
Street Sweepings	• Sweepings are considered waste (unless free of litter and other pollutant contaminants) and must either be disposed of at a permitted waste facility or be recycled in a manner that is acceptable to DEQ. • Hydrocarbons and heavy metals are pollutants found in street sweepings. These pollutants are regulated and can pose risks to human health and the environment. • Placement of sweepings may require permits or a site review (fill, wetland, endangered plants, archeological, etc.) • Waste cannot be stockpiled longer than 6 months without DEQ approval or a permit.	• If contaminants are at high levels, special management or disposal may be required. Watch for odd odors, colors, chemicals, etc. that indicate pollutants are present. (Sweepings from roads under 30,000 ADT typically have low pollutant contaminant levels.) • Sweepings high in organics (leaves, twigs, etc.) make poor structural fill because material will shrink as organics rot. • Rotting organics can cause water quality problems.	• Sweepings can be disposed of at a local landfill. • Work with MOB or Hazmat to develop management and recycling options. Recycling examples include: shoulder repair, general fill, compost, soil amendment, and concrete manufacture. • Chemical testing may be needed to characterize pollutant levels and determine appropriate storage and reuse options. Pollutant testing should include: copper, lead, zinc, cadmium, chromium, gasoline, diesel, and heavy oil. Polyaromatic hydrocarbons (PAHs) or other pollutants may also be appropriate for testing if their presence is suspected. • Storage and recycling of sweepings contaminated with pollutants or litter will require DEQ approval and/or a waste permit. MOB and Haz-mat can assist with waste recycling permits or approvals. • Stockpiling is allowed if recycling is planned. • Consult with your REC to determine restrictions or permits needed for material placement. • Implement erosion control and water quality BMPs where appropriate as part of managing sweeping stockpiles (store on pavement, cover piles, etc.) • Sorting of materials can reduce or increase pollutant levels. Example: Higher pollutant levels are found in fine soils and clays, lower levels in coarse sand and gravel.

Roadwaste Management Chart

(See EMS Manual - Section 5.18 “Roadwaste” for BMPs)

Material	Rules	Concerns	Management
Vactor Cleanings	• Vactor cleanings are considered waste (unless free of litter and pollutant contaminants) and must either be disposed of at a permitted waste facility or be recycled in a manner that is acceptable to DEQ. • Hydrocarbons and heavy metal contaminants are pollutants found in vactor waste. These pollutants are regulated and can pose risks to human health and the environment. • Liquid and solid waste must be separated prior to disposal. Solids typically go to a landfill and liquids to a sewerage treatment facility. • Placement of vactor waste material may require permits or a site review (fill, wetland, endangered plants, archeological, etc.) • Waste cannot be stockpiled longer than 6 months without DEQ approval or a permit.	• Vactor cleanings collected from high traffic roads or urban areas is likely to have high pollutant levels that will require disposal or permitted management. Watch for odd odors, colors, chemicals, etc. that indicate pollutants are present. (Vactor waste from roads under 30,000 ADT typically has low pollutant levels.) • Vactor waste solids comprised mostly of fine silts and clay typically make poor structural fill and soil amendment. • Vactor Waste high in organics (leaves, twigs, etc.) makes poor structural fill because material will shrink as organics rot. • Rotting organics can cause water quality problems.	• Work with MOB, Hazmat, and other local agencies to develop management strategies (decant facilities, drop boxes, evaporation ponds, disposal/recycling options, etc.) Managing vactor cleanings is largely an urban issue and local urban DOT agencies often share management needs for this special material. • For maintenance areas that don’t have access to vactor decant facilities, discharge vactor liquids to municipal sewer or allow evaporation off paved or impermeable surfaces. • Recycling options are limited for urban generated vactor solids. Work with MOB or Hazmat to develop recycle or disposal options as appropriate. • Chemical testing may be needed to characterize pollutant levels and determine appropriate management, storage, and recycle options. Pollutant testing should include: copper, lead, zinc, cadmium, chromium, gasoline, diesel, and heavy oil. Polyaromatic hydrocarbons (PAHs) or other pollutants may also be appropriate for testing if their presence is suspected. • Storage and recycling of vactor solids contaminated with pollutants or litter will require DEQ approval or permits. MOB and Haz-mat can assist. • Stockpiling is allowed if recycling is planned. • Consult with your REC to determine restrictions or permits needed for material placement. • Implement erosion control and water quality BMPs as part of managing vactor waste (store on pavement, land decant or evaporate liquids if appropriate, etc.) • Sorting of materials can reduce or increase pollutant levels. Example: Higher pollutant levels are found in fine soils and clays. Lower levels in coarse sand and gravel. • Frequent cleaning of catchbasins or facilities can help keep pollutant levels low. Frequency depends on sediment build up but annual cleaning of catchbasins could be appropriate for high traffic urban areas.

Roadwaste Management Chart

(See EMS Manual - Section 5.18 “Roadwaste” for BMPs)

Material	Rules	Concerns	Management
Brush and Woody Debris	• Brush and woody debris is considered waste and must either be disposed of at a permitted waste facility or through permitted burning, or be recycled in a manner that is acceptable to DEQ. • Noxious weeds can be present and are regulated by ODA. (Follow District IVM Program.) • Waste cannot be stockpiled longer than 6 months without DEQ approval or a permit.	• Brush and woody debris is considered waste and must be managed because rotting or composting piles can pose risks to human health and safety (fire, bacteria, etc.) • Rotting organics (brush and woody debris) can cause water quality problems.	• Brush and woody debris can be sorted from other maintenance materials and then be recycled or disposed of at a permitted facility (landfill, commercial composter). • Grind or chip and use for compost or mulch (composting more than 20 tons/year requires a DEQ permit). • Place large woody debris in waterways. Coordinate with ODOT REC and ODFW. • Burning is allowed in limited areas, outside riparian corridors and where air quality allows. Burning permits may be required from local authorities. • Stockpiling is allowed if recycling is planned. • Consult with your REC to determine restrictions or permits needed for material placement. • Implement stockpile BMPs as appropriate (manage fire risk, avoid contact with water, etc.)
Ditchings	• Ditchings are considered waste (unless free of litter and pollutant contaminants) and must either be disposed of at a permitted waste facility or be recycled in a manner that is acceptable to DEQ. • Hydrocarbons and heavy metal contaminants are pollutants found in ditchings. These pollutants are regulated and can pose risks to human health and the environment. • Placement of ditchings may require permits or a site review (fill, wetland, endangered plants, archeological, etc.) • Waste cannot be stockpiled longer than 6 months without DEQ approval or a permit.	• If pollutant contamination levels are high, special management or disposal may be required. Watch for odd odors, colors, chemicals, etc. that indicate pollutants are present. (Ditchings from roads under 30,000 ADT typically have low pollutant levels.) • Ditchings can contain high amounts of organics (leaves, twigs, grass, etc.). Organics are considered waste. • Material high in organics makes poor structural fill because material will shrink as organics rot. • Rotting organics can cause water quality problems.	• Work with MOB or Hazmat to develop management and recycle options (ditch rebuilding, general fill, soil amendment, etc.) • Chemical testing may be needed to characterize pollutant levels and determine appropriate storage and recycle options. Pollutants are a concern in urban ditchings. Pollutant testing should include: copper, lead, zinc, cadmium, chromium, gasoline, diesel, and heavy oil. Polyaromatic hydrocarbons (PAHs) or other pollutants may also be appropriate for testing if their presence is suspected. • Storage and reuse of ditchings contaminated with pollutants, litter, or large amounts of vegetation could require DEQ approval and/or a waste permit. MOB and Haz-mat can assist with waste reuse permits or approvals. Stockpiling is allowed if recycling is planned. • Consult with your REC to determine restrictions or permits needed for material placement. • Implement erosion control and water quality BMPs where appropriate as part of managing ditching stockpiles. • Sorting may be appropriate. Litter or excess organic debris can be removed through screening. Organics can be left in stockpiles to rot if managed (limit amounts and exposure to ground and surface water).

Roadwaste Management Chart

(See EMS Manual - Section 5.18 “Roadwaste” for BMPs)

Material	Rules	Concerns	Management
Used Winter Sand and Gravel	• Collected winter sand and gravel can be considered industrial process waste by DEQ but reuse as winter sand and gravel is allowed under Beneficial Use laws. • Hydrocarbons and heavy metals are pollutants found in winter sand and gravel. These pollutants are regulated and can pose risks to human health and the environment. • Placement of winter sand and gravel may require permits or a site review (fill, wetland, endangered plants, archeological, etc.) • Waste cannot be stockpiled longer than 6 months without DEQ approval or a permit.	• Regulated pollutants can be present in winter sand and gravel (litter and chemical pollutants). *Material not reused as winter sand and gravel under DEQ Beneficial use rules falls under the same rules and concerns as street sweepings.* • Depending on the sand and gravel source material, used sand and gravel can be crushed or worn by vehicle tires to where it is no longer effective at improving traction. Dust and fines can also be a problem in tire ground sand and gravel.	• Work with MOB or Hazmat to develop management, reuse, or recycling options (general fill, soil amendment, etc.) • Chemical testing may be needed to characterize pollutant levels and determine appropriate storage and recycling options (if not reusing as winter sand and gravel). Pollutants are especially a concern for urban generated material. Pollutant testing should include: copper, lead, zinc, cadmium, chromium, gasoline, diesel, and heavy oil. Polyaromatic hydrocarbons (PAHs) or other pollutants may also be appropriate for testing if their presence is suspected. • Storage and recycling of winter sand and gravel contaminated with chemical pollutants or litter may require DEQ approval and/or a waste permit. MOB and Haz-mat can assist with waste reuse permits or approvals. • Stockpiling is allowed if recycling is planned. • Consult with your REC to determine restrictions or permits needed for material placement. • Implement erosion control and water quality BMPs where appropriate as part of managing winter sand and gravel stockpiles. • Screening may be needed to remove litter or excessive amounts of organic debris
Landslide Debris	• Slide material is considered to be clean unless there is reason to suspect pollutant contamination. • Placement of Landslide debris may require permits or a site review (fill, wetland, endangered plants, archeological, etc.)	• Regulated pollutants can be present. Sources are contaminants associated with the involved failed property (organics, sewerage, underground storage tanks, etc.) • Watch for odd odors, colors, chemicals, etc. that indicate pollutants are present. • If quantities are high, finding disposal or recycle locations can be difficult.	• Work with MOB, Geology, or outside agencies to develop management, recycling, or disposal options for landslide debris (general fill for quarries, etc.) • Chemical testing is typically not needed unless contaminants are suspected. • Stockpiling is allowed. Reuse should be planned. • Consult with your REC to determine restrictions or permits needed for material placement. • Implement erosion control and water quality BMPs where appropriate as part of managing stockpiles. • Screening may be needed to remove excessive amounts of organic debris depending on recycling or final disposal location.

Roadwaste Management Chart

(See EMS Manual - Section 5.18 “Roadwaste” for BMPs)

Material	Rules	Concerns	Management
Aged Asphalt Grindings	• Aged Asphalt Grindings are considered to be clean fill by DEQ but they may not be used where they have direct contact with water. • Placement of aged asphalt may require permits or a site review (fill, wetland, endangered plants, archeological, etc.)	• A grinding pile can seize up if stockpiled for several years. This can make the grindings difficult to move, spread, and reuse. • If quantities are high, recycling all stockpiled grindings can be problematic.	• Stockpiling is allowed if reuse or recycling is planned. • Consult with your REC to determine restrictions or permits needed for material placement. • Erosion control and water quality BMPs needed for grinding stockpiles will be minimal as grindings do not typically erode, migrate, or impact water as long as there is no direct water contact. • Grindings can be used for shoulder repair, patching, improving non paved surfaces, etc.

APPENDIX C

Oregon Department of Transportation

Routine Road Maintenance
Water Quality and Habitat Guide Best Management Practices
2014

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Link to the ODFW In-Water Timing Guidelines

http://www.dfw.state.or.us/lands/inwater/Oregon_Guidelines_for_Timing_of_%20InWater_work2008.pdf

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	June 1 – October 31 (CT,RB*)
(Confluence with the Coast Fork Willamette to Dexter Dam)	
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	by specific arrangement (CHS,RB,OC*)
(Confluence with the Middle Fork Willamette to Cottage Grove Dam)	
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	July 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*)

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

*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.

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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.

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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 <u>must</u> indicate <u>every</u> 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.

<u>Non-Designated Site</u>. If a site <u>is not</u> 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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Highway Division DIRECTIVE

NUMBER	SUPERSEDES
ENV 01-01	New
EFFECTIVE DATE: January 17, 2006	PAGE NUMBER: 1 of 13
REFERENCE	

SUBJECT	APPROVED SIGNATURE
Migratory Bird Treaty Act (16 U.S.C. 703-712)	/s/ Douglas Tindall, Highway Division Deputy Director

PURPOSE:

To provide agency personnel involved in project delivery, construction, and maintenance with guidelines and strategies to ensure that appropriate and reasonable measures are taken to prevent injury to and death of migratory birds.

DEFINITIONS:

- **Active nest** – a nest containing eggs or young.
- **Appropriate** – suitable for a particular condition, occasion, or place.
- **Conservation** – the protection, preservation, management, or restoration of wildlife and natural resources.
- **Context Sensitive and Sustainable Solutions (CS^3)** – an operational approach that addresses the preservation of scenic, aesthetic, historical, environmental, economic, and community values while building safe and enduring transportation projects.
- **Due diligence** – use of reasonable but not necessarily exhaustive efforts.
- **Environmental stewardship** – the careful and responsible management of natural resources.
- **Fledged** – young that are capable of flight and can successfully leave the nest.
- **Indiscriminate** – non-selective, wanton.
- **Migratory bird** – the vast majority of wild bird species encountered in Oregon; notable exceptions include European starling, house sparrow, and rock dove (feral pigeon).
- **Migratory Bird Treaty Act (MBTA)** – implements four bilateral treaties (between the U.S. and Canada, Japan, Mexico, and the former Soviet Union) making it illegal to pursue, possess, injure, or kill migratory birds without a permit.
- **Reasonably expect** – to presume that one has acted sensibly under the circumstances.
- **Safeguard** – strive to protect against potential harm.
- **USFWS** – United States Fish and Wildlife Service, regulatory agency enforcing the MBTA.

BACKGROUND:

The MBTA was developed in 1918 to stop the indiscriminate killing and market hunting of migratory birds. This act applies to activities conducted within the United States by any person, business, organization, institution, and any local, state, or federal agency.

GUIDELINES:

ODOT is committed to environmental stewardship and supporting the conservation intent of the MBTA while designing, constructing, operating, and maintaining the state highway system through Context Sensitive and Sustainable Solutions (CS^3); therefore, ODOT employees must practice due diligence to safeguard migratory birds while carrying out their daily activities. ODOT Highway Division employees are to incorporate the attached MBTA Guidelines and Strategies into their work responsibilities as can reasonably be expected when implementing the agency mission to provide a safe and efficient transportation system in ways that protect and enhance the environment.

RESPONSIBILITIES:

Highway Division Deputy Director:

- Provide guidance and direction on the MBTA to Highway Division personnel.

Technical Services Manager:

- Ensure that the MBTA Guidelines and Strategies associated with this Highway Division Directive are adaptive.

Natural Resources Unit:

- Lead efforts to revise the MBTA Guidelines and Strategies as needed.
- Include internal and external stakeholders in the periodic review and revision of the MBTA Guidelines and Strategies.
- Provide training and updates on the MBTA Guidelines and Strategies.
- Work with the Specifications, Estimating, and Office of Pre-Letting Unit, Project Managers, and other pertinent parties to develop standard specifications language for activities relevant to migratory bird protection.
- Work with the ODOT Bridge Engineering Section to foster bridge designs that dissuade birds from building nests on bridge sections *that are difficult to access*.
- Pursue MBTA permit options and an ODOT Avian Protection Plan with USFWS.

Environmental Leadership Team:

- Provide input on revisions to the MBTA Guidelines and Strategies.
- Incorporate MBTA Guidelines and Strategies into ODOT activities, projects, and contracts.
- Include migratory bird conservation practices into ODOT activities, projects, and contracts when relevant and reasonable.
- Disseminate MBTA information on the MBTA Guidelines and Strategies to appropriate ODOT personnel and contractors.

Project Delivery Leadership Team:

- Ensure that the protection of migratory birds is given due consideration in the entire project delivery system from inception through final project acceptance.
- Bring project MBTA compliance issues to the attention of the Natural Resources Unit.

Project Team Leaders:

- Ensure that migratory bird conservation principles and practices are implemented as stipulated during project design.
- Work with Biologists and Regional Environmental Coordinators to resolve MBTA compliance issues.

Construction Project Managers:

- Assist with developing contract language for implementation of the MBTA.
- Verify that construction contractors understand how to implement MBTA Guidelines and Strategies within projects.
- Ensure that the agreed upon MBTA Guidelines and Strategies are adhered to during construction activities.
- Report to the Project Delivery Leadership Team any MBTA compliance issues that occur on projects.

Maintenance Leadership Team:

- Incorporate changes in MBTA Guidelines and Strategies as needed into the Routine Road Maintenance Guide for Water Quality and Habitat Best Management Practices (2004 Blue Book).
- Disseminate information on the MBTA Guidelines and Strategies to appropriate maintenance personnel.
- Apprise the Natural Resources Unit of maintenance issues that should be considered in future revisions of the MBTA Guidelines and Strategies.

Maintenance District Managers:

- Integrate appropriate MBTA Guidelines and Strategies into maintenance activities.
- Provide training and disseminate information on the MBTA Guidelines and Strategies to maintenance personnel.

Facilities (Maintenance) Managers:

- Incorporate migratory bird conservation practices into facilities management.
- Report MBTA compliance issues at maintenance facilities to the region Biologist.

Biologists and Regional Environmental Coordinators:

- Recommend and support measures to protect migratory birds during project development and maintenance.
- Help identify active bird nests and/or habitat.
- Involve appropriate federal, state, and non-governmental agencies regarding migratory bird issues that arise during project development and implementation.
- Help resolve MBTA compliance issues during project and maintenance implementation.
- Work with the Natural Resource Unit to ensure that the MBTA Guidelines and Strategies document is current and inclusive.

Individual Employees:

- Practice due diligence to safeguard migratory birds while carrying out employment duties.
- Inform managers of activities that should be considered for inclusion in future revisions of the MBTA Guidelines and Strategies.
- Contact the region Biologist or Regional Environmental Coordinator when issues pertaining to the MBTA arise.

ACTION REQUIRED:

MBTA Guidelines and Strategies are to be incorporated into project delivery, construction, and maintenance activities to ensure that appropriate and reasonable measures are taken to prevent injury to and death of migratory birds.

SPECIAL INSTRUCTIONS:

Implementation of MBTA Guidelines and Strategies is to begin immediately.

MBTA Guidelines and Strategies

Statement of Intent: This document provides strategies to guide project decision-making regarding compliance with the Migratory Bird Treaty Act (MBTA). Because each project provides its own set of MBTA challenges, this document recognizes the need for flexibility in selecting compliance strategies by providing a suite of **possible** options for consideration on a project by project basis.

Compliance Summary: Unless and except as permitted by regulation, it shall be unlawful to possess, pursue, hunt, take, capture, kill, or attempt to take, capture, or kill any migratory bird, any part, nest, or eggs of any such bird, or any product of any such bird or any part, nest, or egg thereof (16 U.S.C. 703).

I. Project Delivery

MBTA Focus for Project Delivery – Identify and incorporate migratory bird conservation principles and practices into ODOT projects and contracts through collaboration with appropriate federal, state, and non-governmental groups during planning efforts.

1) Vegetation/Habitat Preservation

Goal – Ensure that project activities are designed such that migratory bird habitat is not unnecessarily disturbed during project implementation and that nesting habitat is not disturbed during the nesting season.

Possible *habitat preservation activities to require in projects to meet this goal:*

- Avoid disturbing nesting habitat (i.e., vegetation or structures) during the nesting season.
- Identify valuable bird nesting habitat within the project area and retain it if possible within project limits.
- Prevent migratory birds from nesting on structures that will be repaired or demolished prior to when young birds will fledge (e.g., employ exclusionary devices or dispersal methods)
- Within the work area, avoid disturbing vegetation designated to remain following project completion; preservation of this vegetation includes keeping equipment and materials off of the critical root zone.
- Avoid directly or indirectly damaging vegetation outside the work area.
- Following consultation with the project Biologist or Regional Environmental Coordinator (REC), undertake other actions not listed above that meet the MBTA goal for preservation of bird habitat (see Construction section for additional possibilities).

2) Vegetation/Habitat Restoration

Goal – Ensure that migratory bird habitat that is negatively impacted during project implementation is restored where feasible.

Possible *habitat restoration activities to require in projects to meet this goal:*

- Prevent fouling topsoil with subsoil or other detrimental matter; consult Oregon Standard Specifications for Construction (2002).
- Following construction, bring the surface area to a condition ready for planting operations; consult Oregon Standard Specifications for Construction (2002).
- Seed/plant using practices outlined in Sections 01030 and 01040 of Oregon Standard Specifications for Construction (2002).
- Plant in riparian areas following practices outlined in the Vegetation Management Program section of the ODOT Routine Road Maintenance Water Quality and Habitat Guide (2004 Blue Book).
- Consult with ODOT Foresters regarding best practices for planting trees.
- Following consultation with the project Biologist or REC, undertake other actions not listed above that meet the MBTA goal for restoration of bird habitat.

3) Vegetation/Habitat Enhancement

Goal – Improve migratory bird habitat within project areas if feasible and reasonable.

Possible *habitat enhancement activities to incorporate into projects to meet this goal:*

- Eliminate weeds (consult Oregon Standard Specifications for Construction, 2002) before beginning planting or seeding operations.
- Identify suitable native plants to utilize in habitat enhancement activities.
- Foster multi-layered vegetative communities in restoration activities when they do not interfere with the safe operation of the highway.
- Provide structural elements for nest sites *on suitable areas* of transportation structures (e.g., bridges).
- In consultation with the project Biologist, REC, or ODOT Foresters, identify other opportunities to improve bird habitat within the project scope.

4) Vegetation/Habitat Mitigation

Goal – Enhance bird habitat off-site when on-site vegetation preservation, restoration, and enhancement opportunities are limited. Off-site areas include mitigation banks and ODOT properties not associated with the right-of-way.

<u>Possible</u> *habitat mitigation activities to incorporate into projects to meet this goal:*

- Create snags in snag deficient areas.
- Provide nest boxes and nesting structures.
- Encourage multi-layered vegetation communities when practical.
- Enhance habitat requirements for bird species in decline.
- In consultation with the project Biologist or REC, identify other opportunities that meet the MBTA goal for bird habitat mitigation.

II. Construction

MBTA Focus for Construction – Put migratory bird conservation principles into practice during construction activities.

1) Vegetation Clearing

Goal – Avoid clearing live or dead vegetation containing active nests of migratory birds.

Possible *activities to meet this goal:*

- Do not damage vegetation by mechanical or chemical means unless it is necessary for project implementation.
- Clear vegetation outside the nesting season; contact the project Biologist for USFWS-provided information on when migratory birds nest in the project area.
- Prevent migratory birds from nesting in vegetation scheduled for clearing (e.g., employ exclusionary devices or dispersal methods).
- Inspect vegetation for active nests prior to clearing.
- If an active nest is encountered, avoid disturbing the nest or associated vegetation until the young have fledged.
- Consult with the project Biologist or Regional Environmental Coordinator (REC) on vegetation issues that arise during a project regarding compliance with the MBTA; seek additional advice from the Terrestrial Biology Team Leader in ODOT Central Services if warranted.
- Undertake other actions not listed above that meet the MBTA goal for vegetation clearing within the context of the particular project.

NOTE: In the event that eggs or birds are injured or killed, contact the REC for advice on how to proceed.

2) Tree/Snag Removal

Goal – Avoid felling trees or snags containing active nests of migratory birds.

Possible *activities to meet this goal:*

- Do not remove trees and snags unless it is necessary for project implementation or there is a safety issue.
- Remove trees and snags outside the nesting period; contact the project Biologist for USFWS-provided information on when migratory birds nest in the project area.
- Inspect trees and snags for active nests prior to their removal (e.g., observation methods or tree rapping).
- If an active nest is encountered, avoid removing the tree/snag until the young have fledged.

- Consult with the project Biologist or REC on tree/snag removal issues that arise during a project regarding compliance with the MBTA; seek additional advice from the Terrestrial Biology Team Leader in ODOT Central Services if warranted.
- Undertake other actions not listed above that meet the MBTA goal for tree/snag removal within the context of the particular project.

NOTE: In the event that eggs or birds are injured or killed, contact the REC for advice on how to proceed.

3) Bridge Demolition or Repair

Goal – Avoid destroying active nests and injuring birds protected by the MBTA during bridge demolition or repair.

Possible *activities to meet this goal:*

- Prevent migratory birds from nesting on bridges that will be demolished or repaired prior to when young birds will fledge (e.g., employ exclusionary devices or dispersal methods).
- Physically remove nests that do not contain eggs to prevent active nests.
- Inspect bridges for active nests prior to demolition or repair.
- Delay demolition or repair if active nests are located.
- Screen active nests from bridge repair activities.
- Demolish or repair bridges outside the nesting season.
- If occupied nests are encountered, continue work if the nests will not be destroyed and their inhabitants will not be injured, and if parent birds will not be precluded from tending their nests to the extent that the eggs or young are negatively impacted.
- Consult with the project Biologist or REC on bridge demolition/repair issues that arise during a project regarding compliance with the MBTA; seek additional advice from the Terrestrial Biology Team Leader in ODOT Central Service if warranted.
- Undertake other actions not listed above that meet the MBTA goal for bridge demolition or repair within the context of the particular project.

NOTE: In the event that eggs or birds are injured or killed, contact the REC for advice on how to proceed.

III. Maintenance

MBTA Focus for Maintenance – Integrate migratory bird conservation principles and practices into routine and extraordinary ODOT maintenance activities through existing programs and practices.

1) Tree Pruning and Tree/Snag Removal

Goal – Avoid pruning trees or removing trees/snags containing active nests of migratory birds.

- Follow appropriate Best Management Practices (BMPs) as described in the ODOT Routine Road Maintenance Water Quality and Habitat Guide (2004 Blue Book).
- In the unlikely event that state or federal endangered migratory birds are encountered during routine maintenance of trees or snags, stop work immediately and contact the Regional Environmental Coordinator (REC) for advice on how to proceed.

Possible *activities to meet this goal, in addition to those outlined in the Blue Book and other management plans:*

- Where feasible, trees/snags along the right-of-way should not be removed unless they pose safety concerns to the highway or motoring public and/or removing trees/snags is required to comply with state and local laws. Hazard trees are to be removed according to the Blue Book.
- As appropriate, prune or remove trees/snags outside the nesting season (as identified by ODFW), particularly the peak nesting period, unless the tree, limb, or snag is an imminent hazard.
- As outlined in the Blue Book, where appropriate, develop and implement highway corridor plans to minimize the removal of hazard trees/snags during the peak nesting season.
- When feasible, inspect trees/snags prior to removal for active nests (e.g., observation methods or tree rapping).
- If an active nest is encountered, when feasible, avoid pruning or removing the tree/snag until the young have fledged.

2) Vegetation Management

Goal – Minimize impacts to migratory birds that may be nesting in vegetation along right-of-ways through implementation of District Integrated Vegetation Management (IVM) plans that include considerations for migratory birds.

- Follow BMPs for vegetation management as described in the Blue Book.
- In the unlikely event that state or federal endangered migratory birds are encountered in vegetation during routine maintenance, stop work immediately and contact the REC for advice on how to proceed.

Possible *actions to include in District IVM plans that meet this goal:*

- When and where feasible, vegetation will be cleared only if it is necessary for the safe operation of the transportation system, to comply with state and local laws, or to control noxious weeds.
- As appropriate, low-growing plants will be planted that do not require maintenance during the nesting season (as identified by ODFW) of migratory birds; preference may be given to native plant species.
- When feasible, vegetation maintenance activities will occur outside the nesting season, especially during the peak nesting season, unless safety, fire, weed control, incident response, or state and local laws dictate otherwise.
- When feasible, the timing and width of required mowing will be adjusted to minimize impacts to nesting birds.
- When feasible, brush removal will be limited to no more than 20 feet from either end and under all maintained bridges unless necessary for sight distance and the structural integrity of the bridge.
- If possible, inspect vegetation for active nests prior to clearing.
- If an active nest is encountered, if possible, avoid disturbing the nest or surrounding vegetation until the young have fledged.

3) Culvert/Bridge Maintenance and Repair

Goal – Avoid destroying active nests and injuring migratory birds while cleaning or repairing culverts and bridges.

- Follow the Bridge Washing Guidelines found in the Blue Book.
- For state and federal endangered migratory birds known to occur on identified ODOT structures, follow BMPs for maintenance activities described in relevant ODOT management plans (e.g., Peregrine Falcon Management Plan 2002-2007).
- If state or federal endangered migratory birds are unexpectedly encountered during maintenance/repair activities, stop work immediately and contact the REC for advice on how to proceed.

Possible *activities to meet this goal, in addition to those identified in the Blue Book and other management plans:*

- When feasible for scheduled work, prevent migratory birds from nesting on sections of transportation structures that will be cleaned or repaired prior to when young birds will fledge (e.g., employ exclusionary devices or dispersal methods); bridges used for nesting by migratory birds are often noted in the bridge inspectors' database.
- For sections of structures that will undergo maintenance/repair, physically remove nests prior to egg laying (to prevent active nests) or after birds have fledged, when feasible.

- If migratory birds are nesting in or on a structure, delay or avoid maintenance/repair work in the vicinity of the nest, when feasible.
- If active nests are present and work can occur around them, when feasible shield the nests from maintenance/repair activities so nest inhabitants are disturbed as little as possible; reasonable attempts should be made to protect active nests and their inhabitants, and to allow parent birds to tend their nests so that eggs and young are not negatively impacted.
- Undertake other actions not listed above that meet the MBTA goal for the maintenance and repair of culverts and bridges.

4) Maintenance Facilities Management

Goal – Avoid destroying active nests and injuring migratory birds while managing facilities and yards utilized by maintenance.

- Follow rest area vegetation management practices identified in District IVM plans.
- In the unlikely event that state or federal endangered migratory birds are encountered during activities associated with the management of maintenance facilities, stop work immediately and contact the REC for advice on how to proceed.

Possible *activities to meet this goal, in addition to those identified in District IVM plans:*

- When feasible, pressure wash facilities outside the migratory bird nesting season (as identified by ODFW) or when active nests are not present.
- If migratory birds normally nest on facilities that must be maintained/repaired during the nesting season, when feasible prevent nesting on affected sections of the structures by employing exclusionary devices or dispersal methods.
- If active nests are present on facilities that must be maintained/repaired, when feasible shield the nests from disruptive activities so that nests are not destroyed and their inhabitants are not injured, and parent birds are not precluded from tending their nests to the extent that the eggs or young are negatively impacted.
- When feasible, physically remove nests that do not contain eggs to prevent active nests on facilities that will require maintenance/repair.
- When feasible, inspect facilities for active nests prior to undertaking repair/maintenance activities that may be disruptive to nesting birds.
- When feasible, delay repair/maintenance activities on facilities if active nests are located and the activities will be disruptive to nesting birds.
- Prior to building new facilities, evaluate designs that will limit or prevent birds from nesting on problematic areas of the structures.
- When active nests of ground-nesting migratory birds are encountered in maintenance yards, when feasible, flag the nests to minimize disturbing activities around the nests.
- When feasible, undertake other actions not listed above that meet the MBTA goal for maintenance facilities management.

DEFINITIONS:

- **Active nest** – a nest containing eggs or young.
- **Best Management Practices (BMPs)** – the performance of activities in a manner that minimizes impacts to protected species and their habitat.
- **Conservation** – the protection, preservation, management, or restoration of wildlife and natural resources.
- **Enhancement** – an improvement.
- **Goal** – an idealistic or long-term purpose.
- **Integrated Vegetation Management (IVM)** – a decision-making and management process that uses knowledge from a broad base of expertise, a combination of treatment methods, and a monitoring and evaluation system to achieve vegetation management goals.
- **Migratory Bird Treaty Act (MBTA)** – implements four bilateral treaties (between the U.S. and Canada, Japan, Mexico, and the former Soviet Union) making it illegal to possess, pursue, wound, or kill migratory birds without a permit.
- **Mitigation** – an action taken to eliminate or reduce long-term damage to a system.
- **ODFW** – Oregon Department of Fish and Wildlife.
- **Preservation** – the activity of protecting something from loss.
- **REC** – Regional Environmental Coordinator
- **Restoration** – returning to a normal or healthy condition.
- **Strategy** – a plan of action intended to accomplish a specific goal.
- **Tree** – vegetation with a stem diameter greater than 6 inches.

METHODS TO PREVENT SUCCESSFUL NESTING BY MIGRATORY BIRDS:

Exclusionary Devices – any method that denies birds physical access to a nest site.

- Nets
- Curtains of vinyl plastic strips
- Smooth, concave, fiberglass panels (for placement between an eave and wall)
- Slick surface coatings (e.g., slick paint)
- Ledge protectors (e.g., coils, pin and wire, points, shock wire, sticky repellents)
- Hole blockers (e.g., foam, steel wool)

Dispersal Methods – any method that deters birds from producing active nests but does not exclude them from nesting areas.

- Visual deterrents (e.g., mobiles, predator models, scare balloons, tapes)
- Auditory deterrents (e.g., sonic devices)
- Sensory deterrents (e.g., chemical repellents)
- Nest removal prior to egg laying (e.g., knock down with a pole, wash down with water). NOTE: swallows are strongly attracted to old nests or to the remnants of deteriorated nests, so all traces of mud should be removed.

U.S. Department of Agriculture – Animal and Plant Health Inspection Service – Wildlife Services (USDA-APHIS-WS) – has the authority to manage wildlife conflicts with humans (including government agencies).

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Highway Division
Maintenance Leadership Team
Operational Notice

NUMBER	SUPERSEDES	EFFECTIVE DATE	CANCELLATION DATE
MAI 180-01		July 2006	
SUBJECT		ISSUING BODY	
Archaeology Guidance for Hazardous Material Spills and Emergency Situations		Maintenance Leadership Team (MLT)	

PURPOSE:

To establish guidance regarding archaeological review/compliance during emergency situations, such as hazardous material spills, flooding and slide activity.

BACKGROUND:

Establishing guidance for Hazardous Material Response and Emergency Situations should expedite archaeological review and allow cleanup and repair activities to move forward in a reasonable manner.

DEFINITIONS

SHPO: Refers to the State Historic Preservation Office in Salem. The State Archaeologist at the SHPO handles regulatory compliance issues for Archaeology.

ODOT Responder: Any ODOT representative responding to the incident.

High Probability Areas: Refers to geographic locations of significant archaeological concern. A high probability location is defined by the presence of certain topographic features, proximity to known archaeological sites, and presence of possible cultural features.

PROCESS:

During **hazardous material spills** the following steps shall be followed by the ODOT Responder:

- Follow the current ODOT "Employee Guide to Highway Incidents and Hazardous Materials Response" and applicable ODOT safety standards.
- Try to 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.
- Allow the responsible party or cleanup contractor to conduct emergency response actions and cleanup necessary to protect human health, safety and the environment.
- The responsible party and their contractor are responsible for contacting the State Historic Preservation Office (SHPO) and complying with all archaeological requirements.

- If SHPO identifies an archaeological site in the immediate vicinity of the spill, notify the Region Environmental Coordinator (REC) and the ODOT Archaeologist as soon as possible without impeding clean up activities. The ODOT Archaeologist will contact the affected tribes to inform them of spill as well as cleanup activity.
- If ODOT issues a permit for cleanup, include requirements to obtain archaeological clearance and comply with all federal and state archaeological resource protection laws.

The following steps shall be followed by the ODOT Archaeologist:

- If SHPO requests information regarding a spill, refer them to the responsible party for information. If necessary, obtain additional information from the Region HazMat Coordinator or District Incident Response Coordinator.
- If an archaeological site is disturbed, coordinate *mitigation* activities with the responsible party, their contractors, SHPO and the affected tribes. The responsible party is responsible for restoration, mitigation and SHPO requirements. The ODOT Archaeologist should be the primary point of contact for affected tribes and should review mitigation plans, activities and report on behalf of ODOT.

During **emergency situations**, such as slides, flooding etc., the following guidance should be followed:

- If immediate safety, human life and/or lifeline routes, are at stake, emergency work should proceed and archaeological evaluation will take place post-repair as needed.
- If emergency repair work is scheduled to begin within 30 days, and archeological sites and/or high probability areas have been identified,
    1. The ODOT Archaeologist should be contacted via the REC, or other region representative, and be provided with the appropriate location and proposed repair information.
    2. The ODOT Archaeologist will conduct a database search to identify known site locations.
    3. The ODOT Archaeologist will contact SHPO, affected tribes and when appropriate, other consulting parties, via email and/or phone call.
    4. If an archaeological site is identified in the location of the emergency repair, ODOT Archaeological staff will coordinate to provide an archaeological monitor on site during repair work that will be responsible for documenting any archaeological material exposed during emergency repair work.
    5. The ODOT Archaeologist will draft a formal letter to the SHPO office post-repair detailing the consultation efforts and level of archaeological review.
- If emergency repair work is not scheduled to begin until after 30 days, normal archaeological evaluation procedures should be followed requiring survey and proper clearance documentation.

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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.

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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.

Revised by ODOT-GE, 1/20/2011

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In June 2016, starting with Version 2.0, ODOT started tracking substantive changes to the document.

Version	Change No.	Subject	Reason/Justification
2.0	1	**Add BMPs for fence repair/installation**	Determined to have similar issues as sign installation. Not previously addressed.
	2	**Added footnote to Tree Work Checklist**	Tree Work Checklist should be reviewed annually until implemented to ensure conditions haven't changed.