

Appendix 3-A

Other Environmental Performance Standards

APPENDIX 3-A

OTHER ENVIRONMENTAL PERFORMANCE STANDARDS

The following environmental performance standards were developed by ODOT and their contractors under a separate process from the ESA Section 7 consultation. These environmental performance standards were developed for compliance with other applicable laws and regulations.

PROCESS PERFORMANCE STANDARDS

1 The authorization holder shall conduct all work in compliance with the comprehensive plan, zoning requirements or other local, state, or federal regulations pertaining to the project. Local land use planning department approval shall be obtained if the project is located within a Federal Emergency Management Agency (FEMA) designated floodway. All other necessary approvals and permits shall be obtained before commencing with the authorized project. All necessary approvals and permits shall be obtained before commencing the project under this general authorization.

- 2 The authorization holder shall obtain all necessary access permits or rights-of-way prior to entering lands owned by another for the purposes of construction activities for a project authorized under this general authorization.
- 3 The authorization holder shall conduct the activity during the time period recommended by the Oregon Department of Fish and Wildlife (ODFW), unless after consultation with ODFW, a waiver is granted by Agency for a longer or alternative time period.
- 4 When listed species are present, the authorization holder shall comply with the state and Federal Endangered Species Acts. If previously unknown listed species are encountered during the project, the authorization holder shall cease work and contact the Agency as soon as possible.
- 5 The authorization holder shall not disturb or destroy known archeological sites unless authorized under a permit issued by the State Historic Preservation Office (SHPO). When previously unknown occurrences of archeological sites are discovered during construction, the authorization holder shall immediately cease work at the discovery site and contact the Agency.
- 6 The authorization holder shall ensure that the authorized work does not unreasonably interfere with or create a hazard to recreational navigation.
- 7 The authorization holder is responsible for the activities of all contractors or other operators involved in project work covered by the letter of authorization.
- 8 The authorization holder shall ensure that other structures, uses or activities not associated with the application for the proposed project (i.e., vehicle maintenance, construction of storage buildings, parking lots) are not permitted.
- 9 The authorization holder shall keep a copy of all relevant permits and approvals available at the work site whenever the activity is being conducted.

TECHNICAL PERFORMANCE STANDARDS

Proposed Performance Standard 1 (This text has been deleted. Please refer to the BA.)

Proposed Performance Standard 2 (This text has been deleted. Please refer to the BA)

Proposed Performance Standard 3

Pollution and Erosion Control (Final proposed terms and conditions for erosion control are being negotiated with DEQ).

Proposed Term and Condition 3

- 3.1 Prepare and carry out a pollution and erosion control plan to prevent pollution caused by surveying or construction operations.
 - 3.1.1 The plan must be available for inspection on request by ODOT.
- 3.2 The pollution and erosion control plan will contain the pertinent elements listed below, and meet requirements of all applicable laws and regulations.
 - 3.2.1 The name and address of the party(s) responsible for accomplishment of the pollution and erosion control plan.
 - 3.2.2 Practices to prevent erosion and sedimentation associated with access roads, stream crossings, drilling sites, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations, staging areas, and roads being decommissioned.
 - 3.2.3 Practices to confine, remove and dispose of excess concrete, cement, grout, and other mortars or bonding agents, including measures for washout facilities.
 - 3.2.4 A description of any regulated or hazardous products or materials that will be used for the project, including procedures for inventory, storage, handling, and monitoring.
 - 3.2.5 A spill containment and control plan with notification procedures, specific cleanup and disposal instructions for different products, quick response containment and cleanup measures that will be available on the site, proposed methods for disposal of spilled materials, and employee training for spill containment.
 - 3.2.6 Practices to prevent construction debris from dropping into any stream or water body, and to remove any material that does drop with a minimum disturbance to the streambed and water quality.
 - 3.2.7 Inspection of erosion controls. During construction, monitor instream turbidity and inspect all erosion controls daily during the rainy season and weekly during the dry season, or more often as necessary, to ensure the erosion controls are working adequately.
 - 3.2.7.1 If monitoring or inspection shows that the erosion controls are ineffective, mobilize work crews immediately to make repairs, install replacements, or install additional controls as necessary.
 - 3.2.7.2 Remove sediment from erosion controls once it has reached 1/3 of the exposed height of the control.

Proposed Performance Standard 4

Bank Stabilization – Provide measures to minimize and prevent the effects of construction operations and/or procedures on shorelines within the project area.

Proposed Term and Condition 4

- 4.1 Unless precluded by flow conditions, channel and bank stabilization may include but not are not limited to one of the following methods:
 - 4.1.1 Woody plantings and variations (e.g., live stakes, brush layering, facines, brush mattresses).
 - 4.1.2 Herbaceous cover, where analysis of available records (e.g., historical accounts and photographs) shows that trees or shrubs did not exist on the site within historic times, primarily for use on small streams or adjacent wetlands.
 - 4.1.3 Deformable soil reinforcement, consisting of soil layers or lifts strengthened with fabric and vegetation that are mobile ('deformable') at approximately two- to five-year recurrence flows.
 - 4.1.4 Coir logs (long bundles of coconut fiber), straw bales and straw logs used individually or in stacks to trap sediment and provide growth medium for riparian plants.
 - 4.1.5 Bank reshaping and slope grading, when used to reduce a bank slope angle without changing the location of its toe, increase roughness and cross-section, and provide more favorable planting surfaces.
 - 4.1.6 Floodplain roughness, e.g., floodplain tree and large woody debris rows, live siltation fences, brush traverses, brush rows and live brush sills; used to reduce the likelihood of avulsion in areas where natural floodplain roughness is poorly developed or has been removed.
 - 4.1.7 Floodplain flow spreaders, consisting of one or more rows of trees and accumulated debris used to spread flow across the floodplain.
 - 4.1.8 Flow-redirection structures known as barbs, vanes, or bendway weirs, when designed as follows, unless otherwise approved in writing by ODOT.
 - 4.1.8.1 No part of the flow-redirection structure may exceed bank full elevation, including all rock buried in the bank key.
 - 4.1.8.2 Build the flow-redirection structure primarily of wood or otherwise incorporate large wood at a suitable elevation in an exposed portion of the structure or the bank key. Placing the large woody debris near streambanks in the depositional area between flow direction structures to satisfy this requirement is not approved, unless those areas are likely to be greater than 1 meter in depth, sufficient for salmon rearing habitats.
 - 4.1.8.3 Fill the trench excavated for the bank key above bankfull elevation with soil and topped with native vegetation.
 - 4.1.8.4 The maximum flow-redirection structure length will not exceed 1/4 of the bankfull channel width.
 - 4.1.8.5 Place rock individually without end dumping.
 - 4.1.8.6 If two or more flow-redirection structures are built in a series, place the flow-redirection structure farthest upstream within 150

feet or 2.5 bankfull channel widths, from the flow-redirection structure farthest downstream.

- 4.1.8.7 Include woody riparian planting as a project component.
- 4.1.9 Rock may be used instead of wood for the following purposes and structures.
 - 4.1.9.1 The rock will be class 350 metric, or larger, wherever feasible, but may not impair natural stream flows into or out of secondary channels or riparian wetlands. Whenever feasible, place topsoil over the rock and plant with woody vegetation.
 - 4.1.9.2 As ballast to anchor or stabilize large woody debris components of an approved bank treatment.
 - 4.1.9.3 To fill scour holes, as necessary to protect the integrity of the project, if the rock is limited to the depth of the scour hole and does not extend above the channel bed.
 - 4.1.9.4 To construct a footing, facing, head wall, or other protection necessary to prevent scouring or downcutting of, or fill slope erosion or failure at, an existing flow control structure (e.g., a culvert, water intake), utility line, or bridge support.
 - 4.1.9.5 To construct a flow-redirection structure as described above.
- 4.2 If flow conditions require the use of riprap to achieve bank stabilization then incorporate fines and substrate adequate to sustain the growth and survival of native herbaceous vegetation and shrubs.

Proposed Performance Standard 5 (This text has been deleted. Please refer to the BA)
Site Restoration

Proposed Performance Standard 6

Access/Staging ODOT will limit impacts to wetlands from site access and staging activities.

Proposed Term and Condition 6

- 6.1 Marking. Flag the boundaries of clearing limits associated with site access and construction to prevent ground disturbance of critical riparian vegetation, wetlands and other sensitive sites beyond the flagged boundary.
- 6.2 Use existing roadways, travel paths, and drilling pads whenever possible, unless construction of a new way or drilling pad would result in less habitat take
- 6.3 Temporary roads or drilling pads built mid-slope or on slopes steeper than 30% are not authorized
- 6.4 If temporary roads are required through wetlands, culverts will be installed to maintain connectivity between wetland areas
- 6.5 In the case of road removal, the authorization holder shall ensure that all affected stream and bank areas are restored to their approximate original contour
- 6.6 Locate vehicle staging, cleaning, maintenance, refueling, and fuel storage facilities (1) in areas that have been previously compacted, disturbed, and cleared (if available) and (2) in areas where delivery of contaminants to the soil and waters can be prevented, contained, and cleaned rapidly

- 6.7 Hydraulic surveys. Hydraulic measurements that require access to the wetted channel will be done outside of the spawning season, or will have a fisheries biologist verify that there are no redds present at the site. If dye must be used, only non-toxic vegetable dyes is authorized; use of short pieces of plastic ribbon to determine flow patterns is not authorized.
- 6.8 Minimum area. Confine construction impacts to the minimum area necessary to complete the project.
- 6.9 Fish screens. Have a fish screen installed, operated and maintained according to NOAA Fisheries' fish screen criteria on each water intake used for project construction, including pumps used to isolate an in-water work area. Screens for water diversions or intakes that will be used for irrigation, municipal or industrial purposes, or any use besides project construction are not authorized.
- 6.10 Cessation of work. Cease operations under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.

Proposed Performance Standard 7 (This text has been deleted. Please refer to the BA)
Stormwater –

Proposed Performance Standard 8 (This text has been deleted. Please refer to the BA)
Wildlife Avoidance

Proposed Performance Standard 9 (This text has been deleted. Please refer to the BA)
Wildlife Passage

Proposed Performance Standard 10 (This text has been deleted. Please refer to the BA)
Butterflies.

Proposed Performance Standard 11 (This text has been deleted. Please refer to the BA)
Plants

Proposed Performance Standard 12 (This text has been deleted. Please refer to the BA)
Vernal Pools

Proposed Performance Standard 13 (This text has been deleted. Please refer to the BA)
Acoustic.

Proposed Performance Standard 14 (This text has been deleted. Please refer to the BA)
Public Awareness

WILD AND SCENIC RIVERS AND STATE SCENIC WATERWAYS

The number of bridges potentially occurring in Wild and Scenic River corridors or State Scenic Waterways has yet to be determined. Preliminary estimates indicate that two bridges are located on designated Wild and Scenic River segments of the Umpqua River. State Scenic Waterways potentially affected have not yet been identified. However, as part of the Bridge Program compliance effort, draft performance standards/guidelines relating to Wild and Scenic Rivers were developed with the assistance of Susan Whitney

(ODOT), William Jablonski (ODOT), and Arthur Lemke (PMX). Consultations with Susan Sater (US Forest Service) continue, and will be complemented by consultations with other USFS staff and Bureau of Land Management specialists, and may result in refinements to these standards/guidelines. The following performance standards/guidelines apply to projects with bridges located within streams designated pursuant to the National Wild and Scenic Rivers Act (Act), and when:

- Scenic attributes of the corridor are identified as an outstandingly remarkable value (ORV) that contributes to the designation of the stream.
- Scenery (though potentially not specifically named) is included as an attribute of an ORV (e.g., scenery is often an important underlying value comprising an identified Recreation ORV, or may be important to Traditional Use, Lifestyle Adaptation, and Historic values).
- Impacts to Scenic values within the Wild and Scenic River (WSR) corridor resulting from activity outside the corridor may invade or unreasonably diminish Scenic, Recreational, Fish, or Wildlife values.

In as much as designation of the stream pursuant to the Oregon Scenic Waterways Act is concurrent, the standards/guidelines applying to such designation is considered.

Performance Standard

At a minimum, maintain the quality of existing views from the designated stream and other important viewpoints or viewsheds (as seen from) within the designated WSR corridor.

OR

Enhance topographic and/or vegetation screening from the river and other important viewpoints or viewsheds within the designated WSR corridor, when reasonable practicable and existing river views are determined inadequate through consultation or applicable River Management Plan(s). This shall be accomplished using Conservation Measures.

Conservation Measures

1. The federal agency designated as the river management agency has the authority and responsibility for the WSR Section 7 determination of effects to federally designated WSRs. For example, the USACOE cannot issue a wetlands permit without the river management agency providing USACOE with the WSR Section 7 determination. Consequently, of primary importance to WSR compliance, consultation is necessary with the appropriate (U.S. Forest Service (USFS) or Bureau of Land Management (BLM)) River Manager. In addition, when the stream is also designated pursuant to the State Of Oregon's Scenic Waterways Act, the appropriate planner from the Oregon State Parks and Recreation Department (OPRD) must be consulted.
2. Projects must comply with visual and aesthetic standards contained in applicable USFS, BLM, and, where applicable, the OPRD plans, policies, and regulations relating to the WSR designated stream.
3. Projects must comply with the Act provisions for effects from any project within the designated WSR corridor and from any project outside the corridor but that affects values within the corridor.

4. Projects must comply with the guidelines and direction provided in the document entitled “Wild & Scenic rivers Act: Section 7, Technical Report of the Interagency Wild and Scenic Rivers Coordinating Council.”
5. Based on the agency having jurisdiction pursuant to the Act designation, either the BLM Visual Resource Management Program, USFS Landscape Aesthetics: A Handbook for Scenery Management, or the FHWA Visual Impact Assessment for Highway Projects or other (visual assessment) techniques must be used, as determined by the River Manager. Where appropriate, an OPRD planner must be contacted to identify existing and desired future visual/aesthetic values and conditions.
6. To implement numbers 7 through 9 below, by conducting numbers 1 through 5 above, the following must be determined:
 - Extent to which, based on work already conducted by the river management agency, the visual environment plays a role in the ORVs or Special Attributes that contribute to the stream’s designation;
 - Existing visual conditions that must be maintained, and existing visual conditions that currently are inadequate or not consistent with the desired future condition and should be enhanced, in order for the project to meet Section 7 requirements to not result in a “direct and adverse effect” (for bridges crossing inside a designated river) or “invade the area or unreasonably diminish” (for bridges crossing outside the designated river corridor); and
 - Spatial, design, planting and topographic (and other as appropriate) parameters and options that are reasonably practicable and should be considered in developing the bridge and roadway design.
7. Except for situations where views of the river or other features from the roadway or a roadway turnout are determined to necessarily preclude it, substantially screen roadway approaches to bridges, retaining walls lacking natural-appearing aesthetic treatments, bridge abutments and/or other structural appurtenances by use of topographic treatments or vegetation as determined through consultation per Section 1 above. This may be accomplished by one or more of the following measures (or others as determined appropriate through said consultation):
 - Topography and natural vegetation shall be located in such a way that bridge features are inconspicuous and in no case obtruding on the view of other important features from the river.
 - Topographic treatments may consist of vegetated berms, roadway slope contouring, retaining wall aesthetic enhancements, etc.
 - Substantial vegetation screening shall consist of the following:
 - Native evergreen (preferred) and/or deciduous and non-invasive vegetation to totally obscure (when practicable) or allow only a highly filtered view of the improvement preferably within 4 to 5 years. The extent of screening, and targeted time frame for achieving screening goals, shall be based on factors such as local growing conditions and plant species.
 - Native vegetation shall be compatible with natural vegetation growth in the area.
 - All bridges and roadway approaches shall be designed and constructed according to applicable provisions of the most current Oregon Department of Transportation Standards and Specifications, including (but not necessarily limited to) Sections 00280 (Erosion and

Sediment Control), 01030 (Seeding) 01040 (Planting), and Special Provisions 01030 and 01040 (Right of Way Development and Control).

- No new riprap should be visible from the designated river.
8. Bridge elements spanning the stream or otherwise not capable of being screened using topography and/or vegetation, shall be constructed of such materials as to be unobtrusive and compatible with the identified scenic qualities of the area. (Elements of bridges that otherwise might be considered obtrusive to the scenic qualities of the area but contribute to the overall historic and/or visual setting associated with a bridge [such as railings, arches, or non-structural or non-safety related aesthetic embellishments] shall not be considered obtrusive.) Measures shall include, but not necessarily be limited to:
- Structural elements shall be finished in muted tones appropriate to natural surroundings. Structural elements shall include piers, abutments, girders, facing, railing, utilities (e.g., attached pipelines, lighting fixtures), and shall not necessarily include roadway surface.
 - No structural areas shall be finished with white or bright colors or reflective materials, except for roadway surfaces or as needed for safety requirements.
 - Lighting shall be directional and focused on the roadway with little glare or dispersal into natural land areas or areas above the bridge.
 - Signage shall be placed and constructed of materials in such a manner as to minimize visibility from the stream, considering factors such as sign surface, size, colors, and reflective properties relative to the surrounding natural environment.
9. Exceptions to sections 7 and 8 above shall apply if required to meet FHWA/ODOT roadway safety requirements and/or maintenance requirements and policies.

Bridge Demolition Waste Reduction Plan

Performance Standards for bridge demolition material recycling will generally follow and supplement existing ODOT Standard Specifications for Construction.

Performance Goals

1. To recycle or reuse the maximum possible amount of material from bridges that are being demolished.
2. To not landfill any materials from bridge demolitions unless absolutely necessary.

Recycling Definition

To utilize, either onsite or offsite, the debris coming from a bridge structure that is to be demolished to replace new virgin raw material requirements or for other beneficial uses that reuse the material.

Qualifying Recycling Uses

The following are potential uses of various materials. Some of the potential uses will have limited utilization because of the nature and location of the demolition project or the

practicality of the alternative. They are listed here only as a pre-approved list of alternatives.

A. Concrete. To qualify as recycled material, concrete may be used as follows:

- 1) Offsite as large pieces to be reused in non-structural applications such as patio slabs, walkways, etc.
- 2) Offsite and taken to sand and gravel companies for crushing and reuse.
- 3) Crushed onsite and used, onsite or offsite at another nearby project, to offset the need for import of virgin raw material.
 - a) pieces less than 400 mm (15") in any direction may be used as embankment fill, but must be kept more than 300 feet from any stream and 30 feet from any bridge approach. All material shall be at least 2 feet below the ground surface and no rebar may be protrude more than 2" from concrete pieces.
 - b) Rebar free pieces less than 6" in any dimension may be used as subbase material.
 - c) Rebar free material less than 3" in any dimension may be used as backfill or base material if mixed with suitable other material and accepted by ODOT.
- 4) Crushed on site and used offsite where allowed by law and to offset the need for virgin raw material.
- 5) A usage approved by ODOT that qualifies as recycling.

Concrete material may be buried on site, as permitted by ODOT Specifications, but will not qualify for recycling unless it fits in to one of the categories above.

B. Asphalt. To qualify as recycled, it's use must offset the requirement to import raw material or be reincorporated into new asphalt, onsite or offsite.

- 1) Asphalt may be taken offsite to a sand and gravel supplier of asphalt products.
- 2) Asphalt may be taken offsite to an asphalt company.
- 3) Asphalt may be crushed onsite and used onsite to offset the need for raw material import.
 - a) In embankments: less than 15" in size; same other requirements as for concrete used in embankments.
 - b) On shoulders or gravel roads: sized as aggregate requirements for the particular use.
- 4) A usage approved by ODOT as recycling.

All asphalt used onsite or at a nearby site must be weathered.

C. Treated wood. To qualify as recycled, treated wood may generally need to be used as large sections in a use such as bumper guards, fence posts, falsework, etc. Treated wood can not be chipped and used for ground cover. The majority of treated wood will probably require disposal in a landfill. Disposal must follow Solid Waste and/or Hazardous Material regulations.

D. Untreated Wood. To qualify for recycling, untreated wood must be used to offset the need for virgin material.

- 1) Large pieces may be salvaged and used in other building structures or building projects.
- 2) Used as falsework for new Contractor projects.
- 3) Chipped up onsite and used either onsite or offsite for ground cover.

E. Metal To qualify as a recycled material, metal may be used:

- 1) Large portions of items such as rails, trusses, sign poles, or light standards may be removed intact in large sections and reused in other non structural applications such as light standards elsewhere or other metal applications to replace the need of new fabricated metal products.
- 2) Trusses or beams may be sold to the public for use as small bridges or other uses.
- 3) Taken to a metal scrap dealer.

F. Other. This category applies to everything not included above and may include electrical wiring, plastics, etc. To qualify for recycling the Other material must be put to a new beneficial use.

- 1) Contractor should save and preserve items of a historical nature such as gargoyles, spires statues, plaques, etc.
- 2) Most other material will be landfilled.

Performance standard

For each bridge demolished, the Contractor must meet the following Minimum Recycling Standards and should make every attempt to reach the Recycling Goals:

<u>MATERIAL</u>	<u>MINIMUM RECYCLING STANDARD</u>	<u>RECYCLING GOAL</u>
Concrete	70%	95%
Asphalt	70%	95%
Treated Wood	10%	25%
Untreated Wood	70%	95%
Metal	50%	95%
Other	5%	10%

Performance Measures

The Contractor will provide a Recycling Plan with the Contractor’s bid. The Recycling Plan will provide, as a minimum, a list of the type of demolished materials expected to be recovered from the bridge demolition project; an estimated percentage of those recovered bridge materials which the Contractor is proposing to recycle; the proposed disposition of each recycled material; the name, address and phone number of the end user where the material is to be taken; and a pledge to meet the recycling percentages proposed.

Contractors must propose recycling percentages at least in the amounts of the Minimum Recycling Standards. If a Contractor cannot meet the Minimum Recycling Standards for reasons of cost impracticality, lack of recycling alternatives nearby to the site area or any other reason, the Contractor must provide an explanation with their bid as to why they cannot meet the Minimum Recycling Standards.

Contractors that exceed all the Minimum Recycling Standards at the conclusion of the job, as determined by weight or volume, will be eligible for a recycling bonus. The bonus will be a percentage of the Contractor's bid and will be determined by the following chart:

Item	Weighting Factor	Minimum Recycling Standard	Recycling Percentage					Bonus	
			Act Recycle	75%	80%	85%	90%		95%
Concrete	40%	70%	Act Recycle	75%	80%	85%	90%	95%	
Bonus			% Award	1%	2%	3%	4%	5%	
Asphalt	20%	70%	Act Recycle	75%	80%	85%	90%	95%	
Bonus			% Award	1%	2%	3%	4%	5%	
Treated Wood	10%	10%	Act Recycle	15%	18%	21%	23%	25%	
Bonus			% Award	1%	2%	3%	4%	5%	
Untreated Wood	10%	70%	Act Recycle	75%	80%	85%	90%	95%	
Bonus			% Award	1%	2%	3%	4%	5%	
Metal	10%	50%	Act Recycle	60%	70%	80%	90%	95%	
Bonus			% Award	1%	2%	3%	4%	5%	
Other	10%	5%	Act Recycle	6%	7%	8%	9%	10%	
Bonus			% Award	1%	2%	3%	4%	5%	
Total Bonus									

The formula for determining Contractor's bonus equals each item's weighting factor multiplied by its recycling percentage award to equal the bonus for that item. The total bonus is the sum of the individual bonuses.

Example: Contractor's bid is \$1,000,000. Contractor recycled:

80% of the concrete
95% of the asphalt
10% of the treated wood
90% of the untreated wood
90% of the metal
7% of the "other" material

The Contractor's recycling bonus would be calculated as follows:

Concrete .40 x .02 =	.008
Asphalt .20 x .05 =	.001
Treated wood .10 x 0 =	0
Untreated wood .10 x .04 =	.004
Metal .10 x .04 =	.004
Other .10 x .02 =	<u>.002</u>
Total	.019

Contractor's bonus is \$1,000,000 x .019 = \$19,000