

ODFW Reference #: FPPA-0004 - Final

FISH PASSAGE PROGRAMMATIC AGREEMENT

The parties to this Agreement are the State of Oregon, by and through the Oregon Department of Fish and Wildlife (ODFW), and Washington County (County), a political subdivision of the State of Oregon.

I.

PURPOSE

1. It is the policy of the State of Oregon to provide for upstream and downstream passage for native migratory fish in all waters of this state in which they are currently or have historically been present, as expressed in Oregon Revised Statute (ORS) 509.585, Oregon Administrative Rule (OAR) 635-412-0001, and envisioned by the Oregon Plan for Salmon and Healthy Watersheds.
2. Pursuant to ORS 509.585 and OAR 635-412-0020, approval from ODFW or the Oregon Fish and Wildlife Commission (OFWC) regarding fish passage¹ at "artificial obstructions"² where native migratory fish (as defined in OAR 635-412-0005(33)) are currently or were historically present is required prior to certain actions "triggers"³. OAR 635-412-0020(3)(b) allows ODFW to grant "programmatic approval" of a fish passage plan for multiple artificial obstructions of the same type.
3. County owns and operates a number of similar culvert and bridge structures as part of its transportation system that will be required to provide fish passage as part of construction, replacement, abandonment, major maintenance, and other activities defined by OAR 635-412-0005(10) that constitute fish passage trigger events.
4. This Agreement is intended to serve as:
 - a) The ODFW fish passage program approval for County design, construction, and maintenance projects at road-stream crossings meeting the requirements of this Agreement (including Attachment A) and listed in the required Annual Reports,
 - b) ODFW fish passage programmatic approval for those road-stream crossings, and
 - c) A mechanism for cooperation between ODFW and the County on related fish passage matters. For reference, the State of Oregon's Fish Passage Statutes (Attachment B) and Oregon Administrative Rules (Attachment C) are included.

II.

APPLICABILITY

1. This Agreement applies to ODFW and the activities of the Operations and Maintenance Division ("Division") of the Department of Land Use and Transportation of Washington County and its independent contractors. This agreement also applies to individual projects led by the Capital Project Services Division but must be overseen by Environmental Service staff from the

¹ "Fish passage" means the ability, by the weakest native migratory fish and life history stages determined by the Department to require passage at the site, to move either volitionally or by trap collection and transport if consistent with requirements of OAR 635-412-0035(6), with minimal stress, minimal delay, and without physical or physiological injury upstream and downstream of an artificial obstruction.

² "Artificial obstruction" means any dam, diversion, dike, berm, levee, tide or flood gate, road, culvert or other human-made device placed in the waters of this state that precludes or prevents the migration of native migratory fish.

³ "Trigger events" for the purposes of this Agreement shall mean, with respect to an "artificial obstruction" (defined in OAR 635-412-0005(4)) located where native migratory fish are currently or were historically present: "construction" activities (defined in OAR 635-412-0005(10)), "fundamental changes in permit status" (defined in OAR 635-412-0005(26)), or "abandonment" (defined in OAR 635-412-0005(2)). A trigger at one artificial obstruction physically connected to another artificial obstruction requires passage be addressed at both connected structures (OAR 635-412-0005(49)).

Division to ensure all standards within this agreement are met. It does not apply to any other County Divisions or County Departments, third parties, or private persons.

2. This Agreement applies when Division action relating to roads constitutes a “trigger” and determines how it will provide fish passage as per the criteria of this Agreement. County remains responsible to address and comply with fish passage laws for activities and situations not covered by this Agreement.

3. Under this Agreement only ODFW may determine that native migratory fish are not currently and were not historically present at a site; however, the Division may assume presence of native migratory fish.

III.

PROVISIONS OF THE AGREEMENT

1. Fish Passage Design and Construction Standards.

Road-stream crossings designed, constructed, and maintained by Division that meet the criteria below do not require site-specific pre-approval by ODFW:

a. Design Criteria:

- i. **ODFW Stream Simulation Criteria** (OAR 635-412-0035(1) and (3)(a));
or
- ii. **ODFW Clarification of Fish Passage Triggers and Guidelines for Bridges** (Attachment A); Stream Simulation Design Option and Alternative 1: Large-Scale Crossing Design

b. “Roughened Channels” are constructed stream beds adjacent to a road-stream crossing that are steeper than the longitudinal stream profile and are considered by ODFW as separate from, but associated with, the road-stream crossing. Roughened channels may be established provided:

- i. they are designed, installed, and maintained to meet **ODFW Stream Simulation Criteria** for beds as set forth in OAR 635-412-0035(3)(a)(A)(ii), (3)(a)(A)(iv), and (3)(a)(A)(v)(II through VII),
- ii. they are placed at a grade of 4% or less, and
- iii. ODFW’s North Willamette Watershed District Fish Biologist, or a designated staff member, shall be notified of installations and be given the opportunity to be present during construction.

c. An accurate determination of “active channel width”⁴ is required for full compliance with the criteria or guidelines contained in the methodologies named in Paragraph 1.a.i and ii. County may ask ODFW for a determination of the active channel width for a site without seeking site specific approval. If an ODFW determination is provided, this shall be noted in the Annual Report described in Section IV.

d. Road-stream crossings shall be installed as designed. Road-stream crossings and roughened channels shall be installed prior to completion of the same in-water work period as the “trigger event” (OAR 635-412-0020(4)). Construction and temporary

⁴ “Active channel width” means the naturally occurring cumulative stream width(s) between the ordinary high water (OHW) lines, or at the channel bankfull elevation if the ordinary high water lines are indeterminate (OAR 635-412-0005(3)). Note that in bays and estuaries, the active channel width is calculated as the summation of the active channel widths of all freshwater streams entering the bay or estuary upstream of the site (per OAR 635-412-0035(4)(b)). Also note that, for fish passage requirement compliance, active channel width should be determined outside the influence of artificial structures or impacts and confluent tributaries.

water management criteria, including in-water work timing, as set forth in OAR 635-412-0035(10) shall be used.

- e. Temporary work bridges that are in place longer than an approved in-water work window, shall:
 - i. Have at least one unobstructed clear span greater than or equal to the active channel width or 35-feet whichever is greater,
 - ii. Not cause channel aggradation or degradation,
 - iii. Have a minimum bridge deck vertical height equivalent to or greater than the vertical elevation of the 10-year flood at the site,
 - iv. Be removed within 2-years of installation or as approved by ODFW, and
 - v. Be recorded in the Annual Report described in Section IV of this Agreement as a separate structure.
 - f. Division will utilize practices found in: Washington County Best Management Practice for Routine Road Maintenance manual, which may be updated periodically : <https://www.washingtoncountyor.gov/lut/documents/best-management-practices-routine-road-maintenance/download?inline>
2. Fish Passage Plan Approval. Pursuant to OAR 635-412-0020(3)(b), fish passage plans for road-stream crossings and roughened channels which are designed, installed, and maintained by Division and according to the criteria defined in OAR 635-412-0035(1), (2)(I)(A), (3)(a), and (10) are approved programmatically by ODFW through this Agreement as long as it is in force and other Provisions of the Agreement are being met. Therefore, for road-stream crossings or roughened channels that meet the requirements of this Agreement, site-specific pre-project approval by ODFW for Division fish passage plans is not required. Division has adequately demonstrated either prior to or within this Agreement that the requirements of OAR 635-412-0020(3)(b)(A) – (E) have been or will be met.
3. Programmatic Agreement Exclusions.
- a. This Agreement does not authorize the use of Design Option Alternative 2 (*Hydraulic Design*) or Alternative 3 (*Future Replacement or Removal*) from the **ODFW Clarification of Fish Passage Triggers and Guidelines for Bridges** (Attachment A).
 - b. This Agreement does not apply to fish passage waivers or exemptions.
 - c. Fish passage techniques and structures not authorized in this Agreement require specific approval by ODFW. This Agreement does not preclude Division from pursuing other legal options to address or comply with fish passage laws at artificial obstructions owned or operated by County where native migratory fish are currently or were historically present and at which trigger events will occur.
4. Design Exceptions and Emergency Deferrals.
- a. The Division may request exceptions to fish passage criteria per OAR 635-412-0035(1)(d), through ODFW's North Willamette Watershed District Fish Biologist on a site-specific basis. Design exceptions to OAR 635-412-0035(3)(a) must receive approval prior to construction from the ODFW Fish Passage Coordinator. Construction exceptions to OAR 635-412-0035(10) must receive approval from the ODFW North Willamette Watershed District Fish Biologist. ODFW, as approved by the ODFW Fish

Passage Coordinator, may provide an exception to any specific fish passage design criterion under the circumstances described in this section.

- b. **Urgency/Emergency Deferral** – in locations where the Division’s licensed professional engineer indicates that a road-stream crossing is failing or has failed and there is no time for compliance with the provisions of this Agreement because of an emergency⁵ road-stream crossing situation, the Division shall remedy the failure and immediately request approval from the ODFW North Willamette Watershed District Fish Biologist regarding a time period within which the provisions of this Agreement shall be implemented after-the-fact, as prescribed in OAR 635-412-0020(4)(a).
5. **Other Permits.** County shall be responsible for obtaining all other state and federal permits and permissions necessary for completion of construction or maintenance activities approved by the Agreement.

IV.

POST-PROJECT OBLIGATIONS

1. **Maintenance.** Division is responsible for all maintenance required such that all road-stream crossings and roughened channels approved and installed under this Agreement continue to provide adequate fish passage for native migratory fish (ORS 509.610 and OAR 635-412-0035(1)(h)).
2. **Inspection and Record-Keeping.** ODFW may inspect any road-stream crossing for which Division is responsible (ORS 509.625 and OAR 635-412-0020(3)(b)(D)). If inspection of a site installed with fish passage under this Agreement indicates that fish passage is not being provided and/or approved design criteria are not being met, ODFW shall notify Division and Division shall work with ODFW, determine the cause and, during a work period approved by ODFW, expeditiously rectify problems as necessary (OAR 635-412-0020(3)(b)(E)). The Division shall also keep all information related to specific road-stream crossings' or roughened channels' design, installation, and maintenance on record and available for ODFW inspection until post project obligations have concluded.
3. **Monitoring.** Division shall monitor all road-stream crossings and roughened channels implemented pursuant to this Agreement to verify that fish passage continues to be provided. Baseline monitoring shall be conducted in the year of construction (Year 0), and performance monitoring shall occur in years 1, 3, and 5 after project completion. Performance monitoring will consist of a simplified physical assessment of horizontal or vertical channel adjustments (including headcuts), determination of water depths, notation of any jump heights or water velocity issues, and any other relevant data to ensure the project is functioning as designed for fish passage. Photographs of sites shall be included in the monitoring reports. If monitoring indicates that fish passage is not being provided and/or approved design criteria are not met, Division shall consult with ODFW, determine the cause and, during a work period approved by ODFW, expeditiously rectify problems as necessary (OAR 635-412-0020(3)(b)(E)). If the year 5 post-project assessment reveals a stable channel bed form and no indication that fish passage is precluded by the project, then the project will be removed from the post-project monitoring obligations thereafter.

⁵ “Emergency”, as defined in OAR 635-412-0020(4)(a) means an imminent or immediate threat to human safety exists which requires construction at a failed artificial obstruction prior to being able to complete the requirements of subsection OAR 635-412-0020(3).

4. Annual Report. By February 15th of each year of the Agreement, County shall submit an electronic report on all road-stream crossings and roughened channels covered by this Agreement. The report shall contain the information as stated below and be submitted to ODFW's North Willamette Watershed District Fish Biologist and ODFW's Fish Passage Coordinator. The report shall provide project-specific details and should evaluate the effectiveness of Division activities under this Agreement and describe any problems or adaptive management suggestions. The Annual report shall consist of:
 - a. Narrative discussion of program activities,
 - b. Map of project locations completed,
 - c. Description and date of action(s) completed,
 - d. Description of how fish passage criteria were achieved at each project,
 - e. Design information and data on projects installed,
 - f. Monitoring results, description of any remedial actions, and site determinations for all projects including year 5 closeout projects,
 - g. Projects not meeting or achieving the provisions of the Agreement shall be specifically identified and discussed in Annual report(s) and during Annual Coordination Meetings, and
 - h. Data for projects completed shall be consistent with the State of Oregon Fish Passage Barrier Data Standard (reference: https://ftp.gis.oregon.gov/framework/ZZ_Share/Standards/Bioscience/OregonFishPassageBarrierDataStandardv1dot1.pdf). These standards should be referenced for clarification on specific report details.

5. Annual Coordination Meetings. Staff from County and ODFW affected by this agreement shall meet annually to collaboratively review projects approved and constructed under this Agreement and pre-notify and discuss future projects to be implemented during the upcoming construction season. Division staff shall coordinate with ODFW to meet no later than April 30th of each year.

6. Conflict Resolution. County, Division, and ODFW shall seek to resolve conflicts of any determination at the level at which they arise. If efforts at resolution are not able to be mutually agreed upon, the ODFW Fish Passage Coordinator shall make a final determination.

V.


GENERAL PROVISIONS

1. Notice. The parties' contact persons for all notices provided for under this Agreement, except as specifically provided otherwise, are as follows:

Agency	ODFW	ODFW Technical	County	County Technical	County Technical
Name	Greg Apke	Kevin Stertz	Todd Watkins	Jesse Dillow	Hannah Montgomery
Title	Fish Passage Program Manager	District Fish Biologist	Operations Manager	Sr. Env. Resource Specialist	Sr. Env. Resource Specialist
Address	4034 Fairview Industrial Dr SE Salem, OR 97302	17330 SE Evelyn St. Clackamas, OR 97015	1400 SW Walnut Hillsboro, OR 97123	1400 SW Walnut Hillsboro, OR 97123	1400 SW Walnut Hillsboro, OR 97123
Phone	503-947-6228	971-673-6044	503-846-7623	503-846-7652	503-846-7626
E-Mail	Greg.D.Apke@odfw.oregon.gov	Kevin.A.Stertz@odfw.oregon.gov	Todd_Watkins@washingtoncountyor.gov	Jesse_Dillow@washingtoncountyor.gov	Hannah_Montgomery@washingtoncountyor.gov

Either party may change a designated contact person at any time by providing written notice to the other party.

- 2. Amendments. Amendments to this Agreement may be made within applicable laws at the mutual agreement and signature of the ODFW Fish Passage Program Coordinator and the County Administrator.
- 3. Term. This Agreement is entered into on the date of last signature by and between the State of Oregon, through ODFW, and County. This Agreement remains in effect until March 1, 2029, at which time it may be renewed, amended, or terminated.
- 4. Termination. This Agreement may be terminated at any time through mutual agreement by the parties or by either party after a 30-day written notice. If terminated, all fish passage approvals shall be made according to current law, without consideration of this Fish Passage Programmatic Approval under OAR 635-412-0020(3)(b).

DocuSigned by:			
<i>Marni Kuyf</i>	3/7/2025 08:46 PST		3/11/2025
<small>65B0D494A448440</small>	Date	Fish Division Administrator	Date
Deputy County Administrator Washington County, Oregon		Oregon Department of Fish and Wildlife	

Attachment A

ODFW Clarification of Fish Passage Triggers and Guidelines for Bridges



M E M O R A N D U M

Oregon Department of Fish and Wildlife

Fish Division

Date: March 28, 2008

To: Art Martin, Statewide Transportation Coordinator

From: Tom Stahl, Fish Passage Coordinator

Subject: Clarification of Fish Passage Triggers and Guidelines for Bridges

This memo is intended to clarify when bridges trigger fish passage laws (ORS 509-580 through 910; OAR Chapter 635, Division 412). Additionally, new fish passage guidelines for bridges are detailed, which can be used for fish passage approval under the "Alternative Option" for road-stream crossings in ODFW's fish passage criteria (OAR 635-412-0035(3)(b)). This document shall remain in effect until ODFW revises it, passes new administrative rules, or updates fish passage criteria or guidelines and posts these on the ODFW website.

DEFINITIONS

The following definitions apply for the purposes of this memo (note: defined words or phrases are in italics throughout):

- "*active channel width*" means the stream width between the ordinary high water (OHW) linesⁱ, or at the channel bankfull elevationⁱⁱ if the ordinary high water lines are indeterminate (OAR 635-412-0005(3)). Note that in bays and estuaries, the *active channel width* is calculated as the summation of the *active channel widths* of all freshwater streams entering the bay or estuary upstream of the site (per OAR 635-412-0035(4)(b)). Also note that, for fish passage requirement compliance, *active channel width* should be determined outside the influence of artificial structures or impacts and confluent tributariesⁱⁱⁱ. See Figure 1.
- "*bed*" or "*bed and banks*" means the physical container of the waters of this state, bounded on freshwater bodies by the ordinary high water line or bankfull stage, and on bays and estuaries by the limits of the highest measured tide (OAR 635-412-0005(7)). Note that the *bed and banks* of a stream determine its *channel*^{iv}. See Figure 2.
- "*bridge*" means a set of structural *elements* allowing a road and waters-of-the-state to cross which a) is open-bottomed and has a *clear span* greater than 20 feet or b) is open-bottomed, does not have earthen fill on top of it, and has a *clear span* less than or equal to 20 feet^v.
- "*channel*" means that portion of a natural (perennial or intermittent) waterway that periodically or continuously contains moving waters of this state and has a definite *bed and banks* that serve to confine the water (OAR 635-412-0005(8)). Note that, for fish passage

trigger determination, the *channel* should be determined outside the influence of artificial structures or impacts and confluent tributaries (see Endnote #3). See Figure 2.

- "*clear span*" means the open distance between *bridge elements* within the horizontal plane of the channel passing below the *bridge*. See Figure 3 for a depiction of the horizontal plane of the channel and Figure 4 for measurement examples.
- "*element*" or "*bridge element*" means any part of a *bridge* that supports or provides a roadway (i.e., is structural) or provides structural protection^{vi}.

BRIDGE TRIGGERS

This section only defines when fish passage must be addressed at *bridges*^{vii}, not whether a new, replacement, or existing *bridge* meets fish passage requirements or is a barrier. If fish passage must be addressed, some form of ODFW fish passage approval will be needed (see next section for more information on passage approval options).

A *bridge* must address fish passage only if all three of the following apply:

1. native migratory fish are currently or were historically present at the location^{viii},
2. one of the following will occur (note: these are the potential trigger actions):
 - a. a new *bridge* will be constructed at a location where there is no existing crossing (OAR 635-412-0005(10)(a)),
 - b. a replacement *bridge* will be constructed at a location where there is an existing crossing (OAR 635-412-0005(10)(b)), **or**
 - c. over 50% of an existing *bridge's elements* within, below, or above the *channel* are cumulatively removed, replaced, filled, or added to through time (OAR 635-412-0005(10)(b)(D); see endnotes for more regarding the 50% calculation^{ix}), **and**
3. any *element* of a new, replacement, or existing *bridge*, or any part of an existing crossing being replaced by a *bridge*, is within or below the *channel* (see Figure 5).

FISH PASSAGE REQUIREMENTS FOR BRIDGES

Existing criteria in rule for road-stream crossings only describe a Stream Simulation option and an Alternative option (OAR 635-412-0035(3)). *Bridges* and other crossings do not qualify under the Stream Simulation option if a) there is any *bridge element* within the *channel* (including on, or replacing, the *bed and banks*) and b) they do not have a *clear span* greater than or equal to the *active channel width*^x (see Figure 6). In these cases, it is also difficult or time-consuming to show that an Alternative design will meet certain hydraulic conditions in the *channel* that allow for fish passage, based on known or assumed fish swimming abilities (i.e., the "Hydraulic Design" method). Therefore, other Alternative options for fish passage approval of *bridges* are presented here. So, if a) native migratory fish are or were present in a location, b) a new, replacement, or existing *bridge* has any element within or below the *channel*, c) there will be a trigger event, and d) fish passage will be provided, the following design options may be used to obtain fish passage approval for *bridges* from ODFW.

	Eligible for Programmatic Approval	Passage Design/ Review Basis
<p>Stream Simulation Design^{xi}</p> <ul style="list-style-type: none"> • <i>beds</i> or <i>clear spans</i> under should be equal to or greater than the <i>active channel width</i> multiplied by 1.2 plus 2 feet, with no <i>element</i> within the <i>active channel</i> • <i>beds</i> under should be equal to the slope of, and at elevations continuous with, the surrounding long-channel streambed profile • <i>beds</i> under should maintain average water depth and velocities that simulate those in the surrounding stream <i>channel</i> • <i>beds</i> under should be maintained through time • <i>beds</i> under should be composed of material that is similar in size and composition as the surrounding stream, but may be naturally supplemented to address site specific needs including, but not limited to, <i>bed</i> retention and hydraulic shadow^{xii} • <i>beds</i> under, if being placed or replaced, should be mechanically placed during installation • trash racks shall not extend below the top of the <i>channel</i> (i.e., OHW or bankfull elevation) and shall have a minimum of 10 inches clear spacing between vertical members 	YES	Structure and Channel Measures
<p>Alternative 1: Larger-Scale Crossing Design^{xiii}</p> <ul style="list-style-type: none"> • only applies to channels greater than 35 feet wide^{xiv} • there should be at least one <i>clear span</i> of 35 feet within the <i>channel</i> • no more than 25% of the <i>active channel width</i> should be filled (see Figure 7) • no more than 25% of the <i>bed and banks</i> should be filled (see Figure 7) • <i>bridge elements</i> should only fill one channel margin (i.e., one bank at the OHW or bankfull lines)^{xv}, and, where a margin is filled, the fill should not exceed a 1:1 slope or have a Manning's coefficient less than 0.3 • <i>beds</i> under should meet Stream Simulation requirements described above, excluding the requirement for being <i>active channel width</i> 	YES	Structure and Channel Measures
<p>Alternative 2: Hydraulic Design^{xvi}</p> <ul style="list-style-type: none"> • water velocity at the high fish passage design flow should be no greater than 2 feet per second • water depth at the low fish passage design flow should be at least the lower of: the surrounding stream, 6 inches if only juveniles require passage at a given time, or 12 inches if adults require passage at a given time • if there is a stream discontinuity (i.e., hydraulic or grade drop), jump height, jump pool depth, and energy dissipation requirements should also be addressed 	NO	Hydrologic/ Hydraulic Calculations
<p>Alternative 3: Future Replacement or Removal^{xvii}</p> <ul style="list-style-type: none"> • only applies to existing bridges • only applies to <i>channels</i> greater than 20 feet wide • <i>clear span</i> should be greater than or equal to ½ of the <i>active channel width</i> or 20 feet, whichever is greater • <i>beds</i> under should meet Stream Simulation requirements described above, excluding the requirement for being <i>active channel width</i> • <i>bridge</i> shall be placed on a list for future replacement with a <i>bridge</i> which meets either the Stream Simulation or Larger-Scale Crossing Design option or for future removal^{xviii} 	?	Structure and Channel Measures

If none of these options can be met for a new, replacement, or existing *bridge*, the owner/operator of a crossing should have more detailed discussions with ODFW about how best to meet legal fish passage requirements. Other possible approval options include providing passage under some other Alternative design (which may entail exceptions to criteria or guidelines, some combination of the options noted above, or the use of another entity's criteria or guidelines^{xix}), waivers, exemptions, or deferrals for structural emergencies that may affect human safety.

As with all temporary construction activities, passage requirements for temporary *bridges* or construction isolation measures shall be approved by ODFW staff on a site-specific basis and do not necessarily have to meet ODFW's full passage criteria or guidelines. Temporary construction activities are those which take place only within an approved in-water work window. An approved in-water work window may include extensions to published dates that are approved by ODFW. Any structure in place outside of an approved in-water work window will require more formal fish passage approval from ODFW. Work *bridges* that are not permanent, but do not meet ODFW's criteria for being temporary, may qualify for approval under "Alternative 3: Future Replacement or Removal" and be covered generally in a programmatic agreement.

ⁱ Defined in OAR 635-412-0005(36).

ⁱⁱ Defined in OAR 635-412-0005(6).

ⁱⁱⁱ For locations with an existing artificial structure, the *channel's* delineation and *active channel width* should not be determined at the site. Consult ODFW for appropriate methods to determine these.

^{iv} Consistent with ODFW's definition of *active channel width* (OAR 635-412-0005(3)), the ordinary high water lines are the primary determinant of a *channel*, and only if they are indeterminate should the secondary determinant, bankfull stage, be used.

^v Open-bottomed culverts, whether arched, rectilinear, or some other form, are not addressed in this memo and their triggers differ.

^{vi} This includes both superstructure *elements* (including, but not limited to: decks, girders/beams/stringers, wearing surfaces, diaphragms, trusses, and bearings) and substructure *elements* (including, but not limited to: bents/piers, abutments, footings, caps, piles, drilled shafts, columns, retaining walls, wing walls, approach fills, roadway embankments, impact panels, riprap, and other means of scour protection). This excludes ancillary *bridge* parts, such as signs, lighting, *bridge* rails, guardrails, or other items for vehicular or pedestrian safety.

^{vii} As currently written, triggers under OAR 635-412-0005(10)(d)(C) for culverts, and roads above them, do not apply to *bridges*.

^{viii} Unless native migratory fish presence is assumed, ODFW determines current and historic use by native migratory fish (i.e., an owner/operator of an artificial obstruction can assume native migratory fish are or were present but can't assume they aren't or weren't present without contacting ODFW).

^{ix} 50% of the structure should be calculated by volume. For irregular or complicated forms (e.g., I-beams, hollow tubes, or other odd shaped *bridge* elements), either a rough outer volume or an actual volume may be calculated, as long as the same type of calculation is used for both the work in question for the trigger and the entire structure to which it will be compared to determine the percentage. Rather than complicated calculations for *bridge element* volumes, ODFW is open to suggestions regarding other means to determine if *bridge* repair/maintenance/modification actions will affect 50% of a *bridge* and constitute a trigger.

^x If an *element* is within the *channel*, but the *clear span* is greater than the *active channel width*, then the structure would still be considered to meet Stream Simulation requirements. This allows for *channel* migration and assumes at least one naturally functioning bank is present. See Figure 6.

^{xi} Criteria for vertical clearance and over-sized rock that are included in OAR 635-412-0035(3)(a) for Stream Simulation designs are not included here; ODFW is establishing a general exception by this memo, per OAR 635-412-0035(1)(d), for *bridges* for these two criteria.

^{xii} If this condition is met, it is assumed that the *bed* under the *bridge* is stable and there is no hydraulic drop, grade drop, *channel* degradation, or *channel* aggradation being caused by the *bridge*. Rip rap or other *bridge* protection may be placed below the *channel's bed and banks* (i.e., sub-grade). Above this, a top dressing of native material, which may also include over-sized rock, should comprise the *bed and banks*. This *bed and banks* must persist through time. The depth of native top dressing should be determined on a site-specific basis, addressing the risk of losing the native material and exposing the sub-grade, engineered protection (e.g., greater risk of native material degradation would require greater depth of native material).

^{xiii} Guidelines apply to any given stream cross-section through the affected stream length.

^{xiv} 35 feet is an approximate opening through which large wood is expected to pass, allows support for a standard temporary *bridge* span of 40 feet, and is the scale at which ODFW is comfortable that hydraulic constrictions of 25% will not have a significant impact on water velocity and fish passage without further documentation.

^{xv} ODFW strongly recommends the avoidance of channel margin reduction, as certain native migratory fish species and life history stages may migrate in this area, and it provides habitat which is not available in other channel locations. If the guidelines for margin reduction are followed, this should reduce the impact to fish passage, although new information may prove these guidelines inadequate for passage of all native migratory fish and habitat impacts (which may need further habitat mitigation) will still occur.

^{xvi} Hydraulic Design guidelines are contained in other ODFW documentation. The major items are only briefly addressed in this document. For *bridges*, open channel flow models or FishXing can be used to demonstrate hydraulic conditions will be met. In addition, ODFW will consider other information or models that show certain structure and channel conditions will meet hydraulic conditions.

^{xvii} The legal basis for this type of approval is ODFW's authority under OAR 635-412-0020(4)(c) to approve "incremental passage plans", which provide that some level of fish passage is installed or exists at the time of the trigger event and full fish passage is provided at some point in the future.

^{xviii} Timing of replacement will be determined by ODFW with the owner/operator on a site-specific basis, and will likely be based upon when the entity will have funding available and ODFW prioritization for fish passage needs across sites.

^{xix} NMFS or WDFW Stream Simulation criteria/guidelines are examples.

Figure 1. Delineation of the *active channel width*.

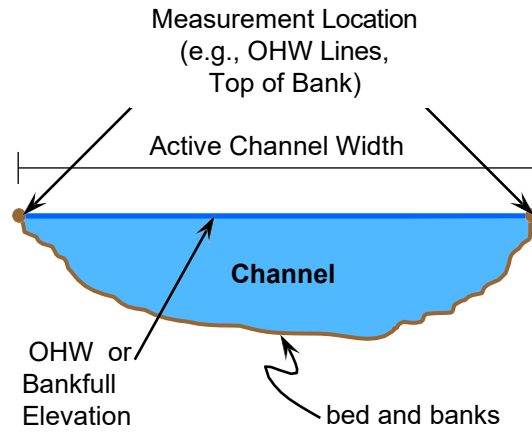


Figure 2. Delineation of a channel.

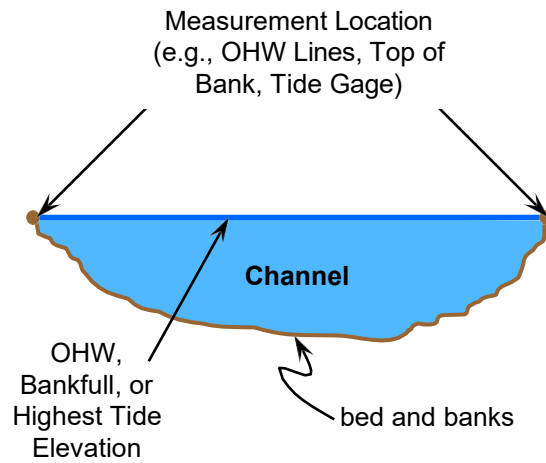


Figure 3. The horizontal plane of the channel (shaded).

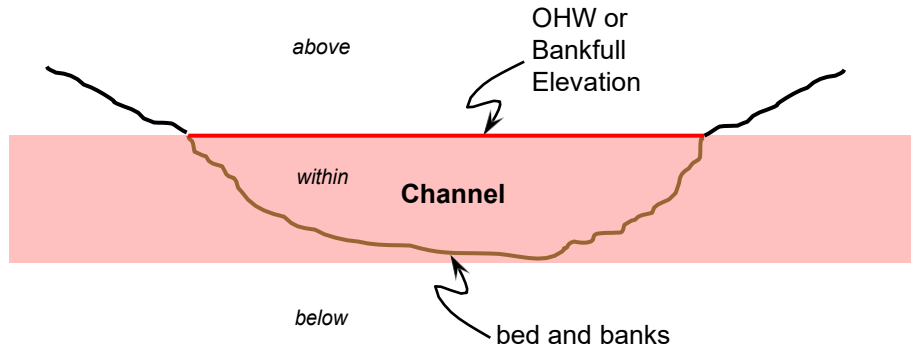
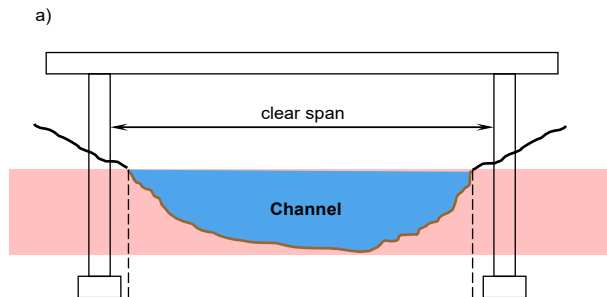


Figure 4. Examples of *clear span* measurements. Note that all situations except Figure 4-a could trigger fish passage laws due the presence of *elements* within or below the *channel* (see Figure 5). Note that new bridges are designed so that footings will not be exposed due to scour. Also note that of the remaining situations only Figure 4-b would meet the *active channel width* criterium for Stream Simulation design (even though in this case the *clear span* is less than the *active channel width*; see Figure 6). Also relative to Figure 4-b, if footings are above the deepest part of a channel that would naturally occur at the site, the clear span is the distance between the footings, assuming there are no other closer elements such as rip-rap within the horizontal plane of the channel.



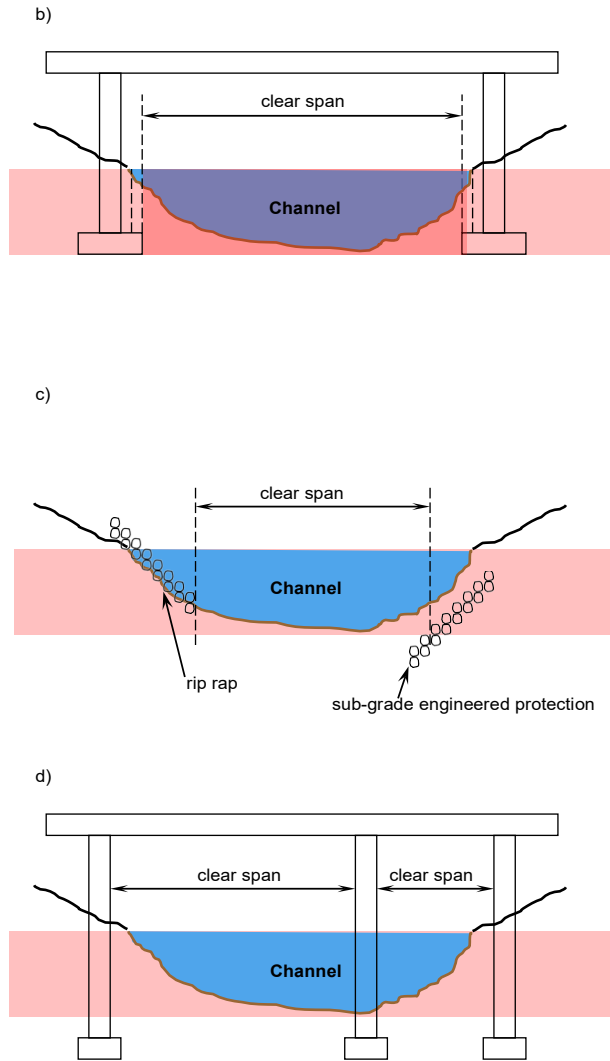


Figure 5. Zones relevant to bridge triggers. Presence of *bridge elements* in the "shaded zone" (i.e., within or below the *channel*) determines whether a trigger is possible. All (and only) *bridge elements* in the vertical plane of the *channel* (i.e., within, below, and above) should be considered for the 50% measure of whether repair/maintenance/modification of an existing *bridge* is a trigger.

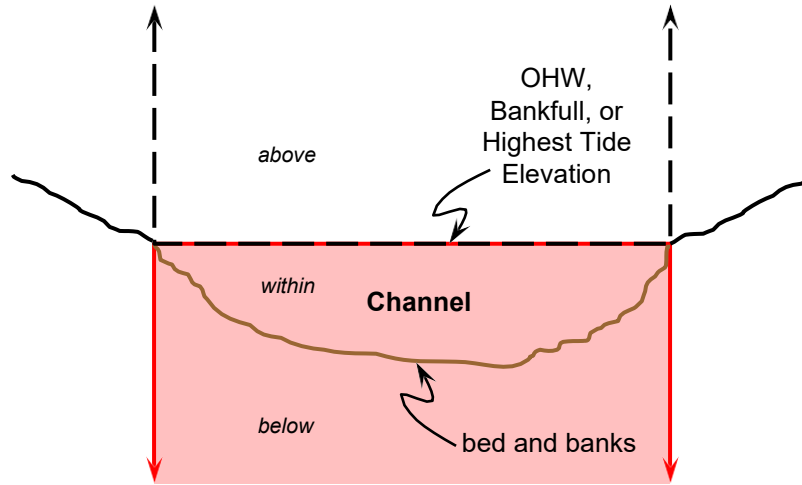


Figure 6. Channel conditions and/or clear span determine whether the Stream Simulation *active channel width* (ACW) criterium is met. The bridge in this diagram meets the Stream Simulation ACW criterium for both channel cases.

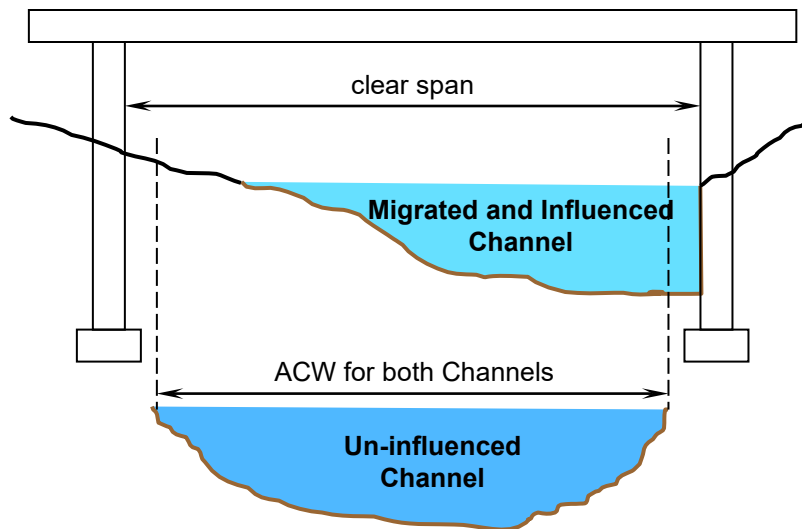
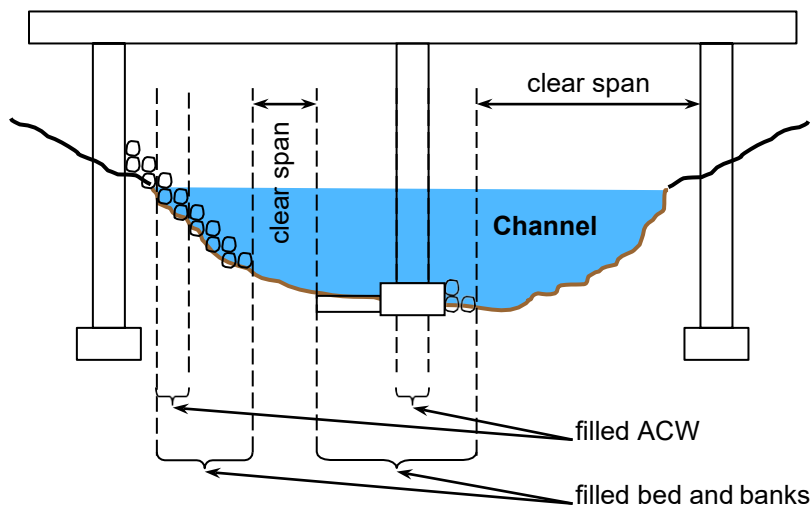


Figure 7. Examples of measurements for Larger-Scale Crossing Guidelines. Note that *active channel width* (ACW) fill is measured at the OHW or bankfull elevation. Anything that replaces or is placed on the *bed and banks* counts toward filled *bed and banks* (e.g., rip rap, exposed footers, poured concrete scour protection).



Attachment B

State of Oregon's Fish Passage Statutes

Chapter 509 — General Protective Regulations

2015 EDITION

FISH PASSAGE; FISHWAYS; SCREENING DEVICES; HATCHERIES NEAR DAMS

509.580 Definitions for ORS 509.580 to 509.590, 509.600 to 509.645 and 509.910; rules.

As used in ORS 509.580 to 509.590, 509.600 to 509.645 and 509.910:

(1) “Artificial obstruction” means any dam, diversion, culvert or other human-made device placed in the waters of this state that precludes or prevents the migration of native migratory fish.

(2) “Construction” means:

(a) Original construction;

(b) Major replacement;

(c) Structural modifications that increase storage or diversion capacity; or

(d) For purposes of culverts, installation or replacement of a roadbed or culvert.

(3) “Emergency” means unforeseen circumstances materially related to or affected by an artificial obstruction that, because of adverse impacts to a population of native migratory fish, requires immediate action. The State Fish and Wildlife Director may further define the term “emergency” by rule.

(4) “Fundamental change in permit status” means a change in regulatory approval for the operation of an artificial obstruction where the regulatory agency has discretion to impose additional conditions on the applicant, including but not limited to licensing, relicensing, reauthorization or the granting of new water rights, but not including water right transfers or routine maintenance permits.

(5) “In-proximity” means within the same watershed or water basin and having the highest likelihood of benefiting the native migratory fish populations directly affected by an artificial obstruction.

(6) “Native migratory fish” means those native fish that migrate for their life cycle needs and that are listed in the rules of the State Fish and Wildlife Director.

(7) “Net benefit” means an increase in the overall, in-proximity habitat quality or quantity that is biologically likely to lead to an increased number of native migratory fish after a development action and any subsequent mitigation measures have been completed.

(8) “Oregon Plan” means the guidance statement and framework described in ORS 541.898. [2001 c.923 §1]

Note: 509.580 to 509.595 were enacted into law by the Legislative Assembly but were not added to or made a part of ORS chapter 509 or any series therein by legislative action. See Preface to Oregon Revised Statutes for further explanation.

509.585 Fish passage required for artificial obstructions; statewide inventory; waiver of requirement by commission; rules; exemptions. (1) It is the policy of the State of Oregon to provide for upstream and downstream passage for native migratory fish and the Legislative Assembly finds that cooperation and collaboration between public and private entities is necessary to accomplish the policy goal of providing passage for native migratory fish and to achieve the enhancement and restoration of Oregon’s native salmonid populations, as envisioned by the Oregon Plan. Therefore, except as provided in ORS chapter 509, fish passage is required

in all waters of this state in which native migratory fish are currently or have historically been present.

(2) Except as otherwise provided by this section or ORS 509.645, a person owning or operating an artificial obstruction may not construct or maintain any artificial obstruction across any waters of this state that are inhabited, or historically inhabited, by native migratory fish without providing passage for native migratory fish.

(3) The State Department of Fish and Wildlife shall complete and maintain a statewide inventory of artificial obstructions in order to prioritize enforcement actions based on the needs of native migratory fish. This prioritization shall include, but need not be limited to, the degree of impact of the artificial obstruction on the native migratory fish, the biological status of the native migratory fish stocks in question and any other factor established by the department by rule. The department shall establish a list of priority projects for enforcement purposes. Priority artificial obstructions are subject to the State Fish and Wildlife Commission's authority as provided in ORS 509.625. Unless requested by persons owning or operating an artificial obstruction, the department shall primarily direct its enforcement authority toward priority projects, emergencies and projects described in subsection (4) of this section. The priority project list shall be subject to periodic review and amendment by the department and to formal review and amendment by the commission no less frequently than once every five years.

(4) A person owning or operating an artificial obstruction shall, prior to construction, fundamental change in permit status or abandonment of the artificial obstruction in any waters of this state, obtain a determination from the department as to whether native migratory fish are or historically have been present in the waters. If the department determines that native migratory fish are or historically have been present in the waters, the person owning or operating the artificial obstruction shall either submit a proposal for fish passage to the department or apply for a waiver pursuant to subsection (7) of this section. Approval of the proposed fish passage facility or of the alternatives to fish passage must be obtained from the department prior to construction, permit modification or abandonment of the artificial obstruction.

(5) Consistent with the purpose and goals of the Oregon Plan, the department shall seek cooperative partnerships to remedy fish passage problems and to ensure that problems are corrected as soon as possible. The department and the person owning or operating the artificial obstruction are encouraged to negotiate the terms and conditions of fish passage or alternatives to fish passage, including appropriate cost sharing. The negotiations may include, but are not limited to, consideration of equitable factors.

(6) The department shall submit a proposed determination of the required fish passage or alternatives to fish passage to the commission for approval. The determination may be the result of the negotiations described in subsection (5) of this section or, if no agreement was reached in the negotiations, a determination proposed by the department. If a protest is not filed within the time period specified in ORS 509.645, the proposed determination shall become a final order.

(7)(a) The commission shall waive the requirement for fish passage if the commission determines that the alternatives to fish passage proposed by the person owning or operating the artificial obstruction provide a net benefit to native migratory fish.

(b) Net benefit to native migratory fish is determined under this subsection by comparing the benefit to native migratory fish that would occur if the artificial obstruction had fish passage to the benefit to native migratory fish that would occur using the proposed alternatives to fish passage. Alternatives to fish passage must result in a benefit to fish greater than that provided by

the artificial obstruction with fish passage. The net benefit to fish shall be determined based upon conditions that exist at the time of comparison.

(c) The State Fish and Wildlife Director shall develop rules establishing general criteria for determining the adequacy of fish passage and of alternatives to fish passage. The general criteria shall include, but not be limited to:

- (A) The geographic scope in which alternatives must be conducted;
- (B) The type and quality of habitat;
- (C) The species affected;
- (D) The status of the native migratory fish stocks;
- (E) Standards for monitoring, evaluating and adaptive management;
- (F) The feasibility of fish passage and alternatives to fish passage;
- (G) Quantified baseline conditions;
- (H) Historic conditions;
- (I) Existing native migratory fish management plans;
- (J) Financial or other incentives and the application of incentives;
- (K) Data collection and evaluation; and
- (L) Consistency with the purpose and goals of the Oregon Plan.

(d) To the extent feasible, the department shall coordinate its requirements for adequate fish passage or alternatives to fish passage with any federal requirements.

(8) A person owning or operating an artificial obstruction may at any time petition the commission to waive the requirement for fish passage in exchange for agreed-upon alternatives to fish passage that provide a net benefit to native migratory fish as determined in subsection (7) of this section.

(9)(a) Artificial obstructions without fish passage are exempt from the requirement to provide fish passage if the commission:

- (A) Finds that a lack of fish passage has been effectively mitigated;
- (B) Has granted a legal waiver for the artificial obstruction; or
- (C) Finds there is no appreciable benefit to providing fish passage.

(b) The commission shall review, at least once every seven years, the artificial obstructions exempted under this subsection that do not have an exemption expiration date to determine whether the exemption should be renewed. The commission may revoke or amend an exemption if it finds that circumstances have changed such that the relevant requirements for the exemption no longer apply. The person owning or operating the artificial obstruction may protest the decision by the commission pursuant to ORS 509.645.

(10) If the fundamental change in permit status is an expiration of a license of a federally licensed hydroelectric project, the commission's determination shall be submitted to the Federal Energy Regulatory Commission as required by ORS 543A.060 to 543A.410.

(11) To the extent that the requirements of this section are preempted by the Federal Power Act or by the laws governing hydroelectric projects located in waters governed jointly by Oregon and another state, federally licensed hydroelectric projects are exempt from the requirements of this section.

(12) A person subject to a decision of the commission under this section shall have the right to a contested case hearing according to the applicable provisions of ORS chapter 183. [2001 c.923 §2]

Note: See note under 509.580.

509.590 Fish Passage Task Force; reports to legislature. (1) The State Fish and Wildlife Director shall establish a Fish Passage Task Force to advise the director and the State Department of Fish and Wildlife on matters related to fish passage in Oregon, including but not limited to funding, cost sharing and prioritization of efforts. The director shall determine the members and the specific duties of the task force by rule.

(2) The department shall provide staff necessary for the performance of the functions of the task force.

(3) A member of the task force may not receive compensation for services as a member of the task force. In accordance with ORS 292.495, a member of the task force may receive reimbursement for actual and necessary travel or other expenses incurred in the performance of official duties.

(4) The task force shall report semiannually to the appropriate legislative committee with responsibility for salmon restoration or species recovery, to advise the committee on matters related to fish passage. [2001 c.923 §3; 2007 c.354 §17]

Note: See note under 509.580.

509.592 Task force advice to department regarding project funding; department report on deposits and expenditures. (1) The Fish Passage Task Force established pursuant to ORS 509.590 shall provide advice to the State Department of Fish and Wildlife regarding the projects to be funded and the expenditures to be made from the Fish Passage Restoration Subaccount created under ORS 497.141.

(2) The department shall maintain a record of all moneys deposited to or expended from the subaccount. The department shall make an annual report of the deposits and expenditures available to the public on the department's website. [2013 c.674 §2]

Note: 509.592 was enacted into law by the Legislative Assembly but was not added to or made a part of ORS chapter 509 or any series therein by legislative action. See Preface to Oregon Revised Statutes for further explanation.

509.595 Director to report on fish passage rules, adequacy and implementation. The State Fish and Wildlife Director shall report to the Governor, the Speaker of the House of Representatives, the President of the Senate and the appropriate legislative committee with responsibility for salmon restoration or species recovery:

(1) Prior to the adoption of rules relating to fish passage;

(2) Prior to the establishment of the general criteria for determining the adequacy of fish passage and of alternatives to fish passage required to be established under ORS 509.585 (7)(c); and

(3) Semiannually on the progress that the director has made in implementing ORS 509.580 to 509.590. [2001 c.923 §20; 2007 c.354 §18]

Note: See note under 509.580.

509.600 Destroying, injuring or taking fish near fishway; permits to take fish. (1) A person may not willfully or knowingly destroy, injure or take fish within 600 feet of any fishway,

except as permitted by subsection (2) of this section. Actions that violate this section include, but are not limited to:

(a) Hindering, annoying or disturbing fish entering, passing through, resting in or leaving such fishway, or obstructing the passage of fish through the fishway at any time or in any manner.

(b) Placing anything in the fishway.

(c) Using any fishing gear within 600 feet of the fishway.

(d) Taking fish at any time anywhere within 600 feet of the fishway.

(e) Doing any injury to the fishway.

(2) The State Fish and Wildlife Commission may by rule or by issuance of permits authorize the taking of fish within 600 feet of any fishway. [1965 c.570 §104; 1973 c.723 §122; 1981 c.646 §6; 2001 c.923 §8]

509.605 [Amended by 1955 c.707 §49; 1963 c.178 §1; 1965 c.570 §131; 1973 c.723 §123; repealed by 2001 c.923 §21]

509.610 Maintenance of fish passage required. (1) Subject to ORS 509.645, when the State Department of Fish and Wildlife requires fish passage to be provided pursuant to ORS 509.585, the person owning or operating an artificial obstruction shall keep the fish passage in such repair as to provide adequate fish passage of native migratory fish at all times.

(2) Each day of neglect or refusal to comply with subsection (1) of this section, after notification in writing by the department, constitutes a separate offense.

(3) A person owning or operating an artificial obstruction is responsible for maintaining, monitoring and evaluating the effectiveness of fish passage or alternatives to fish passage. [Amended by 1955 c.707 §52; 1965 c.570 §132; 2001 c.923 §9]

509.615 [Amended by 1957 c.135 §1; 1963 c.111 §1; 1965 c.570 §135; 1987 c.488 §2; 1993 c.478 §9; 1995 c.426 §6; repealed by 2007 c.625 §16]

509.620 Condemning inadequate or nonfunctioning fish passage; requiring new fish passage. If, in the judgment of the State Department of Fish and Wildlife, fish passage is not functioning as intended or is inadequate, as constructed under ORS 509.585, the State Fish and Wildlife Commission may condemn the fish passage and order new fish passage installed in accordance with plans and specifications determined by the department. [Amended by 2001 c.923 §10]

509.625 Power of department to inspect artificial obstructions and have fish passage constructed or remove obstruction. (1) The State Department of Fish and Wildlife may determine or ascertain by inspection of any artificial obstruction whether it would be advisable to construct fish passage, or order the construction pursuant to ORS 509.585 of fish passage, at the artificial obstruction. Without affecting other remedies to enforce the requirement to install fish passage, if the State Fish and Wildlife Commission determines that an emergency exists, the commission may order the construction, pursuant to ORS 509.585, of fish passage in the waters of this state inhabited by native migratory fish as deemed adequate to provide passage for native migratory fish.

(2) Where fish passage has previously been constructed with or without the approval of the commission and has proved useless or inadequate for the purposes for which it is intended, the commission may improve or rebuild such fish passage. However, such construction or reconstruction shall not interfere with the prime purpose of the artificial obstruction. This subsection may not be construed to require the improvement or rebuilding of fish passage by the commission.

(3)(a) The commission may order a person owning or operating an artificial obstruction on the priority list created pursuant to ORS 509.585 who has been issued a water right, owners of lawfully installed culverts or owners of other lawfully installed obstructions to install fish passage or to provide alternatives to fish passage if the commission can arrange for nonowner or nonoperator funding of at least 60 percent of the cost.

(b) Notwithstanding paragraph (a) of this subsection, the commission may order installation of fish passage or alternatives to fish passage without regard to funding sources:

(A) If the person owning or operating the artificial obstruction is already subject to an obligation to install fish passage or to provide alternatives to fish passage under ORS 509.585;

(B) If the commission declares an emergency under this section; or

(C) If the person owning or operating the artificial obstruction has not been issued a water right or if the artificial obstruction has been otherwise unlawfully installed.

(4) If a person who owns or operates an artificial obstruction and who is required to provide fish passage under ORS 509.585 fails to provide fish passage in the manner and time required by the State Department of Fish and Wildlife, the commission may remove, replace or repair the artificial obstruction or any parts of the obstruction at the expense of the owner or operator.

[Amended by 1955 c.707 §53; 1963 c.232 §1; 1965 c.570 §133; 2001 c.923 §11]

509.630 Power of department to establish fish passage in natural stream obstructions.

The State Department of Fish and Wildlife may determine or ascertain by inspection of any natural obstruction whether it would be advisable to construct fish passage over or around such natural obstruction. If it is deemed advisable the State Fish and Wildlife Commission may construct fish passage that provides adequate passage for native migratory fish in the waters of this state inhabited by native migratory fish. [Amended by 1965 c.570 §134; 2001 c.923 §12]

509.635 Oregon City fishway under control of commission; removal of obstructions. (1)

The fishways over the falls in the Willamette River, near Oregon City, are under the care and control of the State Fish and Wildlife Commission, which may make any extensions, additions, alterations or repairs to the same that become necessary.

(2) The commission, or its duly authorized representatives, may remove any artificial obstructions placed in the Willamette River above the falls which would prevent the free passage of fish up the river. [Amended by 1965 c.570 §136]

509.640 [Amended by 1955 c.707 §54; repealed by 2001 c.923 §21]

509.645 Filing protest with commission; review and determination by commission; alternative dispute resolution. (1) A person owning or operating an artificial obstruction may request alternative dispute resolution at any point in the process of determining fish passage requirements.

(2) A person owning or operating an artificial obstruction may file a protest with the State Fish and Wildlife Commission within 30 days from the receipt of the State Department of Fish and Wildlife determinations under ORS 509.585. The person shall identify the grounds for protesting the department's determinations.

(3) The commission may, after sufficient opportunity for public review and comment, approve, deny or modify the proposed determinations. [1955 c.707 §51; 1973 c.723 §124; 2001 c.923 §13]

ENFORCEMENT

509.910 Injunction to prevent certain violations; jurisdiction; service on corporation.

(1) The State Fish and Wildlife Commission may maintain an action for an injunction to enjoin and restrain any person, municipal corporation, political subdivision or governmental agency of this state from violating any of the provisions of ORS 509.130, 509.140, 509.505, 509.585, 509.610 and 509.625.

(2) Any action authorized by this section shall be tried in the circuit court of the county in which the violation occurs or in Marion or Multnomah County.

(3) If the defendant is a corporation with its principal office and place of business in a county other than in which the waters flow or are situated, such action shall be deemed an action of local nature and service of summons made on a corporation in any county where the corporation has its principal office and place of business. If it is a foreign corporation, service may be made on the statutory agent but if there is no such statutory agent then upon the Secretary of State as in other cases provided by law. [1963 c.303 §1; 1977 c.242 §8; 1979 c.284 §16; 2001 c.923 §14; 2007 c.625 §10]

509.990 [Subsection (8) of 1963 Replacement Part enacted as 1955 c.477 §2; subsection (10) of 1963 Replacement Part enacted as 1957 c.152 §8; repealed by 1965 c.570 §152]

509.991 [1965 c.570 §59e; repealed by 1969 c.675 §21]

509.992 [1969 c.675 §15; repealed by 1977 c.242 §10]

CHAPTER 510 [Reserved for expansion]

Attachment C

Oregon Administrative Rules

1 Division 412
2 FISH PASSAGE

3 **635-412-0001**

4 **Purpose of the Fish Passage Policy**

5 (1) The purpose of these rules is to further clarify and implement the State's fish passage statutes (ORS
6 509.580 through 509.910) and the Department's Climate and Ocean Change Policy (OAR 635-900-0001
7 through 635-900-0020) through the application of consistent standards.

8 (2) It is the policy of the State of Oregon to provide for upstream and downstream passage of native
9 migratory fish at artificial obstructions.

10 (3) Changes in Oregon's future climate make fish passage even more critical, and a lack of fish passage
11 within watersheds may threaten the existence of some native migratory fish species.

12 (4) It is therefore the intent of these rules to promote fish passage while recognizing cooperation and
13 collaboration between public and private entities are necessary to accomplish the policy goal of providing
14 fish passage for native migratory fish and to achieve the enhancement and restoration of Oregon's native
15 migratory fish populations, as envisioned by the Oregon Plan (ORS 541.898).

16 **Statutory/Other Authority:** ORS 496.138 & ORS 509.585

17 **Statutes/Other Implemented:** ORS 496.012 & ORS 509.585

18 **History:**

19 [DFW 154-2022, adopt filed 12/19/2022, effective 01/01/2023](#)

20 **635-412-0005**

21 **Definitions**

22 (1) For the purposes of OAR 635-412-0010 through 635-412-0065 the following definitions shall apply.

23 (2) "Abandonment" means to surrender, decommission, no longer use for an authorized purpose, or give
24 up control.

25 (3) "Active channel width" means the naturally occurring cumulative stream width(s) between the ordinary
26 high water lines, or at the channel bankfull elevation if the ordinary high water lines are indeterminate.

27 (4) "Artificial obstruction" means any dam, diversion, dike, berm, levee, tide or flood gate, road, culvert or
28 other human-made device placed in the waters of this state that precludes or prevents the migration of
29 native migratory fish. Preventing the migration of native migratory fish includes causing a significant delay
30 in the time taken for passage of native migratory fish.

31 (5) "Attraction flow" means water that flows from or near a fishway entrance in sufficient quantity, velocity,
32 and location to attract fish as they migrate upstream into the fishway, which can consist of gravity flow
33 from the fish ladder and auxiliary water system flow added in or near the fishway entrance.

34 (6) "Bankfull elevation" means the point on a stream bank at which overflow into a floodplain begins.

35 (7) "Bed" or "bed and banks" means the physical container of the waters of this state, bounded on
36 freshwater bodies by the ordinary high water line or bankfull stage, and on bays and estuaries by the
37 limits of the highest measured tide.

38 (8) "Channel" means that portion of a natural (perennial or intermittent) waterway that periodically or
39 continuously contains moving waters of this state and has a definite bed and banks that serve to confine
40 the water.

41 (9) "Commission" means the Oregon Fish and Wildlife Commission.

42 (10) "Construction" with respect to artificial obstructions subject to these rules, means:

43 (a) Original construction;

44 (b) Major replacement, which includes:

45 (A) For existing dams and diversions, either a single or cumulative:

46 (i) Excavation or replacement of 30 percent by structure volume;

47 (ii) Repairs, patches, or modifications to over 30 percent of the area of the
48 upstream, downstream, or top face of the dam (measured above the natural
49 ground gradeline that is used to impound water); or

50 (iii) Repairs, patches, or modifications different than the original configuration and
51 that reduce, as determined by the Department, the adequacy of fish passage
52 including periodic or seasonal replacements, unless only checkboards are
53 replaced, or in the case of existing seasonal dams or diversions, the artificial
54 obstruction is in compliance with a water right(s), other regulatory requirements,
55 and the artificial obstruction maintains an open channel connection with
56 adequate water flow and depth conditions that meet OAR 635-412-0035 (2)
57 when instream water is available and between the fish passage design
58 streamflow range.

59 (B) For existing tide gates and flood gates, either a single or cumulative:

60 (i) Replacement of over 50 percent of the gate material, including hinges and the
61 gate itself if detached;

62 (ii) Removal, fill, replacement, or addition of over 50 percent of the structure
63 supporting the gate, excluding road-stream crossing structures; or

64 (iii) Replacements, repairs, patches, or modifications different than the original
65 configuration and that reduce the adequacy of fish passage, as determined by
66 the Department.

67 (C) For existing dikes, berms, levees, roads, culverts, bridges, or other artificial
68 obstructions that segment estuaries, floodplains, or wetlands, either a single or
69 cumulative:

70 (i) Activity or activities defined under OAR 635-412-0005(10)(d) in all locations
71 where current channels cross the artificial obstruction segmenting the estuary,
72 floodplain, or wetland; or

73 (ii) Removal, fill, replacement, or addition of over 50 percent by volume of the
74 existing material directly above an historic channel or historically-inundated area;
75 and

76 (D) For other existing artificial obstructions, the single or cumulative removal, fill,
77 replacement, or addition of over 50 percent of the device that impedes fish passage;

78 (c) Structural modifications that increase storage or diversion capacity; or

79 (d) Installation or replacement of a roadbed, culvert, or bridge that includes any activity that:

- 80 (A) Creates a road or bridge that crosses a channel;
- 81 (B) Widens a roadfill footprint within a channel;
- 82 (C) Fills or removes over 50 percent by volume of the existing roadbed material directly
- 83 above a culvert, except when this volume is exclusively composed of the top 1 foot of
- 84 roadbed material;
- 85 (D) Installs or constructs a new road, culvert, bridge, overflow pipe, apron, or wingwall
- 86 within a channel;
- 87 (E) Extends existing culverts, aprons, or wingwalls within a channel, except one-time
- 88 placements of culvert ends which do not extend greater than 1 foot beyond the adjacent
- 89 road footprint;
- 90 (F) Makes either single or cumulative repairs, patches, or modifications to over 50
- 91 percent of the linear length of a culvert;
- 92 (G) Makes either single or cumulative repairs, patches, or modifications to over 50
- 93 percent of the structural volume of a bridge or its elements except when this volume is
- 94 exclusively composed of the traveling surface of a bridge deck;
- 95 (H) Replaces any part of a culvert, except ends that become misaligned, detached, or
- 96 eroded and are replaced to their original configuration;
- 97 (I) At any point along the linear length of an existing culvert, reduces the entire inside
- 98 perimeter of the culvert; or
- 99 (J) Makes replacements, repairs, patches, or modifications to an existing culvert or bridge
- 100 that are different than the original configuration and reduce, as determined by the
- 101 Department, the adequacy of fish passage.

102 **NOTE:** see Department Memorandum for clarification of fish passage triggers and guidelines for bridges.

103 (11) "Dam" means a structure, or group of structures with different functions, spanning or partially-

104 spanning a stream in one location in order to pool water, facilitate the diversion of water, or raise the

105 water surface elevation.

106 (12) "Department" means the Oregon Department of Fish and Wildlife.

107 (13) "Director" means the Director of the Oregon Department of Fish and Wildlife.

108 (14) "Design streamflow range" means the range of flows within a stream, between the Low Fish Passage

109 Design Flow and the High Fish Passage Design Flow, for which a fishway or other structure shall provide

110 fish passage.

111 (15) "Emergency" means unforeseen circumstances materially related to or affected by an artificial

112 obstruction that, because of adverse impacts to a population of native migratory fish, requires immediate

113 action.

114 (16) "Estuary" means a body of water semi-enclosed by land and connected with the open ocean within

115 which salt water is usually diluted by fresh water derived from the land. "Estuary" includes all estuarine

116 waters, tidelands, tidal marshes and submerged lands extending upstream to the head of tidewater.

117 However, for the purposes of these rules, the Columbia River Estuary extends to the western edge of

118 Puget Island.

- 119 (17) "Exclusion barrier" means a structure placed that prevents fish passage for the benefit of native
120 migratory fish.
- 121 (18) "Exemption" means not providing fish passage at an artificial obstruction when either mitigation in
122 lieu of providing fish passage through a waiver as defined in ORS 509.585(9)(a)(A) is authorized, an
123 artificial obstruction has been granted a legal waiver as defined in ORS 509.585(9)(a)(B), or a finding that
124 there is no appreciable benefit to providing fish passage at the artificial obstruction as defined in ORS
125 509.585(9)(a)(C).
- 126 (19) "Experimental fish passage structure" means a fish passage structure based on new ideas, new
127 technology, or unique, site-specific conditions determined by the Department to not be covered by
128 existing fish passage criteria but to have a reasonable possibility of providing fish passage.
- 129 (20) "Fish passage" means the ability, by the weakest native migratory fish and life history stages
130 determined by the Department to require passage at the site, to move either volitionally or by trap
131 collection and transport if consistent with requirements of OAR 635-412-0035(6), with minimal stress,
132 minimal delay, and without physical or physiological injury upstream and downstream of an artificial
133 obstruction.
- 134 (21) "Fish passage structure" means any human-built structure that allows fish passage past an artificial
135 obstruction, including, but not limited to, fishways and road-stream crossing structures such as culverts
136 and bridges.
- 137 (22) "Fishway" means the set of human-built or operated facilities, structures, devices, and measures that
138 together constitute, are critical to the success of, and were created for the primary purpose of providing
139 upstream or downstream fish passage at artificial or natural obstructions which create a discontinuity
140 between upstream and downstream water or bed surface elevations.
- 141 (23) "Fishway entrance" means the component of a fishway that discharges attraction flow into the
142 waterway downstream of an artificial obstruction where upstream migrant fish enter the fishway.
- 143 (24) "Fishway pools" means discrete sections within a fishway separated by overflow weirs or non-
144 overflow walls that create incremental water surface elevation gains and dissipate energy.
- 145 (25) "Floodplain" means that portion of a river valley, adjacent to the channel, which is built of sediments
146 deposited during the present regimen of the stream and which is covered with water when the waterway
147 overflows its banks at flood stage.
- 148 (26) "Fundamental change in permit status" means a change in regulatory approval for the operation of
149 an artificial obstruction where the regulatory agency has discretion to impose additional conditions on the
150 applicant, including but not limited to licensing, relicensing, reauthorization or the granting of new water
151 rights, but not including water right transfers or, routine maintenance permits unless the action involves
152 construction or abandonment of an artificial obstruction.
- 153 (27) "High fish passage design flow" means the mean daily average stream discharge that is exceeded 5
154 percent of the time during the period when the Department determines native migratory fish require fish
155 passage.
- 156 (28) "Historically" means before 1859 (statehood).
- 157 (29) "Inflow" means surface movement of waters of this state from a lower ground surface elevation to a
158 higher ground surface elevation or away from the ocean.
- 159 (30) "In-proximity" means within the same watershed or water basin, as defined by the Oregon Water
160 Resources Department, and having the highest likelihood of benefiting the native migratory fish
161 populations, as determined by the Department, directly affected by an artificial obstruction.

- 162 (31) "Low fish passage design flow" means the mean daily average stream discharge that is exceeded 95
163 percent of the time, excluding days with no flow, during the period when the Department determines
164 native migratory fish require fish passage.
- 165 (32) "Mitigation" means alternatives to providing fish passage at an artificial obstruction that provide a net
166 benefit to native migratory fish.
- 167 (33) "Native migratory fish" means naturally or hatchery produced native fish (as defined under OAR 635-
168 007-0501) indigenous (i.e., not introduced) to Oregon that migrate for their life cycle needs. These fish
169 include all sub-species and life history patterns of the following species listed by scientific name in use as
170 of 2022. Common names are provided for reference but are not intended to be a complete listing of
171 common names, sub-species, or life history patterns for each species.
- 172 (a) *Acipenser medirostris* — Green sturgeon;
- 173 (b) *Acipenser transmontanus* — White sturgeon;
- 174 (c) *Amphistichus rhodoterus* — Redtail surfperch;
- 175 (d) *Catostomus columbianus* — Bridgelip sucker;
- 176 (e) *Catostomus macrocheilus* — Largescale sucker;
- 177 (f) *Catostomus microps* — Modoc sucker;
- 178 (g) *Catostomus occidentalis* — Goose Lake sucker;
- 179 (h) *Catostomus platyrhynchus* — Mountain sucker;
- 180 (i) *Catostomus rimiculus* — Klamath smallscale sucker;
- 181 (j) *Catostomus snyderi* — Klamath largescale sucker;
- 182 (k) *Catostomus tahoensis* — Tahoe sucker;
- 183 (l) *Catostomus tsiltcoosensis* — Tyee sucker;
- 184 (m) *Catostomus warnerensis* — Warner sucker;
- 185 (n) *Chasmistes brevirostris* — Shortnose sucker;
- 186 (o) *Deltistes luxatus* -- Lost River sucker;
- 187 (p) *Entosphenus folletti* -- Northern California brook lamprey;
- 188 (q) *Entosphenus lethophagus* -- Pit-Klamath brook lamprey;
- 189 (r) *Entosphenus minimus* -- Miller Lake lamprey;
- 190 (s) *Entosphenus similis* -- Klamath River lamprey;
- 191 (t) *Entosphenus tridentatus* -- Pacific lamprey;
- 192 (u) *Hypomesus pretiosus* — Surf smelt;

- 193 (v) *Lampetra ayresii* — Western river lamprey;
- 194 (w) *Lampetra pacifica* -- Pacific brook lamprey;
- 195 (x) *Lampetra richardsoni* -- Western brook lamprey;
- 196 (y) *Oncorhynchus clarkii* — Cutthroat trout;
- 197 (z) *Oncorhynchus gorbuscha* -- Pink salmon;
- 198 (aa) *Oncorhynchus keta* — Chum salmon;
- 199 (bb) *Oncorhynchus kisutch* — Coho salmon;
- 200 (cc) *Oncorhynchus mykiss* — Steelhead, Rainbow and Redband trout;
- 201 (dd) *Oncorhynchus nerka* — Sockeye/Kokanee salmon;
- 202 (ee) *Oncorhynchus tshawytscha* — Chinook salmon;
- 203 (ff) *Prosopium williamsoni* — Mountain whitefish;
- 204 (gg) *Ptychocheilus oregonensis* — Northern pikeminnow;
- 205 (hh) *Ptychocheilus sp.* -- Siuslaw pikeminnow;
- 206 (ii) *Ptychocheilus umpqua* — Umpqua pikeminnow;
- 207 (jj) *Salvelinus confluentus* — Bull trout;
- 208 (kk) *Spirinchus thaleichthys* — Longfin smelt;
- 209 (ll) *Thaleichthys pacificus* — Eulachon.

210 (34) "Net benefit" means an increase in the overall, in-proximity habitat quality or quantity that is
211 biologically likely to lead to an increased number of native migratory fish after a development action and
212 any subsequent mitigation measures have been completed.

213 (35) "No Appreciable Benefit to Providing Fish Passage" means, as determined by the Department using
214 its best professional judgement, fish habitat that would be made accessible, or more accessible, in the
215 reach upstream or downstream of the artificial obstruction, does not currently provide, and will not
216 foreseeably provide before a review occurs in seven years pursuant to ORS 509.585(9)(b), habitat of the
217 type, duration, frequency, quality, or quantity necessary to support one or more life history stages of the
218 native migratory fish that are present, or will foreseeably be present before a review occurs in seven
219 years pursuant to ORS 509.585(9)(b), upstream or downstream of the artificial obstruction.

220 (36) "Ordinary high water line" (OHWL) means the line on the bank or shore to which the high water
221 ordinarily rises annually in season.

222 **NOTE:** See OAR 141-085-0010 for physical characteristics that can be used to determine the OHWL in
223 the field.

224 (37) "Oregon Plan" means the guidance statement and framework described in ORS 541.898.

- 225 (38) "Over-crowding" means fish density within a pool's wetted volume is such that there is less than 0.25
226 cubic feet of water per pound of fish for the maximum number of fish expected to be present within the
227 pool at the same time, as determined by the Department.
- 228 (39) "Road" means a cleared or built surface, and associated materials or measures for support and
229 safety, used for the purpose of motorized or non-motorized movement between different locations.
- 230 (40) "Roadfill footprint" means the area occupied by soil, aggregate, or other materials or structures
231 necessary to support a road, including, but not limited to, wing walls, retaining walls, headwalls, bridge
232 supports, abutments, piers, or scour protection countermeasures.
- 233 (41) "Roughened channel" means a fishway designed to provide fish passage which encompasses the
234 entire stream channel and may be over-steepened relative to the long-channel streambed profile,
235 including but not limited to nature-like rock, rock ramp, or engineered-streambed fishways.
- 236 (42) "Stream" means a body of running waters of this state moving over the surface of the land in a
237 channel or bed including stream types classified as perennial or intermittent and channelized or relocated
238 streams.
- 239 (43) "Structure volume" means volumetric calculation of an existing dam or other artificial obstruction and
240 its elements or components.
- 241 (44) "Sub-basin" means a 4th-field hydrologic unit as defined by the U.S. Geological Survey.
- 242 (45) "Tailrace" means the water immediately downstream of an instream structure discharging flow to a
243 receiving water body.
- 244 (46) "Temporary" means in place less than the in-water work period defined by the Department for a
245 particular location.
- 246 (47) "Trap" means the set of human-built or operated facilities, structures, devices, or measures that hold
247 fish and prevent them from passing volitionally.
- 248 (48) "Trash rack" means a human built or placed measure used to prevent unwanted materials from
249 entering a fishway, culvert, bridge, water diversion or other structures.
- 250 (49) "Trigger" means any event or activity that qualifies as construction, abandonment, or a fundamental
251 change in permit status pursuant to Division 412 rules associated with or at any artificial obstruction that
252 requires an owner or operator of that artificial obstruction to provide fish passage or alternatives to fish
253 passage consistent with such rules. A trigger at one artificial obstruction physically connected to another
254 artificial obstruction requires passage be addressed at both connected structure(s).
- 255 (50) "Unforeseen circumstances" means:
- 256 (a) An event that causes an existing human-made structure in the waters of this state which
257 provides fish passage to become an artificial obstruction; or
- 258 (b) New fish population information indicating that an existing artificial obstruction is placing a
259 local native migratory fish population in jeopardy.
- 260 (51) "Volitionally" means with minimal delay and without being trapped, transferred, or handled by any
261 person.
- 262 (52) "Waiver" means a fish passage exemption specifically allowed under OAR 635-412-0025 (1)(a) or (b)
263 if the Commission or Department, as applicable, determines that alternatives to providing fish passage at

264 an artificial obstruction, as proposed by the owner or operator of the artificial obstruction, provides a net
265 benefit to native migratory fish.

266 (53) "Waters of this state" means natural waterways including all tidal and non-tidal bays, intermittent and
267 perennial streams, constantly flowing streams, lakes, wetlands and other bodies of water in this state,
268 navigable and non-navigable, including that portion of the Pacific Ocean that is within the boundaries of
269 Oregon.

270 (54) "Wetlands" means those areas that are inundated or saturated by surface or ground water at a
271 frequency and duration sufficient to support, and that under normal circumstances do support, a
272 prevalence of vegetation typically adapted for life in saturated soil conditions.

273 **Statutory/Other Authority:** ORS 496.138 & ORS 509.585

274 **Statutes/Other Implemented:** ORS 496.012 & ORS 509.585

275 **History:**

276 [DFW 154-2022, amend filed 12/19/2022, effective 01/01/2023](#)

277 DFW 2-2006, f. & cert. ef. 1-9-06

278 **635-412-0010**

279 **Fish Passage Task Force**

280 (1) The Fish Passage Task Force has nine members who are appointed by the Director.

281 (2) Three members represent interests subject to the obligation to install fish passage at facilities they
282 install, own or operate; three members represent fishing, environmental or conservation interests, and
283 three members represent the general public.

284 (3) Members serve four year terms and are eligible for reappointment.

285 (4) The Task Force shall:

286 (a) Serve as the public advisory committee and advise the Director, Department, and
287 Commission regarding rulemaking to implement the fish passage and exemption
288 requirements consistent with applicable law;

289 (b) Prioritize projects from the statewide inventory of artificial obstructions for purposes of
290 restoration and enforcement;

291 (c) Recommend to the Director, Department, and Commission appropriate levels of funding and
292 special conditions applicable to projects installing fish passage or alternatives to fish passage
293 resulting in a net benefit to native migratory fish;

294 (d) Select one of its members to serve as chair and one as vice chair;

295 (e) Review and recommend to the Department or Commission, as applicable, which projects
296 should be exempt;

297 (f) Report semiannually to the joint legislative committee created under ORS 171.551, or to the
298 appropriate interim legislative committee with responsibility for salmon restoration or species
299 recovery, advising the committee on matters related to fish passage;

300 (g) After public review and comment, review applications for exemptions of the fish passage
301 requirement, and advise the Commission or Department, as applicable, as to whether an artificial
302 obstruction should be deemed exempt pursuant to ORS 509.585(9);

303 (h) Perform such other duties relating to fish passage as requested by the Director or
304 Commission;
305 (i) The Task Force shall meet at such times and places as may be determined by the chair or by
306 a majority of members.

307 (5) The Department's Fish Passage Coordinator serves as staff for the Task Force.

308 (6) The chair of the Task Force conducts the meetings of the Task Force, serves as the main contact
309 point between the Department or Commission and the Task Force, and performs other duties as the Task
310 Force sets. The vice chair of the Task Force shall serve as chair if the chair is unavailable to carry out
311 their duties.

312 (7) Task Force members may not receive compensation for services as a member of the Task Force;
313 however, in accordance with ORS 292.495, a member of the Task Force may receive reimbursement for
314 actual and necessary travel or other expenses incurred in the performance of official duties.

315 **Statutory/Other Authority:** ORS 496.138 & ORS 509.585
316 **Statutes/Other Implemented:** ORS 496.012 & ORS 509.585
317 **History:**
318 [DFW 154-2022, amend filed 12/19/2022, effective 01/01/2023](#)
319 DFW 10-2002, f. & cert. ef. 2-4-02

320 **635-412-0015**
321 **Prioritization**

322 (1) The Department shall establish a list of priority artificial obstructions at which fish passage would
323 provide the greatest benefit to native migratory fish for restoration and enforcement purposes.

324 (2) The priority list may exclude artificial obstructions where a legal agreement with the Department or
325 Commission specifically indicates fish passage is not required.

326 (3) The Department will prioritize working collaboratively with the owners or operators of artificial
327 obstructions on the priority list to establish fish passage.

328 (4) The priority list shall be based on the current and future needs of native migratory fish.

329 (5) When determining placement of an artificial obstruction on the priority list, the Department may use
330 existing Department information or professional judgment.

331 (6) When determining placement of an artificial obstruction on the priority list, the Department shall
332 consider the following factors relative to each artificial obstruction for all native migratory fish currently or
333 historically in waters of this state where the artificial obstruction is located. These factors include but may
334 not be limited to:

335 (a) The current and future quantity of native migratory fish habitat which is inaccessible;

336 (b) The current and future quality of native migratory fish habitat which is inaccessible;

337 (c) The reasonably foreseeable future quantity and quality of native migratory fish habitat given
338 known trends in climate change (e.g., changes in timing and quantity of streamflow and stream
339 temperatures);

340 (d) Unique or limited native migratory fish habitat which is inaccessible, or should remain
341 inaccessible for fish management purposes;

- 342 (e) The biological status of the native migratory fish;
- 343 (f) The level of fish passage currently provided at the artificial obstruction;
- 344 (g) The presence of other artificial obstructions upstream or downstream and the timeframe
345 native migratory fish will be able to use restored passage; and
- 346 (h) Existing agreements with the Department regarding fish passage.
- 347 (7) The Department shall field verify the information used for prioritization prior to initiating any
348 enforcement action.
- 349 (8) The Department shall make changes to the priority list using the most recent information after
350 enforcement occurs at five priority artificial obstructions or as directed by the Commission.
- 351 (9) The Commission shall review and amend the priority list when the Department changes the ranking of
352 barriers on the list, and at least once every five years.
- 353 (10) The Department may order an owner or operator of an artificial obstruction on the priority list who has
354 been issued a water right, owns a lawfully installed culvert or owns another lawfully installed obstruction
355 to install fish passage or to provide mitigation within a defined timeframe under any of the following
356 circumstances:
- 357 (a) The owner or operator of an artificial obstruction refuses to work cooperatively with the
358 Department;
- 359 (b) The Department can arrange for non-owner or non-operator funding of at least 60 percent of
360 the cost for fish passage design, construction, and installation; or
- 361 (c) The artificial obstruction is ranked in the top ten within a Department Region on the priority list.
- 362 (11) Once the Department has arranged for non-owner or non-operator funding of at least 60 percent of
363 the cost for fish passage design, construction, and installation at an artificial obstruction the owner or
364 operator of an artificial obstruction has two years from the Department's order to:
- 365 (a) Install a fish passage structure according to a fish passage plan approved by the Department;
366 or
- 367 (b) Provide mitigation that the Commission determines is a net benefit to native migratory fish.
- 368 (12) The relative position of an artificial obstruction on the priority list should not be used as a basis for
369 approving or denying an application for an exemption.

370 **Statutory/Other Authority:** ORS 496.138 & ORS 509.585
371 **Statutes/Other Implemented:** ORS 496.012 & ORS 509.585
372 **History:**
373 [DFW 154-2022, amend filed 12/19/2022, effective 01/01/2023](#)
374 DFW 2-2006, f. & cert. ef. 1-9-06

375 **635-412-0020**
376 **Fish Passage Approval**

- 377 (1) No artificial obstruction may be constructed or maintained across any waters of this state that are
378 inhabited, or were historically inhabited, by native migratory fish without providing passage for native
379 migratory fish.

380 (2) Prior to a trigger, an owner or operator of an artificial obstruction shall obtain a determination from the
381 Department as to whether native migratory fish are or were historically present in the waters of this state
382 where the artificial obstruction is located, unless the owner or operator assumes the presence of native
383 migratory fish.

384 (3) If the Department determines, or the owner or operator assumes, that native migratory fish are or were
385 historically present in the waters of this state where the artificial obstruction is located, prior to a trigger
386 the owner or operator of the artificial obstruction shall either:

387 (a) Obtain Department approval of a fish passage plan that meets the requirements of OAR 635-
388 412-0035 for the specific artificial obstruction;

389 (b) Obtain Department programmatic approval of a fish passage plan for multiple artificial
390 obstructions of the same type. The Department may also grant programmatic approval to an
391 agent for multiple owners or operators of artificial obstructions of the same type. Programmatic
392 approvals are only valid so long as the owner or operator complies with the conditions of the
393 programmatic approval. The Department shall only provide programmatic approval if:

394 (A) Fish passage structures placed subject to the programmatic approval meet and
395 adhere to criteria determined by the Department;

396 (B) The owner, operator, or agent demonstrates, as determined by the Department, prior
397 experience providing or approving acceptable fish passage structures;

398 (C) The owner, operator, or agent reports installation information annually to the
399 Department, including but not limited to the location and installation date of all fish
400 passage structures placed under the programmatic approval;

401 (D) The owner or operator allows, or the agent requires owners or operators to allow, the
402 Department to inspect fish passage structures subject to the programmatic approval at
403 reasonable times; and

404 (E) The owner, operator, or agent agrees to expeditiously remedy all fish passage
405 structures subject to the programmatic approval which the Department finds do not meet
406 the applicable criteria or conditions of that programmatic approval.

407 (c) Pursuant to ORS 527.710(6), install and maintain road-stream crossing structures on non-
408 federal forestlands in compliance with State Board of Forestry, through the Oregon Department of
409 Forestry, rules and guidelines that the Department concurs meet the purposes of the
410 Department's fish passage program; or

411 (d) Obtain an exemption from fish passage requirements for the artificial obstruction as provided
412 in OAR 635-412-0025.

413 (4) Fish passage plans shall provide for and be implemented such that fish passage is installed at the
414 artificial obstruction prior to completion of or by the end of the same in-water work period as the action
415 which triggered fish passage requirements under subsection (2) of this rule unless:

416 (a) An owner or operator demonstrates to the Department an imminent or immediate threat to
417 human safety exists which requires construction at a failed artificial obstruction prior to being able
418 to complete the requirements of subsection (3), and the Department approves a fish passage
419 plan in which the requirements of subsection (3) shall be met by the end of the next in-water work
420 period or as soon as practicable as determined by the Department (providing passage at the time
421 of construction is preferred);

422 (b) The Department or Commission finds additional time is necessary and appropriate given the
423 size and scope of the project;

424 (c) Installation begins within the same in-water work period as the action that triggered fish
425 passage and the Department finds that additional time to complete installation is necessary and
426 appropriate given the size and scope of the project; or

427 (d) The Department finds that additional time is necessary and appropriate given the terms and
428 conditions of a negotiated settlement for a federal proceeding or to ensure coordination with other
429 federal requirements.

430 **Statutory/Other Authority:** ORS 496.138 & ORS 509.585

431 **Statutes/Other Implemented:** ORS 496.012 & ORS 509.585

432 **History:**

433 [DFW 154-2022, amend filed 12/19/2022, effective 01/01/2023](#)

434 DFW 2-2006, f. & cert. ef. 1-9-06

435 DFW 23-2003, f. & cert. ef. 3-26-03

436 **635-412-0025**

437 **Fish Passage Waivers and Exemptions**

438 (1) The Commission (or Department as applicable) may grant exemptions from fish passage
439 requirements at an artificial obstruction if it is determined that:

440 (a) A lack of fish passage has been effectively mitigated;

441 (b) The owner or operator has received a legal waiver for the artificial obstruction from the
442 Commission or the Department; or

443 (c) There is no appreciable benefit to providing fish passage.

444 (2) Waivers from fish passage requirements shall be granted for an artificial obstruction if the Commission
445 (or Department, as applicable) determines that mitigation rather than fish passage proposed by the
446 person owning or operating the artificial obstruction provides a net benefit to native migratory fish.

447 (3) Net benefit to native migratory fish is determined by comparing the benefit to native migratory fish that
448 would occur if the artificial obstruction had fish passage to the benefit to native migratory fish that would
449 occur as a direct result of the proposed mitigation actions. To qualify for a waiver of the requirement to
450 install fish passage, proposed mitigation must result in a benefit to native migratory fish greater than the
451 benefit to such species that would be provided by fish passage at the artificial obstruction. The net benefit
452 determination shall be based upon conditions that exist at the time of comparison and should consider
453 future conditions (e.g., climate change).

454 (4) Waivers shall be valid so long as the owner or operator continues to provide the agreed-upon
455 mitigation until the next fish passage trigger at the artificial obstruction or until the Commission or
456 Department determines that circumstances have changed such that the waiver requirements no longer
457 apply, pursuant to ORS 509.585(9)(b).

458 (5) Exemptions granted under subsection (1)(c) of this rule shall be valid only so long as conditions that
459 justified that exemption do not change, except if:

460 (a) That exemption has expired;

461 (b) A trigger occurs with respect to the artificial obstruction subject to that exemption; or

462 (c) The Commission or Department determines that exemption should not be renewed.

463 (6) At least once every seven years, the Department shall review, exemptions under subsection (1)(c) of
464 this rule to determine whether such exemptions should be renewed. An exemption granted as a result of
465 an action which triggered fish passage requirements under OAR 635-412-0020(2) tolls the trigger event

466 until the exemption is revoked. Prior to a seven-year review, exemptions under subsection (1)(c) of this
467 rule may be reviewed by the Commission or Department.

468 (7) To obtain an exemption from fish passage requirements, an owner or operator of an artificial
469 obstruction shall obtain from and submit to the Department an application for either a waiver under
470 subsection (1)(a) or an exemption under section 1(c) of this rule.

471 (8) Based on application review, verification of the information in the application and of site-specific
472 knowledge, Department staff shall provide a written benefit analysis of whether the proposal in the
473 application meets the applicable requirements. If there is some level of passage at the artificial
474 obstruction, but it does not meet the requirements of OAR 635-412-0035, the effective level of passage
475 shall be factored into the Department's benefit analysis as a reduction in required mitigation measures.

476 (9) To receive a waiver, an owner or operator of an artificial obstruction shall enter an agreement with the
477 Commission (or Department as applicable) that clearly describes timelines, duties, responsibilities, and
478 options regarding the required mitigation. The agreement shall state that the mitigation shall be
479 completed prior to completion of or by the end of the same in-water work period as the action which
480 triggered fish passage requirements under OAR 635-412-0020, unless the Commission or Department
481 finds that additional time is necessary and appropriate given the size and scope of the project; or to
482 coordinate with requirements of federal proceedings.

483 (10) The Commission or Department may require additional mitigation associated with a waiver if the
484 mitigation cannot be or is not completed within the required time frame set forth in the agreement
485 prescribed by subsection (9) of this rule.

486 (11) Once the application, Department's written benefit analysis, and a draft agreement are completed,
487 the exemption determination shall be made by:

488 (a) The Department:

489 (A) If it determines that the total stream distance, including tributaries, affected by the
490 artificial obstruction for which the exemption under section 1(a) and 1(b) is being sought
491 is less than or equal to 1 mile of current native migratory fish distribution;

492 (B) For all exemptions proposed to have no appreciable benefit under section 1(c) of this
493 rule; and

494 (C) For re-authorization of an existing hydroelectric project subject to ORS 543A.030 to
495 543A.055 and not subject to federal hydroelectric relicensing; or

496 (b) The Commission:

497 (A) In all other instances; or

498 (B) If the Department refers a decision to the Commission.

499 (12) The decision to grant an exemption shall include the determination described in subsection (8) of this
500 rule as well as approval of the agreement documenting applicable exemption conditions.

501 (13) The Department may amend or approve changes to the agreement if the changes do not affect the
502 benefit analysis and after a public review and recommendation by the Fish Passage Task Force.

503 (14) In addition to the Fish Passage Task Force, the Department shall notify the public and provide an
504 opportunity to review and comment on the owner or operator's request at least three weeks prior to an
505 exemption determination.

506 (15) The Commission or Department, as applicable may provide further public comment prior to a
507 decision on whether an exemption should be granted.

508 (16) The Department shall maintain a database of the locations of exempted artificial obstructions and
509 mitigation.

510 **Statutory/Other Authority:** ORS 496.138 & ORS 509.585
511 **Statutes/Other Implemented:** ORS 496.012 & ORS 509.585
512 **History:**
513 [DFW 154-2022, amend filed 12/19/2022, effective 01/01/2023](#)
514 DFW 2-2006, f. & cert. ef. 1-9-06
515 DFW 23-2003, f. & cert. ef. 3-26-03

516 **635-412-0030**
517 **Fish Passage Protests**

518 (1) A person owning or operating an artificial obstruction may request alternative dispute resolution at any
519 point in the process of determining fish passage requirements.

520 (2) The owner or operator of the artificial obstruction who objects to a determination made by the
521 Department under these rules may file a protest with the Commission. Protests must be submitted in
522 writing within 30 days from the date the Department posts the determination on its website and must
523 include the grounds for protesting that determination.

524 (3) The Commission may approve, deny, or modify the Department's proposed or final determination after
525 sufficient opportunity for public review and comment.

526 (4) If a protest is not filed within 30 days from the date the Department posts the determination from the
527 Department, the Commission's or Department's determination becomes a final order.

528 **Statutory/Other Authority:** ORS 496.138 & ORS 509.585
529 **Statutes/Other Implemented:** ORS 496.012 & ORS 509.585
530 **History:**
531 [DFW 154-2022, amend filed 12/19/2022, effective 01/01/2023](#)
532 DFW 112-2004, f. & cert. ef. 11-17-04
533 DFW 23-2003, f. & cert. ef. 3-26-03

534 **635-412-0035**
535 **Fish Passage Criteria**

536 (1) General requirements for fish passage are:

537 (a) Unless the owner or operator of an artificial obstruction chooses to provide year-round fish
538 passage for all native migratory fish and life history stages, the Department shall determine:

539 (A) The native migratory fish that are currently or were historically present at the site that
540 must be provided fish passage;

541 (B) The life history stages the required fish passage must accommodate; and

542 (C) The periods of the year and any conditions relevant to when fish passage shall be
543 provided for such life history stages and native migratory fish.

544 (b) The person submitting the fish passage plan to the Department for approval shall submit all
545 information necessary for the Department to efficiently evaluate whether the design will meet fish
546 passage criteria including a description of how climate change impacts have been incorporated
547 into the final design;

- 548 (c) If site-specific circumstances indicate that the fish passage criteria are not adequate to provide
549 fish passage at the artificial obstruction, the Department may require in writing that additional fish
550 passage criteria be met;
- 551 (d) If the Department determines that the existing or historically present native migratory
552 species or site-specific circumstances warrant an exception to any specific fish passage criterion
553 then the Department may approve such an exception in writing as long as it finds that fish
554 passage will likely still be provided at the artificial obstruction;
- 555 (e) All fish passage structures shall be designed considering their upstream and downstream
556 connection and prevent undesirable impacts to fish passage, including but not limited to scour
557 and headcuts;
- 558 (f) If federal approval of a fish passage plan is required, the Department shall take into account
559 federal requirements during its review and determination;
- 560 (g) The Department may require monitoring and reporting to determine if a fish passage structure
561 meets applicable criteria and is providing fish passage as intended and designed; and
- 562 (h) The owner or operator of an artificial obstruction shall maintain the fish passage structure in
563 such repair and operation as to provide fish passage of native migratory fish at all times required
564 by the Department.
- 565 (2) Requirements for fish passage at dams and other artificial obstructions which create a discontinuity
566 between upstream and downstream water surface or streambed elevations are:
- 567 (a) Fishways shall provide fish passage at all flows within the design streamflow range and
568 should be analyzed using estimates for the projected life expectancy of the structure;
- 569 (b) The fishway entrance shall be located and adequate attraction flow shall be provided at one or
570 more points where fish can easily locate and enter the fishway;
- 571 (c) Fishway water velocities shall:
- 572 (A) Range between 1 and 2 feet per second in transport channels;
- 573 (B) Average no greater than 5 feet per second in baffled-chute fishways, including but not
574 limited to Alaska steppasses and denils; and
- 575 (C) Not exceed 8 feet per second in discrete fishway transitions between the fishway
576 entrance, pools, and exit through which fish must swim to move upstream, including but
577 not limited to slots, orifices, or weir crests.
- 578 (d) At any point entering, within, or exiting the fishway where fish are required to jump to move
579 upstream, the maximum difference between the upstream and downstream water surface
580 elevations shall be 6 inches, except it shall be 12 inches if only adult salmon or steelhead require
581 fish passage;
- 582 (e) In fishway locations through which fish must swim, water depths shall be a minimum of 6
583 inches where only juveniles require passage and 12 inches where adults require passage,
584 except:
- 585 (A) Baffled-chute fishways, including but not limited to Alaska steppasses and denils,
586 shall have a minimum flow depth of 2 feet throughout the length of the fishway; and

- 587 (B) Water depths shall be a minimum of 2 feet within jump pools which shall be located
588 downstream of any point entering, within, or exiting the fishway where fish are required to
589 jump to move upstream.
- 590 (f) All fishway locations through which fish must swim shall be at least 12 inches wide, except
591 vertical slot weir width may be 6 inches where the Department has determined the artificial
592 obstruction is required to provide fish passage only for juvenile native migratory fish;
- 593 (g) Fishway pools shall:
- 594 (A) Be sized according to the applicable native migratory fish and life history stages and
595 to avoid over-crowding;
- 596 (B) Have $V \geq wQH/4$ at all flows within the design streamflow range, where:
- 597 (i) "V" is the water volume in cubic feet;
- 598 (ii) "w" is 62.4, the unit weight of water, in pounds per cubic foot;
- 599 (iii) "Q" is the fish ladder flow in cubic feet per second;
- 600 (iv) "H" is the energy head of pool-to-pool flow in feet; and
- 601 (v) 4 has a unit of foot-pounds per second per cubic foot.
- 602 (C) Where the fishway changes direction 90 degrees or more, have turning pools with a
603 flowpath centerline double the length of non-turning pools; and
- 604 (D) Be placed at least every 25 feet of horizontal distance in baffled-chute fishways,
605 including but not limited to Alaska steeppasses and denils;
- 606 (h) The fishway exit should be located to minimize the risk of fish unintentionally falling
607 downstream of the artificial obstruction, or into a water diversion;
- 608 (i) Fishway trash racks shall:
- 609 (A) Allow for easy maintenance and debris removal;
- 610 (B) Be maintained and cleaned as necessary to provide fish passage;
- 611 (C) Have a minimum clear space between vertical members of 10 inches, except at least
612 4 inches shall be provided if only juveniles are present; and
- 613 (D) Have a minimum clear space between horizontal members of 24 inches;
- 614 (j) The fishway shall:
- 615 (A) Have water temperatures which are within 1 degree Fahrenheit of the water entering
616 the fishway;
- 617 (B) Be designed to assure that fish do not leap out of the fishway;
- 618 (C) Have all surfaces, edges and fasteners which fish may contact ground smooth or
619 chamfered;

- 620 (D) Not have protrusions that extend into the flow path of the fishway;
- 621 (E) Not expose fish to any moving parts;
- 622 (F) Be designed to avoid turbulence and hydraulic transition flow conditions as much as
623 possible;
- 624 (G) Have as much ambient lighting as possible and avoid lighting transitions;
- 625 (H) Have fishway components which are not detailed in OAR 635-412-0035(2), including
626 but not limited to auxiliary water systems, designed considering the most recent National
627 Marine Fisheries Service or U.S. Fish and Wildlife Service fish passage criteria and
628 guidelines;
- 629 (I) Meet the species-specific requirements in OAR 635-412-0035(7) if any of those native
630 migratory fish require fish passage;
- 631 (k) Requirements for specific types of fishways include:
 - 632 (A) Baffled-chute fishways, including but not limited to Alaska steppasses and denils,
633 shall not be used in areas where downstream passage will occur through the baffled-
634 chute fishway; and
 - 635 (B) All fishways of a specific type with accepted configurations shall comply with those
636 configurations.
- 637 (l) Requirements for fishways which encompass the entire channel include:
 - 638 (A) Roughened channels or nature-like fishway designs shall:
 - 639 (i) Meet the requirements of OAR 635-412-0035(3)(a)(A) (ii), (iv), (v)(II through
640 VII), or OAR 635-412-0035(3)(b);
 - 641 (ii) Not have a slope that exceeds 6 percent, unless the average natural stream
642 slope exceeds 6 percent; and
 - 643 (iii) Contain partially buried over-sized boulder or boulder clusters to provide
644 structural integrity and localized areas of lower water velocity.
 - 645 (B) Stream channel-spanning weirs shall:
 - 646 (i) Rise toward each bank from a low flow section centered along the thalweg of
647 the channel;
 - 648 (ii) Have a downstream jump pool with a minimum depth of 2 feet;
 - 649 (iii) Have a maximum difference in elevation of 6 inches between the lowest point
650 on the weir and the downstream pool's water surface control point;
 - 651 (iv) Be sealed if fish passage during low flows is required;
 - 652 (v) Be spaced at least 1.5 active channel widths apart if there are multiple weirs
653 and recommend consideration of wider spacing when appropriate; and
 - 654 (vi) Extend into the streambank a sufficient distance to protect against flanking;

655 (C) All fishway entrances or flow outlets shall be designed to provide passage or be
656 designed to only be used during a period(s) defined by the Department.

657 (D) Fish passage plans for hybrid fishways that may combine features of several
658 established fishway types shall have criteria established by the Department on a case-by-
659 case basis and shall clearly demonstrate how water depths, water velocities, water
660 surface jump height differentials or energy dissipation provides hydraulic conditions that
661 achieves fish passage;

662 (m) For downstream fish passage:

663 (A) Fish passage structures shall have an open water surface, except a submerged or
664 enclosed conduit or orifice may be used if:

665 (i) Acceptable guidance or collection mechanisms are used and kept free from
666 debris;

667 (ii) Water depth is greater than 4 inches during all flows;

668 (iii) Water velocity is greater than 2 feet per second during all flows;

669 (iv) Water is not pumped;

670 (v) Conduits have smooth surfaces and avoid rapid changes in direction to
671 preclude fish impact and injury; and

672 (vi) Conduits are at least 10 inches wide.

673 (B) Plunging flow moving past an artificial obstruction via spillways, outlet pipes, or some
674 other means which may contain fish shall:

675 (i) At all flows, fall into a receiving pool of sufficient depth, depending on impact
676 velocity and quantity of flow, to ensure that fish shall not impact the stream
677 bottom or other solid features; and

678 (ii) Have a maximum impact velocity into a receiving pool, including vertical and
679 horizontal velocity components, less than 25 feet per second; and

680 (C) Water depth over spillways or other artificial obstructions shall be greater than 4
681 inches during all flows.

682 (D) Fish screening and bypass devices installed to protect downstream migrating fish
683 should be constructed to Department specifications and must meet Department criteria
684 when installation is required.

685 (3) Requirements for fish passage at road-stream crossing structures such as bridges and culverts are:

686 (a) Stream Simulation Option (preferred design alternative) where:

687 (A) Open-bottomed and closed-bottom road-stream crossing structures shall have beds
688 under or within the structure that:

689 (i) Are equal to or greater than the active channel width multiplied by 1.2 plus 2
690 feet, as measured at sufficient locations outside the influence of any artificial or
691 unique channel constrictions or tributaries both upstream and downstream of the
692 site;

- 693 (ii) Are equal to the slope of, and at elevations continuous with, the surrounding
- 694 long-channel streambed profile, unless the Department approves maintaining a
- 695 pre-existing road-impounded wetland;

- 696 (iii) Have, for open-bottomed road-stream crossing structures, a minimum of 3
- 697 feet vertical clearance from the active channel width elevation to the inside top of
- 698 the structure;

- 699 (iv) Maintain average water depth and velocities that simulate those in the
- 700 surrounding stream channel; and

- 701 (v) Are composed of material that:
 - 702 (I) Assures the bed under or within the road-stream crossing structure is
 - 703 maintained through time;

 - 704 (II) Is either natural (similar size and composition as the surrounding
 - 705 stream) or supplemented to address site-specific needs including, but
 - 706 not limited to, bed retention and hydraulic shadow;

 - 707 (III) Contains partially-buried, over-sized rock;

 - 708 (IV) Is mechanically placed during structure installation rather than
 - 709 allowed to naturally accumulate, unless the surrounding streambed is
 - 710 primarily bedrock;

 - 711 (V) Excluding partially-buried over-sized rock, is, for closed-bottom road-
 - 712 stream crossing structures, at a minimum depth of 20 percent of the
 - 713 structure height;

 - 714 (VI) Considers bed scour and stability of the bed material due to the
 - 715 confined flow through the crossing structure. Major structural
 - 716 components within the crossing should be designed for structural stability
 - 717 at the 100 year flood flow; and

 - 718 (VII) Contains a low flow thalweg.

719 (B) Trash racks shall:

- 720 (i) Allow for easy maintenance and debris removal;
- 721 (ii) Be maintained, monitored, and cleaned as necessary to provide fish passage;
- 722 (iii) Not extend below the active channel width elevation;
- 723 (iv) Have a minimum of 10 inches clear spacing between vertical members; and
- 724 (v) Have a minimum clear space between horizontal members of 12 inches.

725 (C) Beaver exclusion culvert protection devices shall:

- 726 (i) Allow for easy maintenance and debris removal;
- 727 (ii) Be maintained, monitored, and cleaned as necessary to provide fish passage;

728 (iii) Have a minimum clear space between vertical and horizontal members of 6 inches
729 when only resident trout, *Entosphenus* and *Lampetra* species (lamprey) species are
730 present;

731 (iv) Be approved on a case by case basis in areas with salmon, steelhead, bull trout, or
732 other large bodied species.

733 (D) Unvented and vented ford crossings shall meet the requirements of OAR 635-412-0035(2)
734 and 635-412-0035(3)(b); and

735 (i) Be located outside of all known or suspected fish spawning areas such as pool tail-
736 outs;

737 (ii) Be constructed perpendicular to the stream flow;

738 (iii) Minimize the width (perpendicular to streamflow);

739 (iv) Maintain similar water depths and flow velocities as surrounding stream during the
740 design stream flows; and

741 (v) Have a low flow channel constructed within the crossing.

742 (E) Unvented ford crossings shall meet design criteria in OAR 635-412-0035(3)(a) and be
743 constructed using materials approved by the Department that shall:

744 (i) Not be comprised of broken concrete, pavement or other debris;

745 (ii) Be comprised of clean washed gravel and rock;

746 (iii) Be countersunk and vertically align with the existing stream channel profile and
747 gradient;

748 (iv) Be designed to allow natural bedload transportation;

749 (v) Be designed to withstand overtopping flood events;

750 (vi) Be used during periods of no or low stream flow; and

751 (vii) Be regularly inspected and maintained to provide fish passage.

752 (F) The Department may authorize construction of new fords in limited situations when it is the
753 least impacting water crossing option. The following are examples of situations where the
754 Department may authorize an unvented ford:

755 (i) The stream has extreme seasonal flow variations and low flows during anticipated ford
756 use;

757 (ii) The channel has low bank height and low gradient approaches;

758 (iii) The stream has dynamic flood plains, such as alluvial fans; or

759 (iv) The stream is subject to mass wasting events, debris transport, or extreme peak
760 flows.

761 (b) Alternative Option: the Department may approve road-stream crossing structures for which
762 clear justification, based on fish performance, fish behavior data, and proposed post
763 treatment hydraulic conditions (e.g., water depths, water velocities, and gate time open) is
764 provided that demonstrates that the alternative design provides fish passage.

765 (4) Requirements for fish passage at artificial obstructions in estuaries, and above which a stream is
766 present, are:

767 (a) Fish passage shall be provided at all current and historic channels;

768 (b) Fish passage structures shall meet the criteria of OAR 635-412-0035(2) or (3), except fish
769 passage structures shall be sized according to the cumulative flows or active channel widths,
770 respectively, of all streams entering the estuary above the artificial obstruction; and

771 (c) Tide gates and associated fish passage structures shall:

772 (A) Be a minimum of 4 feet wide unless the natural channel conditions are less than 4
773 feet wide;

774 (B) Consist of an aluminum tide gate door or other equivalent light weight material;

775 (C) Be a side hinged door configuration;

776 (D) Meet the requirements of OAR 635-412-0035(2) or 635-412-0035(3)(b) within the
777 design streamflow range and for an average of at least 51 percent of tidal cycles,
778 excluding periods when the channel is not passable under natural conditions;

779 (i) Design streamflow range shall include tidal exchange, freshwater stream
780 discharge and water storage volumes draining to the tide gate:

781 (ii) Design streamflow range should consider sub-surface flows if appropriate at
782 the project location;

783 (E) Design invert elevation of tide gate and associated structure to be placed at 1 foot
784 below Mean Lower Low Water elevation or as otherwise appropriate for the site to
785 prevent perched low flow fish passage conditions and allow proper tide gate function;

786 (F) Consider the use of pet doors, mitigators, self-managed and self-regulating tide gate
787 devices to maximize fish passage, time of tide gate door openness, water exchange, and
788 tidal inundation if the tide gate is associated with high priority restoration habitat; and

789 (G) Submit a water management plan for projects implementing self-managed or self-
790 regulating devices.

791 **NOTE:** Alternative self-regulating design features that meet the design criteria of this section will be
792 considered for fish passage.

793 (5) Requirements for fish passage at artificial obstructions in estuaries, floodplains, and wetlands, and
794 above which no stream is present, are:

795 (a) Downstream Fish Passage shall be provided:

796 (A) After any inflow which contains native migratory fish;

797 (B) Until water has drained from the estuary, floodplain, or wetland, or through the period
798 determined by the Department that shall be based on one, or more of, the following:

- 799 (i) A specific date;
- 800 (ii) Water temperature, as measured at a location or locations determined by the
- 801 Department;
- 802 (iii) Ground surface elevation;
- 803 (iv) Water surface elevation; or
- 804 (v) Some other reasonable measure; and
- 805 (C) Egress delays may be approved by the Department based on expected inflow
- 806 frequency and suitable habitat exists and as long as passage is provided by the time the
- 807 conditions in OAR 635-412-0035(5)(a)(B) occur;
- 808 (D) A minimum egress flow of 0.25 cubic feet per second (cfs) at one point of egress shall
- 809 be provided;
- 810 (E) Egress flow of 0.5 cfs per 10 surface acres, for at least the first 100 surface acres of
- 811 impounded water, shall be provided;
- 812 (F) All plunging egress flows shall meet the requirements of OAR 635-412-0035(2)(l)(B);
- 813 (G) If egress flow is provided by a pump, it shall be appropriately screened;
- 814 (H) The water depth and width through or across the point of egress shall be at least 4
- 815 inches;
- 816 (I) The ground surface above the artificial obstruction shall be sloped toward the point(s)
- 817 of egress to eliminate isolated pools and topographic conditions that may entrain native
- 818 migratory fish; and
- 819 (J) An uninterrupted, open connection with a minimum water depth of 4 inches shall be
- 820 present from the point of egress to the downstream waters of this state, unless another
- 821 connection is provided as per OAR 635-412-0035(2)(l)(A).
- 822 (b) Upstream Fish Passage shall be provided:
 - 823 (A) If the Department determines there is current or historic native migratory fish
 - 824 spawning or rearing habitat within the estuary, floodplain, or wetland area impounded by
 - 825 the artificial obstruction; and
 - 826 (B) During the period determined by the Department.
- 827 (6) Requirements for fish passage by trap collection and transport include:
 - 828 (a) A permit issued by the Department is required to take fish when operating traps;
 - 829 (b) Traps shall be constructed and operated to prevent physical or physiological injury to native
 - 830 migratory fish;
 - 831 (c) Traps shall meet all requirements of OAR 635-412-0035(2)(g);

832 (d) Traps located within a fishway (i.e., "in-ladder" traps) shall not inhibit native migratory fish from
833 entering the fishway or trap and shall be removed if the Department determines that fish are not
834 entering the trap;

835 (e) Traps should be constructed and operated so native migratory fish proceed through traps with
836 minimal delay and are removed from traps as frequently as necessary to avoid over-crowding;

837 (f) All native migratory fish, excluding those which have approved take authorization from the
838 Department and that do not require fish passage as per OAR 635-412-0035(1)(a), shall be
839 returned to the stream by one of the following methods:

840 (A) Movement from the trap to immediately-adjacent water which has fish passage; or

841 (B) Transport within a watered container, including but not limited to lifts, hoppers, locks,
842 and trucks, from the trap to a location approved by the Department; and

843 (g) Traps shall be utilized where the feasibility of other fish passage structures or other site-
844 specific considerations warrant use of trap collection and transport, or otherwise, the Department
845 determines, using its professional judgment, trap collection and transport will result in an effective
846 means of ensuring access to habitat above or below the artificial obstruction by native migratory
847 species.

848 (7) Additional requirements for specific native migratory fish are:

849 (a) *Acipenser* species (sturgeon):

850 (A) The fish passage structure shall not require fish to jump when entering, within, or
851 exiting the structure;

852 (B) The fish passage structure, including trash racks, shall be sized to accommodate the
853 largest individual expected to require fish passage;

854 (C) Non-volitional transport within a watered container may only be allowed with
855 Department approval; and

856 (D) Turning pools within the fish passage structure must be designed to allow for fish
857 passage of a native migratory species at least 2 body lengths of the largest individual
858 native migratory species currently or historically in the waters affected by the artificial
859 obstruction.

860 (b) *Catostomus*, *Chasmistes*, and *Deltistes* species (suckers):

861 (A) The fish passage structure shall not require fish to jump when entering, within, or
862 exiting the structure;

863 (B) Fishways shall:

864 (i) Have a maximum water velocity of 4 feet per second;

865 (ii) Have a minimum water depth of 12 inches;

866 (iii) Maximize downstream flow between pools to avoid back eddies;

867 (iv) Have curved walls within turning pools; and

868 (v) Have a slope less than 4 percent.

- 869 (c) *Entosphenus* and *Lampetra* species (lamprey):
- 870 (A) Fishways and associated structures (e.g., dams and spillways) shall have 4 to 6 inch
871 smooth rounded radii edge surfaces (floors, aprons, walls, and weir crests) over
872 which *Entosphenus* and *Lampetra* species may pass;
- 873 (B) Fishways shall not have water surface to water surface jumps or overhanging
874 surfaces unless fishway surfaces have a 4 to 6 inch smooth rounded radii (floors, walls
875 and weir crests) over which *Entosphenus* and *Lampetra* species may pass;
- 876 (C) Fishways shall, in locations with water velocities greater than 2 feet per second, have
877 a passage route that:
- 878 (i) Has a smooth, continuous, impermeable, uninterrupted surface or a simulated
879 streambed;
- 880 (ii) Has water velocities over the structure's surface less than 8 feet per second;
881 and
- 882 (iii) Is wetted;
- 883 (D) Denil fishways shall not be used unless an alternative passage route is provided;
- 884 (E) Traps, picketed leads, picket weirs, auxiliary water supply grating or any other fishway
885 grating shall have a spacing of less than 0.7 inches to preclude lamprey passage, or
886 greater than 1.0 inch to allow lamprey to pass through;
- 887 (F) Fishway wall diffusers for auxiliary water supply shall be located at least 6 inches
888 above finish floor of fishway pool;
- 889 (G) Auxiliary water floor diffusers shall be avoided if possible, but if necessary shall be
890 located to provide at least 12 inches width of continuous smooth floor passage route
891 along fishway floor;
- 892 (H) Fishway designs shall consider orifice flow if *Entosphenus* or *Lampetra* species are
893 present.
- 894 (I) Orifices shall be positioned flush with the fishway floor and flush along one fishway
895 wall; and
- 896 (J) Lamprey Passage Structures (Lamprey Ramps) shall be considered when retrofitting
897 existing artificial obstructions to improve conditions for upstream migration
898 of *Entosphenus* and *Lampetra* species.
- 899 (d) *Oncorhynchus* species (trout and salmon): fish passage structures for *Oncorhynchus*
900 *keta* (chum) shall not require fish to jump when entering, within, or exiting the structure.
- 901 (e) *Ptychocheilus* species (pikeminnow): fish passage structures shall meet the requirements of
902 OAR 635-412-0035(7)(a).
- 903 (f) If more than one native migratory fish species requires passage at a site and the requirements
904 for the different species are mutually exclusive, the Department shall determine the required
905 passage criteria.
- 906 (8) Requirements for artificial obstruction removal are:

- 907 (a) Artificial obstruction removals shall follow the requirements of OAR 635-412-0035(10);
- 908 (b) If not completely removed, no parts of the remaining artificial obstruction shall:
- 909 (A) Constrict the stream channel; or
- 910 (B) Cause low flow depths less than the surrounding stream channel.
- 911 (c) After an artificial obstruction is removed the stream channel shall be restored; and
- 912 (d) The stream channel restoration shall address impacts to stream habitat caused by the artificial
- 913 obstruction while in place and by its removal, including but not limited to upstream and
- 914 downstream channel degradation, and provisions shall be made to address unexpected fish
- 915 passage issues resulting from removal.
- 916 (9) Requirements for exclusion barriers are:
- 917 (a) When fish passage is not required or is provided by other means, exclusion barriers shall only
- 918 be placed in the following situations:
- 919 (A) To guide fish to an approved fish passage structure or trap;
- 920 (B) To prevent fish from leaving waters of this state and entering human-made water
- 921 supply conduits;
- 922 (C) To prevent fish from entering waters of this state associated with operations of
- 923 another artificial obstruction that could lead to fish injury; or
- 924 (D) To achieve other fish management objectives approved in writing by the Department;
- 925 and
- 926 (b) Exclusion barriers shall comply with National Marine Fisheries Service or U.S. Fish and
- 927 Wildlife Service criteria.
- 928 (10) Requirements for fish passage during construction of fish passage structures and periods when
- 929 temporary artificial obstructions are in place are:
- 930 (a) All fish passage structures shall be constructed and temporary artificial obstructions shall be in
- 931 place only during the Department approved site-specific in-water work period;
- 932 (b) At times indicated by the Department as per OAR 635-412-0035(1)(a), downstream fish
- 933 passage shall be provided and:
- 934 (A) The outfall of a stream flow bypass system shall be placed to provide safe reentry of
- 935 fish into the stream channel; and
- 936 (B) If downstream fish passage during construction is not required and stream flow is
- 937 pumped around the site, the site shall meet Department screening or bypass
- 938 requirements.
- 939 (c) At times indicated by the Department as per OAR 635-412-0035(1)(a), upstream fish passage
- 940 shall be provided and shall be based on the wetted-width or flows of the stream during the period
- 941 of construction or temporary obstruction;
- 942 (d) In-stream construction sites shall be isolated from stream flow and fish;

943 (e) Prior to in-stream construction activities, all fish shall be safely collected, removed from the
944 construction site or de-watered reach, and placed in the flowing stream outside of the areas of
945 project impacts by an authorized person with an ODFW Fish Rescue Salvage
946 Authorization issued by and following the guidance of the Department; and

947 (f) After construction, the construction site shall be re-watered slowly and in a controlled manner
948 to prevent loss of downstream surface water as the construction site's streambed absorbs water.

949 (11) Requirements for experimental fish passage structures are:

950 (a) Experimental fish passage structures shall only be allowed in waters of this state after:

951 (A) Laboratory testing with native migratory fish or similar species indicates that the
952 structure provides fish passage;

953 (B) Field testing with a prototype structure, at a location where existing fish passage will
954 not be compromised and where fish passage does not need to be addressed under OAR
955 635-412-0020(2) and (3), indicates that the structure will provide fish passage; and

956 (C) In addition to information needed to evaluate the structure's design for the specific
957 location, the following are submitted to and approved by the Department:

958 (i) A written summary of the laboratory and field testing and how the results
959 indicate that fish passage shall be provided;

960 (ii) A monitoring and reporting plan to determine if the installed experimental fish
961 passage structure meets applicable design objectives and is providing fish
962 passage; and

963 (iii) A modification plan for the experimental fish passage structure if monitoring
964 indicates that fish passage is not being provided, including standard thresholds
965 that once met will require owner or operator to initiate these modifications.

966 (b) If at any time an experimental fish passage structure is deemed by the Department in writing
967 to not provide fish passage, the owner or operator, in consultation with the Department, shall
968 make such modifications to the structure or operation as are necessary to provide fish passage,
969 and, after a reasonable period, if modifications are deemed by the Department in writing to not
970 provide fish passage, a fish passage structure that meets the standard criteria of OAR 635-412-
971 0035 shall be installed as soon as practicable but no later than the end of the next complete in-
972 water work period after notification by the Department, unless the Department determines
973 additional time is necessary;

974 (c) The owner or operator of an experimental fish passage structure shall allow the Department to
975 inspect experimental fish passage structures at reasonable times;

976 (d) Five years after the experimental fish passage structure is installed and fish are present to
977 attempt passage a final monitoring report shall be submitted to the Department and the
978 Department shall determine if the experimental fish passage structure provides fish passage; and

979 (e) The Department may consider a fish passage structure to no longer constitute an
980 experimental fish passage structure after the Department finds three such structures of the same
981 design concept placed in waters of this state effectively provide fish passage.

982 **Statutory/Other Authority:** ORS 496.138 & ORS 509.585
983 **Statutes/Other Implemented:** ORS 496.012 & ORS 509.585
984 **History:**

985 DFW 154-2022, amend filed 12/19/2022, effective 01/01/2023
986 DFW 2-2006, f. & cert. ef. 1-9-06

987

988 **635-412-0040**
989 **Mitigation Criteria**

990 (1) Mitigation shall not be allowed for artificial obstructions located in, or which would prevent access to,
991 "Habitat Category 1" habitat for native migratory fish as described in OAR 635-415-0025(1).

992 (2) Mitigation options include:

993 (a) Providing fish passage at another pre-existing artificial obstruction which is not required to
994 address fish passage under OAR 635-412-0015 or 635-412-0020;

995 (b) Restoration or enhancement of native migratory fish habitat;

996 (c) Implementing measures that directly increase naturally-produced native migratory fish
997 populations, especially sensitive or state or federally listed species through implementation of fish
998 management measures; and

999 (d) Implementation of other actions specifically approved by the Commission or Department.

1000 (3) Mitigation shall not include any activity that is a requirement or condition of any other agreement, law,
1001 permit, or authorization except if it is also for fish passage mitigation of the same action at the artificial
1002 obstruction for a different level of government.

1003 (4) Unless a fish passage waiver for a site has already been obtained and mitigation has been provided,
1004 mitigation activities shall not be completed prior to a decision regarding a fish passage waiver.

1005 (5) The Department shall approve final mitigation plans, including designs as applicable, in writing prior to
1006 implementation.

1007 **NOTE:** Mitigation actions/measures/activities or concepts, absent specific designs, can be approved at
1008 the time a waiver decision is made.

1009 (6) Mitigation actions that provide fish passage shall meet the fish passage criteria contained in OAR 635-
1010 412-0035.

1011 (7) The Commission or Department may require the posting of a bond or other financial instrument to
1012 cover the cost of mitigation actions or providing fish passage at the artificial obstruction if implementation
1013 of the mitigation action or providing fish passage does not achieve its goals.

1014 (8) An owner or operator of an artificial obstruction is responsible for maintaining, monitoring, evaluating
1015 the effectiveness of, and reporting on mitigation.

1016 (9) Mitigation:

1017 (a) Shall be conducted in-proximity to the artificial obstruction, with respect to geographic scope;

1018 (b) Shall have habitat type and quality which is more beneficial than that affected by the artificial
1019 obstruction, if mitigation is passage into, restoration of, or enhancement of habitat;

1020 (c) Shall at least benefit the same native migratory fish species affected at the artificial
1021 obstruction;

1022 (d) Shall have a clear benefit for those native migratory fish species affected at the artificial
1023 obstruction if their status is listed as "threatened" or "endangered" under the state or federal
1024 Endangered Species Act;

1025 (e) Shall have standards for monitoring and evaluating, and include adaptive management
1026 approved by the Department, that assure that the goal of the mitigation is achieved and
1027 maintained, and which are detailed in the agreement required in OAR 635-412-0025(9);

1028 (f) Shall be considered if the owner or operator of the artificial obstruction believes the feasibility
1029 of fish passage at the artificial obstruction is less than that for mitigation;

1030 (g) Shall attempt to restore or enhance historic conditions;

1031 (h) To the extent possible, shall be consistent with existing native migratory fish or watershed
1032 management plans;

1033 (i) May qualify for financial incentives or grants issued by the Department. The Department will
1034 not factor into its written benefit analysis the owner's or operator's cost for mitigation or fish
1035 passage at an artificial obstruction, nor any financial incentives or grants issued by the
1036 Department;

1037 (j) Shall be consistent with the purpose and goals of the Oregon Plan.

1038 (10) The Department or Commission, as applicable, in determining the sufficiency of proposed mitigation:

1039 (a) May require quantification of baseline conditions before a decision regarding a fish passage
1040 waiver is made in situations with no existing information, which require recent of updated
1041 information, or situations which have no clear benefit to native migratory fish species;

1042 (b) May require data collection and evaluation as directed by the Department, by the owner or
1043 operator before a decision regarding a fish passage waiver is made in situations with no existing
1044 information, which require recent information, or which have no clear benefit;

1045 (c) Shall consider the extent to which the proposed mitigation is likely to occur independent of a
1046 fish passage waiver; and

1047 (d) Shall consider actions that anticipate the expected effects of climate change, which may
1048 include but is not limited to effects to streamflows, water temperatures, sediment transport, fish
1049 passage facility performance, biological responses, risk and uncertainty, and the importance of
1050 protecting and restoring habitat for native migratory fish.

1051 **Statutory/Other Authority:** ORS 496.138 & ORS 509.585

1052 **Statutes/Other Implemented:** ORS 496.012 & ORS 509.585

1053 **History:**

1054 [DFW 154-2022, amend filed 12/19/2022, effective 01/01/2023](#)

1055 DFW 2-2006, f. & cert. ef. 1-9-06

1056 **635-412-0045**

1057 **Environmental Restoration Weirs**

1058 Definitions; In addition to the definitions in OAR 635-412-0005, for the purpose environmental restoration
1059 weirs the following definitions shall apply:

1060 (1) "Ancient floodplain" means channel adjacent areas and surfaces constructed by fluvial processes that
1061 functioned as floodplains or areas for overbank deposition prior to channel incision.

- 1062 (2) "Applicant" means a person applying for the Department's approval of the construction of an
1063 environmental restoration weir as defined in this section.
- 1064 (3) "Environmental restoration weir" means one or more structures that are constructed:
- 1065 (a) For the purpose of delaying or slowing, but not preventing, streamflow to promote restoration
1066 of stream and habitat conditions;
- 1067 (b) Such that the structures do not store or appropriate water in a manner that would require a
1068 permit from the Oregon Water Resources Department;
- 1069 (c) To be no larger than necessary to cause overbank flooding onto the lands constituting the
1070 ancient floodplain during ordinary periods of high streamflow. Ordinary periods of high streamflow
1071 are times when the water elevations would reach the ordinary high water line in an unaltered
1072 stream condition; and
- 1073 (d) From wood (including untreated fence posts), earth, dirt, rock or other natural materials.
1074 Treated wood, metal, concrete, gabions or other engineered material do not qualify as natural
1075 materials.
- 1076 (4) "Healthy native migratory fish population" means a population of native migratory fish that, as
1077 determined by the Oregon Department of Fish and Wildlife:
- 1078 (a) Demonstrates appropriate life stages throughout the year; and
- 1079 (b) Reproduces at sufficient levels to be a self-sustaining population into the foreseeable future.
- 1080 (5) "Incised or eroded stream" means a stream that has been scoured by erosion to the extent that the
1081 channel bed elevation has lowered relative to its ancient floodplain and the stream has lost connectivity
1082 with the ancient floodplain, as characterized by:
- 1083 (a) The loss of natural wetland, riparian or meadow conditions in the adjacent surfaces;
- 1084 (b) The absence of overbank flooding or deposition during ordinary periods of high streamflow;
- 1085 (c) The loss of historic diversity of native fish or other species; or
- 1086 (d) The presence of dry land species that have encroached from adjacent uplands, including but
1087 not limited to sagebrush, bunch grass, juniper and pine.
- 1088 (6) "Qualifying stream" means an incised or eroded stream, a designated reach of an incised or eroded
1089 stream or a designated set of adjacent reaches of an incised or eroded stream that, prior to
1090 commencement of a project approved by the Department:
- 1091 (a) Has an estimated median monthly natural streamflow of less than one cubic foot per second
1092 during at least two months of the year;
- 1093 (b) Has not had a healthy native migratory fish population for at least three years prior to the time
1094 of Department approval; and
- 1095 (c) Is incised or eroded to the extent that the channel bed elevation has lowered by two feet or
1096 more relative to the elevation of the ancient floodplain.
- 1097 (7) "Reach" means a section of a stream that is similar in flow topography and habitat characteristics and
1098 is between 50 and 500 feet in length.

1099 (8) "Summit of the Cascade Mountains" means a line beginning at the intersection of the northern
1100 boundary of the State of Oregon and the western boundary of Wasco County, thence southerly along the
1101 western boundaries of the counties of Wasco, Jefferson, Deschutes and Klamath to the southern
1102 boundary of the State of Oregon.

1103 **Statutory/Other Authority:** ORS 509.580, ORS 509.585 & HB2298 (2021)

1104 **Statutes/Other Implemented:** HB2298 (2021)

1105 **History:**

1106 [DFW 31-2022, adopt filed 03/23/2022, effective 03/23/2022](#)

1107 **635-412-0050**

1108 **Eligibility Criteria**

1109 (1) If the Department determines, or the applicant assumes, that native migratory fish are present in a
1110 qualifying stream, prior to construction of the environmental restoration weir the applicant shall obtain
1111 Department approval of a fish passage plan that is consistent with criteria set forth in OAR 635-412-0035.

1112 (2) If the Department determines that native migratory fish are not present in a qualifying stream prior to
1113 the date of construction of environmental restoration weirs, the applicant is exempt from the requirements
1114 of ORS 509.585 and applicable provisions of OAR 635, Division 412, unless and until the Department
1115 determines that native migratory fish have returned to the qualifying stream.

1116 (3) If, after construction of an environmental restoration weir, the Department determines that native
1117 migratory fish have returned to the qualifying stream, the Department may require the owner of that
1118 environmental restoration weir to either:

1119 (a) Obtain Department approval of a fish passage plan that:

1120 (A) Can be constructed from locally available natural materials; and

1121 (B) Includes modifications recommended by the Department unless the owner of the
1122 environmental restoration weir demonstrates to the Department that the proposed
1123 modifications will not be economically practicable. To determine if the modifications are
1124 economically practicable, the Department may evaluate information including but not
1125 limited to:

1126 (i) the cost of the original project;

1127 (ii) the cost of the recommended modifications; and

1128 (iii) the habitat value of the restoration project; or

1129 (b) Obtain Department approval of mitigation that provides a net benefit
1130 to native migratory fish consistent with ORS 509.585 and criteria set forth
1131 in OAR 635-412-0040.

1132 (c) If the Department requires the owner of an environmental restoration
1133 weir to obtain Department approval of a fish passage plan or mitigation
1134 proposal pursuant to this subsection (3), the owner of the environmental
1135 restoration weir must submit a sufficient plan or proposal, as applicable,
1136 within 60 days unless the Department determines an extension is
1137 warranted.

1138 (4) The Department may authorize a project for stream restoration and habitat improvement through the
1139 construction of environmental restoration weirs only if:

- 1140 (a) The project involves construction of environmental restoration weirs on one or more qualifying
1141 streams located in any historically closed basin:
- 1142 (A) From which water does not flow to the Pacific Ocean; and
- 1143 (B) That is located east of the summit of the Cascade Mountains;
- 1144 (b) Construction of the environmental restoration weirs will be completed no later than July 1,
1145 2031;
- 1146 (c) The project complies with local floodplain regulations if the project is located within an area
1147 subject to floodplain management;
- 1148 (d) Construction of environmental restoration weirs has not begun prior to the date of the
1149 Department's approval;
- 1150 (e) The project is unlikely to adversely impact transportation infrastructure or planned
1151 transportation infrastructure as determined by the Oregon Department of Transportation;
- 1152 (f) The project will not store or appropriate water in a manner that would require a permit from the
1153 Oregon Water Resources Department;
- 1154 (g) The Department has approved a fish passage plan for the project if such approval is required
1155 by section (1) of this rule;
- 1156 (h) The planned project, including but not limited to timing of construction, material, size, location,
1157 and other information contained in the application regarding historic features on landscape and
1158 rationale for the project, demonstrate, as determined by the Department, that the project is likely
1159 to produce the intended ecological benefits of stream restoration and habitat improvement; and
- 1160 (i) The Department determines that the environmental restoration weir is no larger than necessary
1161 to cause overbank flooding during ordinary periods of high streamflow.

1162 **Statutory/Other Authority:** ORS 509.580, ORS 509.585 & HB 2298 (2021)

1163 **Statutes/Other Implemented:** HB 2298 (2021)

1164 **History:**

1165 [DFW 31-2022, adopt filed 03/23/2022, effective 03/23/2022](#)

1166 **635-412-0055**

1167 **Application Material**

1168 Any application for projects involving construction of environmental restoration weirs must utilize the
1169 Department's application form and specifically describe how the project will meet all the eligibility criteria
1170 set forth in OAR 635-412-0050 and facilitate stream restoration and habitat improvement. The
1171 Department may require the application to include:

1172 (1) A description of the current habitat conditions, rationale for the project, and intended impact of the
1173 environmental restoration weirs, including whether beaver restoration is an intended outcome;

1174 (2) Information on the planned construction timing, location, and number of environmental restoration
1175 weirs in the qualifying stream;

1176 (3) Photographs of all the proposed environmental restoration weir construction sites sufficient to meet
1177 pre-project monitoring requirements;

1178 (4) A description of stream management and adjacent land use plans, descriptions of any efforts already
1179 undertaken to address historic factors contributing to habitat degradation and future efforts that will be
1180 implemented to protect habitat restoration;

1181 (5) Plans, drawings, or pictures documenting stream measurements including active channel width,
1182 height of ordinary high water line, height of ancient floodplain above stream bottom, and the size and
1183 material source and composition of the environmental restoration weirs;

1184 (6) Written documentation from the Oregon Water Resources Department (OWRD) stating:

1185 (a) Whether injury to other water rights is likely to occur if the proposal is implemented as
1186 described in the application;

1187 (b) Whether any manipulation of water during any phase of construction is likely to cause injury to
1188 any existing water right; and

1189 (c) Whether the project will require a permit from the OWRD;

1190 (7) Information on location and type of nearest downstream road crossing; and

1191 (8) Plans demonstrating fish passage meets the criteria set forth in OAR 635-412-0035, if the project is in
1192 a qualifying stream reach where native migratory fish are present.

1193 **Statutory/Other Authority:** ORS 509.580, ORS 509.585 & HB 2298 (2021)

1194 **Statutes/Other Implemented:** HB 2298 (2021)

1195 **History:**

1196 [DFW 31-2022, adopt filed 03/23/2022, effective 03/23/2022](#)

1197 **635-412-0060**

1198 **Conditions of Approval**

1199 (1) The Department may require third-party monitoring as a condition of approval.

1200 (2) Brush and trees removed in association with construction of an environmental restoration weir must
1201 be replanted with native riparian vegetation. Removal of vegetation shall not be more than required to
1202 access the project site.

1203 (3) Planting or removal of brush and trees from stream banks and riparian areas as part of an authorized
1204 project are not subject to riparian management requirements established under the Oregon Forest
1205 Practices Act. The State Forester must be notified if there is any sale, barter, or trade of timber material
1206 resulting from the removal of trees associated with the project.

1207 (4) Construction of environmental restoration weirs must be done either when the stream is dry, during
1208 the appropriate Department in-water work window, or by arrangement with the Department.

1209 (5) For streams with flowing water at the time of construction, best efforts shall be used to prevent erosion
1210 and minimize soil movement and turbidity including:

1211 (a) Stabilizing exposed soils during and after construction to prevent erosion and turbidity. To
1212 prevent erosion the Department recommends protecting soil stockpiled during rain events or
1213 when the stockpile site is not moved or reshaped for more than 48 hours by use of:

1214 (A) Compost berms;

1215 (B) Impervious materials; or

- 1216 (C) Other equally effective methods.
- 1217 (b) Unless areas are frozen solid or under dry summer conditions, all construction access points
1218 through, and staging areas in, riparian and wetland areas must use methods to prevent soil
1219 compaction, excluding the soil or materials used in the environmental restoration weir;
- 1220 (c) At project completion, disturbed areas with soil exposed by construction activities must be
1221 stabilized by mulching and native vegetative plantings/seeding;
- 1222 (d) Unless incorporated in the environmental restoration weir, dredged or other excavated
1223 material must be placed on upland areas having stable slopes and must be prevented from
1224 eroding back into waterways and wetlands;
- 1225 (e) The owner of the environmental restoration weir should inspect and maintain erosion control
1226 measures as necessary to ensure their continued effectiveness until soils become stabilized;
- 1227 (f) All erosion control structures must be removed when the project is complete, and soils are
1228 stabilized and vegetated; and
- 1229 (g) Unless otherwise approved by the Department based on site-specific conditions, the work
1230 area must be isolated from flowing water during construction or other methods must be in place to
1231 prevent downstream turbidity. All structures and materials used to isolate the work area must be
1232 removed immediately following construction and water flow returned to pre-construction
1233 conditions.
- 1234 (6) Petroleum products, chemicals, wood treated with leachable preservatives or other deleterious waste
1235 materials must not enter the qualifying stream. Machinery and equipment staging, cleaning, maintenance,
1236 refueling, parking, and fuel storage must be at least 150 feet from the stream channel to prevent
1237 contaminants from entering waters of this state. Refueling is to be confined to a designated area to
1238 prevent spillage into waters of this state.
- 1239 (7) Operating machinery within the stream channel should be minimized as much as possible. All
1240 machinery operated within the stream channel must be in good working order, inspected for leaks prior to
1241 each use, and maintained to prevent leakage of fuels, oils, or other fluids.
- 1242 (a) An appropriately sized spill kit must be on-site when operating in the stream channel, leaked
1243 fluids must be cleaned promptly, and any contaminated soils removed from the area and properly
1244 disposed of; and
- 1245 (b) Any equipment found to be leaking fluids must be immediately removed from and kept out of
1246 the stream channel until repaired.
- 1247 (8) The project must not redirect the stream channel or cause damage to property or structures adjacent,
1248 nearby, upstream, downstream, or within the project site.
- 1249 (9) It is the responsibility of the applicant or owner of an environmental restoration weir to comply with all
1250 necessary and required local, county, state, and federal approvals and permits.
- 1251 (10) Applicant or owner of the environmental restoration weir shall at all times observe and comply with all
1252 federal and state laws, including without limitation the Endangered Species Act of 1973, as amended (16
1253 U.S.C. 1531-1536, 1538-1540), ORS 496.172 to 496.192 (Threatened and Endangered Wildlife Species),
1254 and ORS 564.100 to 564.135 (Threatened and Endangered Plants), and lawful regulations issued
1255 thereunder, and local bylaws, ordinances, and regulations, which relate to Threatened and Endangered
1256 plant or animal species while constructing and maintaining environmental restoration weirs approved by
1257 the Department.

1258 **Statutory/Other Authority:** ORS 509.580, ORS 509.585 & HB 2298 (2021)

1259 **Statutes/Other Implemented:** HB 2298 (2021)

1260 **History:**

1261 [DFW 31-2022, adopt filed 03/23/2022, effective 03/23/2022](#)

1262 **635-412-0065**

1263 **Monitoring and Reporting**

1264 (1) The owner of an environmental restoration weir is responsible for maintaining the structure as
1265 approved, and monitoring and reporting on the habitat conditions as specifically required by this rule.

1266 (2) Monitoring and reporting shall consist of fixed photo-point monitoring of each environmental
1267 restoration weir, or if approved by the Department, high resolution video footage of each environmental
1268 restoration weir as a substitute for such fixed-point monitoring. Photo monitoring shall:

1269 (a) Be established prior to construction of the environmental restoration weir;

1270 (b) Be taken from established and consistent sites before construction and after construction
1271 during high and low water periods each year for 10 years;

1272 (c) Show the environmental restoration weir from both sides of the qualifying stream;

1273 (d) Show upstream, downstream stream, and riparian habitat conditions; and

1274 (e) Be submitted to the Department annually for 10 years post construction.

1275 (3) If the Department requires third-party monitoring as a condition of approval.

1276 (a) Monitoring will only be conducted if:

1277 (A) The third party is chosen through mutual agreement between the owner of the
1278 environmental restoration weir and the Department;

1279 (B) The owner of the environmental restoration weir may not unreasonably withhold
1280 consent for the third party to engage in monitoring;

1281 (C) The third-party monitoring may not result in a financial cost to the owner of the
1282 environmental restoration weir; and

1283 (D) The third party engaging in the monitoring must be covered by sufficient liability and
1284 casualty insurance.

1285 (b) Monitoring may include gathering information on applicable habitat and stream metrics
1286 including temperature data, water quality, stream discharge measurements, habitat survey data,
1287 invertebrate sampling, riparian vegetation surveys, pool area measurements, floodplain area
1288 engagement, fish sampling, dissolved oxygen, wildlife responses, or other land responses
1289 associated with the environmental restoration weirs.

1290 (4) The Department shall require the owner of the environmental restoration weir to modify or remove the
1291 environmental restoration weir if it is found:

1292 (a) By the Oregon Water Resources Department to result in injury to an existing water right;

1293 (b) By the Department to have a significant detrimental impact on native migratory fish; or

1294 (c) To have been modified beyond the original authorized design specification to the point where
1295 the project no longer meets the criteria set forth in OAR 635-412-0050(4).

1296 (5) The Department, in coordination with the Oregon Department of Transportation, may at any time
1297 require the owner to modify environmental restoration weirs if the environmental restoration weirs are
1298 found to adversely impact transportation infrastructure or planned transportation infrastructure.

1299 (6) The Department shall maintain a database of projects that apply for approval under this program.

1300 (a) No later than December 31, 2027, the Department shall submit a publicly available report, in
1301 the manner provided by ORS 192.245, to the interim committees of the Legislative Assembly
1302 related to environment and natural resources that provides information summarizing the extent to
1303 which projects have been commenced and completed under OAR 635-412-0045 through 635-
1304 412-0065.

1305 (b) No later than September 15, 2032, the Department shall submit a publicly available report, in
1306 the manner provided by ORS 192.245, to the interim committees of the Legislative Assembly
1307 related to environment and natural resources on projects authorized under OAR 635-412-0045
1308 through 635-412-0065. The report shall include:

1309 (A) Assessments of the conditions of qualifying streams affected by authorized projects,
1310 which assess stream conditions prior to construction of environmental restoration weirs
1311 as well as after construction of environmental restoration weirs; projects will be evaluated
1312 on factors including:

1313 (i) Number and location of environmental restoration weirs;

1314 (ii) Photo monitoring of habitat conditions before and after the construction of the
1315 environmental restoration weir;

1316 (iii) Professional opinion of change in habitat quality, water quantity and quality,
1317 fish distribution, health of native migratory fish populations; and

1318 (iv) Any habitat data provided by the owner of the environmental restoration weir
1319 including temperature monitoring, stream characteristics, flow measurements,
1320 fish surveys, riparian vegetation, floodplain connectivity or other observations
1321 made in association with the construction of restoration weirs.

1322 (B) Recommendations, which may include recommendations for legislation, to allow the
1323 Department to authorize projects in which construction of environmental restoration weirs
1324 will commence on or after January 2, 2036.

1325 (c) The Department will provide the Fish Passage Task Force with draft reports for review prior to
1326 reporting to the Legislature.

1327 **Statutory/Other Authority:** ORS 509.580, ORS 509.585 & HB 2298 (2021)

1328 **Statutes/Other Implemented:** HB 2298 (2021)

1329 **History:**

1330 [DFW 31-2022, adopt filed 03/23/2022, effective 03/23/2022](#)

1331

For Administrative Use Only – Z99999

Supplier Name: Oregon Department of Fish & Wildlife

Actual Contract Number (CustomText4): 25-0248

Department (Location): LUT - Ops

Contract Type: 8 Agreements

Contract Sub Type (Custom2Code): IGA: Intergovernmental Agreement

Minute Order Date:

Minute Order Number:

Master Contract Number (CustomText1): 25-0248

Bid/RFP # (BidRFP):

BPO Number (Custom1Code): \$0 or Not Applicable

SHIP TO (LocShipTo): LUT - Ops

BILL TO (LocBillTo): LUT - Ops

Project Number (CustomText2):

Chargeable Program Number (ChargeProgram):

Contract Admin (Administrator): Aaron Clodfelter

Certificate Of Completion

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Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp
Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	3/7/2025 8:21:47 AM
Certified Delivered	Security Checked	3/7/2025 8:44:33 AM
Signing Complete	Security Checked	3/7/2025 8:46:32 AM
Completed	Security Checked	3/7/2025 8:46:32 AM
Payment Events	Status	Timestamps
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- ii. send us an email to tina_hartmeier@co.washington.or.us and in the body of such request you must state your email, full name, mailing address, and telephone number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process..

Required hardware and software

The minimum system requirements for using the DocuSign system may change over time. The current system requirements are found here: <https://support.docusign.com/guides/signer-guide-signing-system-requirements>.

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