

ODFW Draft Rule Revision Proposals

Task Force Section OAR 635-412-0010

11-18-2021 DRAFT & from 11-02-2021 Meeting

Italicized text indicates new propose language.

Strikethrough red text indicates text to be removed.

Lines 184 to 220 (from existing rules)

Revision to Existing:

(Lines 187 - 189)

(1) The Director shall appoint ~~nine~~ *ten* members to constitute the Fish Passage Task Force.

(2) Three members shall represent interests subject to the obligation to install passage at facilities they install, own or operate; three members shall represent fishing, environmental or conservation interests, ~~and~~ three members shall represent the general public, *and one member shall represent tribal interests.*

11-2-2021 Meeting Summary (see minutes) –

The option to add a new additional member to the Task Force for a total of 10 members and have the new member represent tribal interests was the agreed on preferred solution from the sub-committee members present (n=4). It was suggested this discussion be presented to the Task Force for further discussion during the Dec 3, 2021 Meeting.

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Prioritization Section OAR 635-412-0015

11-18-2021 **DRAFT & from 11-02-2021 Meeting**

Italicized text indicates new propose language.

Strikethrough red text indicates text to be removed.

Lines 221 to 260 (from existing rules)

Revision to Existing:

(Lines 223)

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

New Proposed New Rule:

(To be included into Lines 225)

(2) *The priority list shall exclude artificial obstructions where a legal agreement with the Department or Commission specifically indicates passage is not required or where there is another legal requirement to address fish passage.*

(3) *The Department shall work cooperatively with the owners or operators of artificial obstructions on the priority list to establish fish passage.*

New Revision to Existing:

(Lines 225 - 229)

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

(a) The prioritization shall consider the following factors relative to each artificial obstruction for all native migratory fish currently or historically present at the artificial obstruction:

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

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

New Revision to Existing:

(Lines 244)

(3) The Commission shall review, approve, or amend the priority list ~~after the initial priority list is developed,~~ when the Department re-prioritizes, and no less frequently than once every five years.

New Revision to Existing:

(Lines 246 - 252)

(4) ~~Once the Commission has approved the priority list,~~ The Department may order a person owning or operating an artificial obstruction on the *approved* priority list ~~who has been issued a water right, owns a lawfully installed culvert or owns another lawfully installed obstruction~~ to install fish passage or to provide mitigation *within a defined timeframe* if:

- (a) *The owner or operator refuses to work cooperatively with the Department;*
- (b) *The Department has field verified the information used for prioritization of the artificial obstruction;*
- (ac) The Department can arrange for non-owner or non-operator funding of at least 60 percent of the cost for fish passage design, construction, and installation; ~~or and~~
- (bd) The artificial obstruction is ranked in the top ten ~~for the state or highest~~ within a Department Region on the priority list.

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Fish Passage Approval Section OAR 635-412-0020

11-2-2021 **DRAFT & from 11-02-2021 Meeting**

Italicized text indicates new propose language.

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Lines 261 to 314 (from existing rules)

Revision to Existing:

(Lines 266)

(2) Prior to ~~construction, fundamental change in permit status or abandonment of a trigger~~ *at* an artificial obstruction in any waters of this state, a person owning or operating an artificial obstruction shall obtain a determination from the Department as to whether native migratory fish are or were historically present in the waters, unless the owner or operator assumes the presence of native migratory fish.

Revision to Existing:

(Lines 270 - 272)

(3) If the Department determines, or the owner or operator assumes, that native migratory fish are or were historically present in the waters, prior to ~~construction, fundamental change in permit status, or abandonment a trigger of~~ *at at* the artificial obstruction the person owning or operating the artificial obstruction shall either:

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Waivers - Exemption Section OAR 635-412-0025

11-18-2021 DRAFT & from 11-02-2021 Meeting

Italicized text indicates new propose language.

Strikethrough red text indicates text to be removed.

Lines 315 to 381 (from existing rules)

Revision to Existing:

(Lines 325 - 327)

(3) Waivers shall be valid so long as: *a) the owner or operator continues to provide the agreed-upon mitigation measures, and b) so long as and until the waived artificial obstruction undergoes does not qualifies for another trigger. further construction, a fundamental change in permit status, or abandonment does not another trigger.*

Revision to Existing:

(Lines 336 - 340)

(6) The Commission *or Department* shall review, at least once every seven years, exempt artificial obstructions that do not have exemption expiration dates to determine whether the exemption should continue. *Prior to a seven year review and upon the request by any private citizen, organization, government agency or official, exemption decisions will be reviewed by the Commission or Department.* The Commission *or Department* may revoke or amend an exemption if it finds that circumstances have changed such that the basis for the exemption no longer applies. An exemption granted as a result of an action which triggered fish passage requirements under OAR 635-412-0020(2) ~~tells~~ *satisfies* the trigger event until the exemption is revoked *or another trigger at the artificial obstruction.*

Public or third party initiation of a petition to review an exemption decision.

See TU's comment below # 127 (Rogers) and 117 (Lambert) for revision language to be considered.

“Upon request by any private citizen, organization, government agency or official a decision to grant a fish passage exemption or waiver will be reviewed by the Department, Task Force, or Commission. If the reviewing body determines that the circumstances or conditions from which the exemption or waiver decision was based are no longer valid the Department or Commission may revoke or revise the decision.”

Primary content from above added into lines 336 – 340 (see above).

Revision to Existing:

(Lines 348 - 353)

(9) To receive a waiver, or an exemption under subsection (4)(a), an owner or operator of an artificial obstruction shall enter an agreement with the Commission (or Department as applicable) that clearly describes timelines, duties, responsibilities, and options regarding the mitigation. The agreement shall state that the mitigation shall be completed prior to completion of or by the end of the same in-water work period as the action which triggered fish passage requirements under OAR 635-412-0020(2), unless the Commission *or Department* finds that additional time is necessary and appropriate:

New issue: Existing rules do not presently allow for additional mitigation if there is a delay between the trigger at the AO and the required mitigation. Mitigation implementation delays may need a requirement for additional mitigation. This issue needs to be more clearly framed up and presented at a future meeting where more sub-committee attendees are present, particularly the issue of additional mitigation if significant time delay is proposed by applicant. How is this delay determined? If additional mitigation is required, how is this determined and consistently administered. What factors should be considered for additional mitigation? How are these factored defended? How is delay or time lag determined or identified.

Revision to Existing:

(Lines 356 - 361)

(10) Once the application, analysis, and a draft agreement are completed, a decision on whether the waiver or exemption shall be granted shall be made by:

(a) The Department:

(A) If it determines that the total stream distance, including tributaries, affected by the artificial obstruction for which the waiver ~~or exemption~~ is being sought is less than or equal to 1 mile ~~to a natural barrier of current native migratory fish distribution~~;

(B) If the request is for an exemption under subsection (4)~~(a) or (4)(b)~~; or

Revision to Existing:

(Lines 367)

(b) The Commission:

(A) In all other instances; or

(B) If the Department refers a decision to the Commission; or

(C) If the owner or operator *or another interested party* files a protest of the Department's determination to the Commission *within 30 days*.

Revision to Existing:

(Lines 368 -369)

(11) The decision to grant a waiver or exemption shall include the determination described in subsection (1) or (4) as well as approval of the agreement required in subsection (9). *The Department may amend or approve changes to the agreement if the changes do not affect the benefit analysis and after a public review by the Fish Passage Task Force.*

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Protest Section OAR 635-412-0030

11-23-2021 **DRAFT**

Italicized text indicates new propose language.

Strikethrough red text indicates text to be removed.

Lines 382 to 393 (from existing rules)

Revision to Existing:

(Lines 384 - 385)

(1) A person owning or operating an artificial obstruction *or any private citizen, organization, government agency or official* may request alternative dispute resolution at any point in the process of determining fish passage requirements.

Revision to Existing:

(Lines 386 - 389)

(2) The owner or operator of the artificial obstruction *or any private citizen, organization, government agency or official* who objects to a determination made by the Department under these rules may file a protest with the Commission. Protests must be submitted in writing within 30 days of receipt of a written determination from the Department and must include the grounds for protesting the Department's determination.

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Fish Passage Criteria Section OAR 635-412-0035

11-23-2021 **DRAFT**

Bold italicized text indicates new propose language.

Strikethrough red text indicates text to be removed.

Lines 399 to 671 (from existing rules)

635-412-0035

Fish Passage Criteria

(lines 399 – 420)

(1) General requirements for fish passage are:

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

(A) Native migratory fish currently or historically present at the site which require fish passage;

(B) Life history stages which require fish passage; and

(C) ~~Dates~~ **Periods** of the year and/or conditions when passage shall be provided for the life history stages and native migratory fish.

(b) The person submitting the fish passage plan to the Department for approval shall submit all information necessary to efficiently evaluate whether the design will meet fish passage criteria;

(c) If site-specific circumstances indicate that the fish passage criteria are not adequate to provide fish passage, the Department may require in writing that additional fish passage criteria be met;

(d) If native migratory fish- or site-specific circumstances warrant it, the Department may provide an exception to any specific fish passage criterion if the Department determines in writing that fish passage shall still be provided;

(e) All fish passage structures shall be designed to take into consideration their upstream and downstream connection and prevent undesirable impacts to fish passage, including but not limited to scour and headcuts;

(f) If joint state and federal approval is required, the Department shall take into account federal requirements during approval;

(g) ~~Primarily a~~ **At** sites with little existing site information or questionable design solutions, the Department may require monitoring and reporting to determine if a fish passage structure meets applicable criteria and/or is providing fish passage; and

(h) The person owning or operating an artificial obstruction shall maintain the fish passage structure in such repair and operation as to provide fish passage of native migratory fish at all times required by the Department.

(lines 421 – 499)

(2) Requirements for fish passage at dams and other artificial obstructions which create a discontinuity between upstream and downstream water surface or streambed elevations are:

- (a) Fishways shall provide fish passage at all flows within the design streamflow range;
- (b) The fishway entrance shall be located and adequate attraction flow shall be provided at one or more points where fish can easily locate and enter the fishway;
- (c) Fishway water velocities shall:
 - (A) Range between 1 and 2 feet per second in transport channels;
 - (B) Average no greater than 5 feet per second in baffled-chute fishways, including but not limited to Alaska steppasses and denils; and
 - (C) Not exceed 8 feet per second in discrete fishway transitions between the fishway entrance, pools, and exit through which fish must swim to move upstream, including but not limited to slots, orifices, or weir crests.
- (d) At any point entering, within, or exiting the fishway where fish are required to jump to move upstream, the maximum difference between the upstream and downstream water surface elevations shall be 6 inches, except it shall be 12 inches if only salmon or steelhead adults require fish passage;
- (e) In fishway locations through which fish must swim, water depths shall be a minimum of 6 inches where only juveniles require passage and 12 inches where adults require passage, except:
 - (A) Baffled-chute fishways, including but not limited to Alaska steppasses and denils, shall have a minimum flow depth of 2 feet throughout the length of the fishway; and
 - (B) Water depths shall be a minimum of 2 feet within jump pools which shall be located downstream of any point entering, within, or exiting the fishway where fish are required to jump to move upstream.
- (f) All fishway locations through which fish must swim shall be at least 12 inches wide;
- (g) Fishway pools shall:
 - (A) Be sized according to the native migratory fish and life history stages requiring passage and to avoid over-crowding;
 - (B) Have $V \geq wQH/4$ at all flows within the design streamflow range, where:
 - (i) "V" is the water volume in cubic feet;
 - (ii) "w" is 62.4, the unit weight of water, in pounds per cubic foot;
 - (iii) "Q" is the fish ladder flow in cubic feet per second;
 - (iv) "H" is the energy head of pool-to-pool flow in feet; ~~and~~
 - (v) 4 has a unit of foot-pounds per second per cubic foot; ~~and~~
 - (C) Where the fishway bends 90 degrees or more, have turning pools with a flowpath centerline double the length of non-turning pools; and
 - (D) Be placed at least every 25 feet of horizontal distance in baffled-chute fishways, including but not limited to Alaska steppasses and denils;
- (h) The fishway exit should be located to minimize the risk of fish unintentionally falling downstream of the artificial obstruction;
- (i) Fishway trash racks shall:

- (A) Allow for easy maintenance and debris removal;
- (B) Have a minimum clear space between vertical members of 9 inches, except:
 - (i) 10 inches shall be provided if adult chinook are present; and
 - (ii) At least 4 inches shall be provided if only juveniles are present; and
- (C) Have a minimum clear space between horizontal members of 12 inches;
- (j) The fishway shall:
 - (A) Have water temperatures which are within 1 degree Fahrenheit of the water entering the fishway;
 - (B) Be designed to assure that fish do not leap out of the fishway;
 - (C) Have all edges and fasteners which fish may contact ground smooth or chamfered;
 - (D) Not have protrusions extend into the flow path of the fishway;
 - (E) Have as much ambient lighting as possible;
 - (F) Have fishway components which are not detailed in OAR 635-412-0035(2), including but not limited to auxiliary water systems, designed considering the most recent National Marine Fisheries Service or U.S. Fish and Wildlife Service fish passage criteria and guidelines; and
 - (G) Meet the species-specific requirements in OAR 635-412-0035(7) if any of those native migratory fish require fish passage.

(H) Fishway flows shall be laminar and designed to minimize turbulence.

- (k) Requirements for specific types of fishways include:
 - (A) Baffled-chute fishways, including but not limited to Alaska steeppasses and denils, shall not be used in areas where downstream passage will occur through the baffled-chute fishway;
 - ~~(B) All fishways of a specific type with accepted configurations shall comply with those configurations; and~~
 - ~~(C) Fish passage plans for stream channel-spanning weirs, roughened channels (including but not limited to nature-like, rock, or engineered stream fishways), and hybrid fishways (including but not limited to pool and chute ladders) which may combine criteria elements of natural streams and/or established fishway types (including but not limited to pool and weir, vertical slot, and baffled chute fishways) shall clearly demonstrate how water depths, water velocities, water drops, jump pools, structure sizing, and fish injury precautions shall provide fish passage.~~

(l) Requirements for fishways which encompass the entire channel include:

(A) roughened channels or nature-like fishway designs shall:

- (i) meet the requirements of OAR 635-412-0035(3)(a)(A);***
- (ii) not have a slope that exceeds 6%; and***
- (iii) shall contain partially buried over-sized boulder or boulder clusters to provide structural integrity and areas of low water velocity.***

(B) stream channel-spanning weirs shall:

- (i) rise toward each bank from a low flow section centered along the thalweg of the channel,***
- (ii) have a downstream jump pool with a minimum depth of 2 feet,***
- (iii) have a maximum difference in elevation of 6 inches between the lowest point on the weir and the downstream pool's water surface control point,***
- (iv) be sealed if passage during low flows is required, and***

(v) be spaced at least 1 active channel width apart, if there are multiple weirs;

(C) alternate stream flow outlets for artificial obstructions at which a fishway spanning the entire channel is located shall also provide fish passage or only be used during a period defined by the Department, in coordination with other agencies as needed, as not requiring passage.

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

(m) For downstream fish passage:

NOTE: fish screening and bypass requirements for diverted water are separate from these requirements.

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

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

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

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

(iv) Water is not pumped;

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

(vi) Conduits are at least 10 inches wide.

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

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

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

(C) Water depth over spillways shall be greater than 4 inches during all flows.

(lines 500 – 525)

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

(a) Stream Simulation Option (*preferred design alternative*):

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

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

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

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

(iv) Maintain average water depths and velocities that simulate those in the surrounding stream channel;

(v) Contains a low flow thalweg;

(vi) Are composed of material that:

(I) Assures the bed under or within the road-stream crossing structure is maintained through time;

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

(III) Contains partially-buried, over-sized rock ~~if the road-stream crossing structure is greater than 40 feet in length;~~

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

(V) Excluding partially-buried over-sized rock, is, for closed-bottom road-stream crossing structures, at a minimum depth of 20 percent of the structure height ~~and a maximum depth of 50 percent of the structure height; and~~

(B) Trash racks shall;

(i) Allow for easy maintenance and debris removal;

(ii) Be maintained and cleaned frequently;

(iii) Not extend below the active channel width elevation;

(iv) ~~and shall have~~ Have a minimum of 9 10 inches clear spacing between vertical members; and

(v) Have a minimum clear space between horizontal members of 12 inches

(C) Beaver exclusion devices shall:

(i) Allow for easy maintenance and debris removal;

(ii) Be maintained and cleaned frequently;

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

(iv) Have a minimum clear space between vertical members of 9 inches, except:

(v) 10 inches shall be provided if adult chinook are present; and

(vi) Have a minimum clear space between horizontal members of 12 inches; or

(b) Alternative Option: the Department may approve road-stream crossing structures for which clear justification is provided, based on fish performance and/or fish behavior data and **proposed or post treatment** hydraulic conditions, that the alternative design shall provide fish passage.

(lines 526 – 533)

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

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

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

(c) Tide gates and associated fish passage structures shall be a minimum of 4 feet wide, *made of aluminum, a side hinged configuration* and shall meet the requirements of OAR 635-412-0035(2) within the design streamflow range and for an average of at least 51% of tidal cycles, excluding periods when the channel is not passable under natural conditions.

(lines 534 – 560)

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

(a) Downstream Fish Passage:

(A) Downstream fish passage shall be provided after inflow which may contain native migratory fish;

(B) Downstream fish passage shall be provided until water has drained from the estuary, floodplain, or wetland, or through the period determined by the Department which shall be based on one, or a combination of, the following:

(i) A specific date;

(ii) Water temperature, as measured at a location or locations determined by the Department;

(iii) Ground surface elevation;

(iv) Water surface elevation; and/or

(v) Some other reasonable measure.

(C) Egress delays may be approved by the Department based on expected inflow frequency if there is suitable habitat and as long as passage is provided by the time the conditions in OAR 635-412-0035(5)(a)(B) occur;

(D) A minimum egress flow of 0.25 cubic feet per second (cfs) at one point of egress shall be provided;

(E) Egress flow of 0.5 cfs per 10 surface acres, for at least the first 100 surface acres of impounded water, shall be provided;

(F) All plunging egress flows shall meet the requirements of OAR 635-412-0035(2)(I)(B);

(G) If egress flow is provided by a pump, it shall be appropriately screened;

(H) The minimum water depth and width through or across the point of egress shall be 4 inches;

(I) The ground surface above the artificial obstruction shall be sloped toward the point(s) of egress to eliminate isolated pools **and topographic conditions that entrain native migratory fish**; and

(J) An uninterrupted, open connection with a minimum water depth of 4 inches shall be present from the point of egress to the downstream waters of this state, unless another connection is provided as per OAR 635-412-0035(2)(I)(A).

(b) Upstream Fish Passage: a fishway or road-stream crossing structure with or without a tide gate shall be provided during the period determined by the Department if there is current or historic native migratory fish spawning or rearing habitat within the estuary, floodplain, or wetland area impounded by the artificial obstruction.

(lines 561 – 574)

(6) Requirements for fish passage at traps are:

- (a) A collection permit issued by the Department is required to operate all traps;
- (b) Traps shall be constructed to prevent physical or physiological injury to native migratory fish;
- (c) Traps shall meet all requirements of OAR 635-412-0035(2)(g);
- (d) Traps located within a fishway (i.e., "in-ladder" traps) shall not inhibit native migratory fish from entering the fishway or trap and shall be removed if the Department determines that fish are not entering the trap;
- (e) Native migratory fish shall be processed through traps with minimal possible delay and as frequently as necessary to avoid over-crowding;
- (f) All native migratory fish, excluding those which have approved take authorization from the Department and which do not require fish passage as per OAR 635-412-0035(1)(a), shall be returned to the stream by one of the following methods:
 - (A) Movement from the trap to immediately-adjacent water which has fish passage; or
 - (B) Transport within a watered container, including but not limited to lifts, hoppers, locks, and trucks, from the trap to a location approved by the Commission.

(lines 575 – 600)

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

- (a) *Acipenser* species (sturgeon):
 - (A) The fish passage structure shall not require fish to jump when entering, within, or exiting the structure;
 - (B) The fish passage structure, including trash racks, shall be sized to accommodate the largest individual expected to require fish passage; and
 - (C) Non-volitional transport within a watered container shall be allowed with Department approval.
- (b) *Catostomus* and *Chasmistes* species (suckers):
 - (A) The fish passage structure shall not require fish to jump when entering, within, or exiting the structure;
 - (B) Fishways shall have a maximum water velocity of 4 feet per second;
 - (C) Fishways shall have a minimum water depth of 12 inches;
 - (D) Fishways shall maximize downstream flow between pools to avoid back eddies;
 - (E) Fishways shall have curved walls within turning pools; and
 - (F) Fishways shall have a slope less than 4 percent.
- (c) ***Entosphenus* and *Lampetra*** species (lamprey):
 - ~~(A) Fishways shall not have overhanging surfaces;~~
 - (B) Fishways shall have 4 to 6 inch smooth rounded radii or chamfered edge surfaces (floors, walls and weir crests) over which *Entosphenus* or *Lampetra* species may pass;**
 - (B) Fishways shall have no water surface jumps or overhanging surfaces unless fishway surfaces have to 4 to 6 inch smooth rounded radii or chamfered edge surfaces (floors, walls and weir crests) over which *Entosphenus* or *Lampetra* species may pass;**

(C) Fishways shall, in locations with water velocities greater than 2 feet per second, have a passage route that:

- (i) Has a smooth, **continuous**, impermeable, uninterrupted surface or a simulated streambed;
- (ii) Has water velocities over the structure's surface less than 8 feet per second; and
- (iii) Is wetted.

(D) Denil fishways shall not be used unless alternative passage route is provided.

(E) Picketed leads, picket weirs, auxiliary water supply grating or any other fishway grating shall have a spacing of less than 0.7 inches to preclude lamprey passage where applicable, or greater than 1.0 inch to allow passage through, at traps and where applicable.

NOTE: Fishway designs should consider orifice flow if *Entosphenus* or *Lampetra* species are present. If orifices (including fishway entrances) are applicable, they shall be positioned flush with the fishway floor and if possible, flush along one fishway wall.

(d) *Oncorhynchus* species (trout and salmon): fish passage structures for *Oncorhynchus keta* (chum) shall not require fish to jump when entering, within, or exiting the structure.

(e) *Ptychocheilus* species (pikeminnow): fish passage structures shall meet the requirements of OAR 635-412-0035(7)(a).

(f) If more than one native migratory fish species requires passage at a site and the requirements for the different species are mutually exclusive, the Department shall determine passage criteria.

(lines 601 – 609)

(8) Requirements for artificial obstruction removal are:

(a) Artificial obstruction removals shall follow the requirements of OAR 635-412-0035(10);

(b) If not completely removed, no parts of the remaining artificial obstruction shall:

(A) Constrict the stream channel; or

(B) Cause low flow depths less than the surrounding stream channel.

(c) After an artificial obstruction is removed the stream channel shall be restored; and

(d) The stream channel restoration shall address impacts to stream habitat caused by the artificial obstruction while in place and by its removal, including but not limited to upstream and downstream channel degradation, and provisions shall be made to address unexpected fish passage issues resulting from removal.

(lines 610 – 619)

(9) Requirements for exclusion barriers are:

(a) Exclusion barriers shall only be placed in the following situations, when fish passage is not required or is provided by other means:

- (A) To guide fish to an approved fish passage structure or trap;
 - (B) To prevent fish from leaving waters of this state and entering human-made water supply conduits;
 - (C) To prevent fish from entering waters of this state associated with operations of another artificial obstruction that could lead to fish injury; or
 - (D) To achieve other fish management objectives approved in writing by the Department; and
- (b) Exclusion barriers shall comply with National Marine Fisheries Service or U.S. Fish and Wildlife Service criteria.

(lines 620 – 638)

(10) Requirements for fish passage during construction of fish passage structures and periods when temporary artificial obstructions are in place are:

- (a) All fish passage structures shall be constructed and temporary artificial obstructions shall be in place only during the site-specific in-water work period defined or approved by the Department;
- (b) At times indicated by the Department as per OAR 635-412-0035(1)(a), downstream fish passage shall be provided and:
 - (A) The outfall of a stream flow bypass system shall be placed to provide safe reentry of fish into the stream channel; and
 - (B) If downstream fish passage during construction is not required and stream flow is pumped around the site, the site shall meet Department screening and/or bypass requirements.
- (c) At times indicated by the Department as per OAR 635-412-0035(1)(a), upstream fish passage shall be provided and shall be based on the wetted-width or flows of the stream during the period of construction or temporary obstruction;
- (d) In-stream construction sites shall be isolated from stream flow and fish;
- (e) Prior to in-stream construction activities, all fish shall be safely collected, removed from the construction site or de-watered reach, and placed in the flowing stream **outside of the area of project impacts** by an authorized person with a collection permit issued by the Department; and

NOTE: In suitable habitats where larval *Entosphenus* or *Lampetra* species are present, dewatering, fish salvage and electro-fishing guidelines should be implemented prior to in-stream construction activities. Dewatering, fish salvage and electro-fishing guidelines information is available at:

<https://www.fws.gov/pacificlamprey/Documents/2020%20Lamprey%20BMG%20Final.pdf>

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

(lines 639 – 671)

(11) Requirements for experimental fish passage structures are:

- (a) Experimental fish passage structures shall only be allowed in waters of the state after:
 - (A) Laboratory testing with native migratory fish or similar species indicates that the structure is feasible to provide fish passage;

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

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

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

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

(iii) A modification plan for the experimental fish passage structure if monitoring indicates that fish passage is not being provided, including standard thresholds that will initiate these modifications.

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

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

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

(e) If the Department determines that the experimental fish passage structure does not provide fish passage, a fish passage structure that meets the standard criteria of OAR 635-412-0035 shall be installed as soon as practicable but no later than the end of the next complete in-water work period after notification by the Department, ***unless additional time is necessary and approved by the Department;*** and

(f) After three experimental fish passage structures of the same design concept are placed in waters of the state and deemed to provide fish passage by the Department, the experimental fish passage structure shall no longer be considered experimental.