

## Public Comments on Definition Section 0005 (updated 6-23-2021)

7 13 La PineThe Wild River Owners Association (WROA) "Line 1: ODFW and any relevant state agency shall fully enforce its Fish Passage Rules, especially when native fish species are barred from volitional migration up and down stream.

### Abandonment - New Term Definition

54 60 Coquille / Coos Bay "Coquille Watershed Association (Melaney Dunne), Coos Watershed Association (Ed Hughes) " Line 2 - Definitions - A definition for what abandonment means is key to ensure all stakeholders are clear on this potential trigger event. Abandonment may be interpreted differently by a stakeholder compared to what the agency's perspective is. In the definitions section include a definition of abandonment.

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**Line 4-5 Current Rule Language: (2) "Active channel width" means the stream width between the ordinary high water lines, or at the channel bankfull elevation if the ordinary high water lines are indeterminate.**

170 na ODOT 635-412-0005 – Definitions Active Channel Width 4  
"Active Channel Width". Non-mainstem channel features need to be added to reflect true stream function in the reach. Suggested re-word:

"Active Channel Width" is the cumulative width of a stream's channel elements at the Ordinary High Water Elevation within the confining landform. Cumulative bank-full width may be used for non-incised channels when Active Channel Width field indicators are absent or indeterminate."

14 20 Grants Pass Public "(2) "Active channel width" means the naturally-occurring stream width between the ordinary high water lines, or at the channel bankfull elevation if the ordinary high water lines are indeterminate. In bays and estuaries, 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 artificial obstruction" 4 The proposed rule change is arbitrary and capricious in regards to the bay and estuary active channel width determinations. This isn't a valid scientifically based method to determine active channel width. Take a look at the huge bridge in Astoria that spans for miles. How far upstream are you going to add freshwater streams up to get your active channel? This methodology isn't sound. Something more scientifically based. 2021-03-23 09:21:25

## Appreciable Benefit (New Definition)

42 48 Portland PacifiCorp 635-412- Definition Section - "PacifiCorp owns over 3,000 megawatts of renewable energy generating facilities, including several hydroelectric projects on waters of the state of Oregon inhabited by native migratory fish. The company is also expanding its renewable generation portfolio to address climate change impacts and ultimately achieve net zero greenhouse gas emissions in service of over 2 million customers across six western states. Therefore, PacifiCorp hereby expresses its support and interest in Oregon Department of Fish and Wildlife (ODFW)'s current review and revision of the fish passage administrative rules (Oregon Administrative Rules (OAR) 635-412-) as motivated, in part, by ODFW's new Climate and Ocean Change Policy (OAR 635-900-). Addressing climate change will require prudent, near-term actions to support ODFW's mission to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. PacifiCorp supports science-based decision-making regarding fish passage in Oregon for the purposes of achieving recovering and sustainable populations of native migratory fish. PacifiCorp also notes that hydropower has a significant role to play in moving towards carbon-neutral operations in Oregon and ameliorating the causes and effects of climate change. Therefore, the climate change benefits of hydroelectricity should be considered in net benefit analyses of fish passage at hydropower facilities. PacifiCorp has gained experience implementing fish passage solutions at our federally-licensed hydroelectric projects, and we have learned that site-specific information on current and, to the extent possible, future conditions must be considered in implementation of the administrative rules to maximize long-term net benefits to native migratory fish. In certain cases, biological research has concluded that there may be little value to local fish populations in light of the expense of constructing, operating, and maintaining fish passage at an artificial obstruction. Off-site mitigation projects with lower costs than implementing fish passage at an artificial obstruction can provide a greater net benefit to at-risk fish populations, including some that may not be present at the site. The revised administrative rules should clarify that it is the intent of the state to achieve the highest net benefit to fish populations when considering the impacts of an artificial obstruction and any proposed mitigation measures. " " Definitions (-0005; New) "Appreciable benefit" means that fish passage at an Artificial Obstruction would provide fish with access to existing habitat of the type, duration, frequency, quality, and quantity needed to support healthy populations of one or more life history stages of those native migratory fish that are present downstream of Artificial Obstruction at the time of the exemption request. "

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83 na Water Watch Line 6 - To provide clarity and direction on review of future exemption requests. "Define ""appreciable benefit"" in a way that includes incremental progress toward restoration of access to historic habitat if there is a reasonable possibility of full restoration in the foreseeable future. The fish passage statutes require passage where native

migratory fish were historically present, not just where they are currently present, and the requirement for passage based on historic presence is not limited to locations where fish can immediately use the passage or immediately gain access to historic habitat that is not presently used. Thus, the statutes imply that passage in locations of historic fish presence is an appreciable benefit even if it won't immediately expand use by native migratory fish. If an impassable barrier downstream, or an impassable barrier immediately upstream, always justify an exemption, there will be no progress toward restoration as one barrier justifies an exemption at another and the exempted barrier than justifies an exemption at the former. We understand exemptions may be revoked but wonder whether that is likely to occur (is there any history of revoked exemptions?). Keep in mind that this suggested definition would not require passage where it isn't justified on a cost-benefit basis. The owner of the obstruction could still seek a waiver in exchange for mitigation that provides a "net benefit." If the benefits from passage are in fact small, the mitigation would not be onerous and fish would receive at least something in exchange for the owner of the obstruction not providing passage at the trigger site."

55 61 Portland Definitions (-005; new) - "-0025 (4)(c) uses the term appreciable benefits to denote a key criteria for granting or denying waivers, but this is not defined" "'Appreciable benefit" means that fish passage at an Artificial Obstruction would provide fish with access to existing habitat of the type, duration, frequency, quality, and quantity needed to support healthy populations of one or more life history stages of those native migratory fish that are present downstream of Artificial Obstruction at the time of the exemption request" 2021-05-07 07:44:28

113 na Lambert TU Definitions Appreciable Benefit - "TU proposes that a definition be included for the term "appreciable benefit." We assume that the inclusion of "appreciable" was intended to facilitate exemption of fish passage requirements for projects that would have a de minimus biological effect on native migratory fish. However, the fish passage statutes require fish passage where native migratory fish were "historically present" in addition to where they are currently present. Accordingly, to ensure consistency with the statutory directives, TU recommends that the definition consider fish passage benefit in the context of other reasonably foreseeable future conditions and projects. In many systems, there are multiple fish passage barriers and a project should not be approved without fish passage obligations solely because other barriers are present especially if it is reasonably foreseeable that the other barriers will also be addressed in the future.

Proposed Definition: "Appreciable benefit" means "meaningful biological benefit to native

migratory fish based on present or reasonably foreseeable future conditions.””

142 na PacifiCorp Definitions (-0005; New) - ““Appreciable benefit” means that fish passage at an Artificial Obstruction would provide fish with access to existing habitat of the type, duration, frequency, quality, and quantity needed to support healthy populations of one or more life history stages of those native migratory fish that are present downstream of Artificial Obstruction at the time of the exemption request”

169 na ODOT 635-412-0005 – Definitions - Line 11. Appreciable Benefit - Add definition of “Appreciable benefit” Line 11

**Line 6-8 Current Rule Language: (3) "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.**

239 na Conservation Angler Definition Section : AO Definition 6  
"It is possible that an artificial obstruction that does not completely cross a water-body may also obstruct, block or unreasonably delay migration."

240 na Conservation Angler Definition Section : AO Definition 6  
The list of human-made devices should include bridges - which may create an artificial obstruction - an example of this is the Hood Canal Floating Bridge in WA which significantly delays steelhead migration and makes them very vulnerable to predation as well.

**Water Watch** Expressly include in the definition of "[a]rtificial obstruction" reservoir pools, low flows and high water temperatures caused by a "dam, diversion, culvert or other human-made device placed in the waters of this state." If such barriers are caused by the human-made devices, they should be sufficiently within the terms of the statute to address under the fish passage laws.

**Water Watch** Add to definition of "artificial obstruction": "including devices not intended to be permanent." Non-permanent structures (e.g., "push up dams" and some BDAs) can also interfere with fish migration and cause significant detrimental impacts to fish. Rules should clearly apply to them. (To avoid confusion, we suggest not using the term "temporary" because that's a defined term in the rules that's narrower than the concept suggested here.)

99 na Mary-Ann Farm Bureau Definitions 6 "The definition of "artificial obstruction" is too broad, and we strongly object to the addition of language that would list a feature as an artificial obstruction if it "has the potential" to impact fish passage. This definition is at odds with the statutory authority of the program, and would give the agency nearly unlimited authority over state waterways. That is unacceptable."

124 na Rogers TU Lines 6-8: Definition of artificial obstruction. 6 "Lines 6-8: Replace artificial obstruction with the more effective term "artificial barrier". Research indicates that physical barriers can cause changes in water quantity or quality that can be a barrier to

fish migration and survival. These conditions may be intensified by climate change." "Lines 6-8: Artificial barrier 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 prevents the migration of native migratory fish by physically blocking the waterway or by producing conditions in the water that preclude fish migration, including low flow, water temperature or toxic chemical concentrations."

171 na ODOT "635-412-0005 – Definitions - ""Artificial obstruction"" 6 ""Artificial obstruction"" means any artificial structure or device within the Active Channel that convey waters of the State and precludes, impedes, or prevents the migration of native migratory fish required for survival and reproduction." (This includes spawning, rearing, foraging, and seasonal thermal refugia use.)"

84 na Water Watch Line 6 6 To recognize all types of obstructions within terms of statute. "Expressly include in the definition of "[a]rtificial obstruction"" reservoir pools, low flows and high water temperatures caused by a ""dam, diversion, culvert or other human-made device placed in the waters of this state."" If such barriers are caused by the human-made devices, they should be sufficiently within the terms of the statute to address under the fish passage laws. "

85 na Water Watch Line 6 6 To clearly address passage barriers that may be unregulated. "Add to definition of ""artificial obstruction"": ""including devices not intended to be permanent."" Non-permanent structures (e.g., ""push up dams"" and some BDAs) can also interfere with fish migration and cause significant detrimental impacts to fish. Rules should clearly apply to them. (To avoid confusion, we suggest not using the term

""temporary"" because that's a defined term in the rules that's narrower than the concept suggested here.)"

130 na Deschutes TU Definitions 6 "The phrase "artificial obstruction" (impedes or prevents passage) is used throughout the OAR. However, its definition in the rules clearly describes an artificial barrier (prevents movement or access). The phrase throughout the OAR should be changed to artificial barrier."

114 na Lambert TU Definition - Artificial Obstruction 6 "TU understands that the artificial obstruction definition is contained in statute. However, we recommend that the definition be modified to clarify that it includes human-made devices/structures/operations that constitute physical barriers (dams, diversions, culverts, levees etc.) or contribute to environmental barriers (poor water quality, temperature, excess sediment, low flow). There are many different scenarios that can produce conditions that impede movement of fish (increased sediment that changes the habitat such that it becomes impassable, change in temperature conditions that prevent movement of fish, change in flow velocity, volume or quality that can prevent movement of fish). Proposed Definition: ""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 by physical means or by contributing to poor water quality, flow, or habitat conditions that are significant enough to impede or delay fish movement.""

131 na Deschutes TU Lines 6-8: definition of artificial obstruction 6 "Lines 6-8: The use of the term "precludes" (meaning = prevent from happening) is redundant and confusing. If the intention is to include some qualifying language short of "prevents" then that should be more clearly stated, otherwise the term "precludes" can be deleted. Also see the above overall comment." "Line 7: ...human-made device, placed in the waters of this state that precludes or prevents the migration of native migratory..."

10 16 Portland "(3) ""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."" I believe the State's definition of artificial obstructions relative to impairing fish passage is deficient and does not include many other obstructions that prohibit or impair fish passage such a streamflow obstructions, water quality obstructions (e.g., chemical contamination), and hydro-acoustic obstructions from high underwater noise and sound pressures. "6 "Fish passage and habitat connectivity issues are not limited to physical barriers in stream systems.

Often passage is limited or discontinued for native migratory fish by non-physical barriers such as streamflow, water quality/chemical, and hydro-acoustic. Streamflow is a particular issue on the east side of the state where in many basins, water rights and water usage are close to exceeding or exceed a stream's ability to provide the habitat needed for fish to migrate. Streamflow barriers during warm summer months exacerbates harm to fish by restricting their movement to areas with better habitat quality, often leaving fish susceptible to disease and other issues to survival during an already stressful period for the fish. An important component of this rule change is a reasonable and fair definition of how/when these new artificial obstructions would trigger application of the rule." "(3) ""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. An Artificial obstruction is also defined as human-made barriers to migration that affect the quality of NMF habitat such that passage is prohibited or delayed during NMF migratory periods. These obstructions include streamflow barriers, water quality/chemical barriers, and hydro-acoustic barriers."" " 2021-03-16 13:50:40

71 77 Oregon City Native Fish Society Fish Passage OARs (comments on suggestions below) 6 "Fish passage at artificial obstructions is critical to the conservation and recovery of Oregon's native, migratory fish populations. This is made even more important given the information we have and are gaining on the impacts of climate change on the range, distribution, and life-history requirements of species. We urge the advisory committee to consider changes which: 1) Adhere to statute; 2) Align with existing departmental policies, specifically the Native Fish Conservation Policy and Climate and Ocean Change Policy; 3) Have a high level of specificity to provide direction for the task force and clarity for stakeholders." " Line 27: support addition of "has the potential to preclude, delay, or prevent..." This recognizes that native migratory fish could be impacted even if they are not currently present at the obstruction. " 2021-05-07 16:42:25

100 na Mary-Ann Farm Bureau Definitions 6 "We object to the inclusion of bridges in this program, and fail to see how they meet the definition of an obstruction that requires fish passage given that they do not impede the passage of fish."

**Lines 9-11 Current Rule Language: (4) "Attraction flow" means the flow that emanates from or near a fishway entrance in sufficient quantity, velocity, and location to attract upstream migrants into the fishway, which can consist of gravity flow from the fish ladder and auxiliary water system flow added in or near the lower ladder.**

**172** na ODOT "635-412-0005 – Definitions - ""Attraction flow"" **9**  
""Attraction flow"" means the flow that discharges from the fishway that attracts upstream migrating fish or flow that enters the fishway that directs downstream migrating fish to the designed entrance."

**Line 12 Current Rule Language: (5) "Bankfull elevation" means the point on a stream bank at which overflow into a floodplain begins.**

**173** na ODOT "635-412-0005 – Definitions: ""Bankfull elevation"" **12**  
""Bankfull elevation"" means the point on a stream bank at which overflow into a floodplain begins for non-incised channels.""

**Lines 19-56 Current Rule Language: (9) "Construction" means:**

**(a) Original construction;**

**(b) Major replacement, which includes:**

**(A) for dams and diversions, excavation or replacement of 30 percent by structure volume of the dam, including periodic or seasonal replacements, unless:**

**(i) Only checkboards are replaced; or**

**(ii) Fish passage approval has already been obtained in writing from the Department for expected replacement.**

**(B) For tide gates and flood gates:**

**(i) Cumulative replacement of over 50 percent of the gate material; or**

**(ii) Cumulative removal, fill, replacement, or addition of over 50 percent of the structure supporting the gate, excluding road-stream crossing structures.**

**(C) For dikes, berms, levees, roads, or other artificial obstructions that segment estuaries, floodplains, or wetlands:**

**(i) Activities defined under OAR 635-412-0005(9)(d) in all locations where current channels cross the artificial obstruction segmenting the estuary, floodplain, or wetland; or**

**(ii) The cumulative removal, fill, replacement, or addition of over 50 percent by volume of the existing material directly above an historic channel or historically-inundated area; and**



- (D) For other artificial obstructions, the cumulative removal, fill, replacement, or addition of over 50 percent of the structure comprising the artificial obstruction to native migratory fish migration;
- (c) Structural modifications that increase storage or diversion capacity; or
- (d) For purposes of culverts, installation or replacement of a roadbed or culvert, further defined as:
  - (A) Roadbed installation or replacement at culverts includes any activity that:
    - (i) Creates a road which crosses a channel;
    - (ii) Widens a roadfill footprint within a channel; or
    - (iii) Fills or removes over 50 percent by volume of the existing roadbed material directly above a culvert, except when this volume is exclusively composed of the top 1 foot of roadbed material.
  - (B) Culvert installation or replacement includes any activity that:
    - (i) Installs or constructs a new culvert, overflow pipe, apron, or wingwall within a channel;
    - (ii) Extends existing culverts, aprons, or wingwalls within a channel, except one-time placements of culvert ends which do not extend greater than 1 foot beyond the adjacent road footprint in place prior to August 2001;
    - (iii) Cumulatively through time makes significant repairs or patches to over 50 percent of the linear length of a culvert;
    - (iv) Replaces any part of a culvert, except ends which become misaligned or eroded and which are replaced to their original configuration;
    - (v) At any point along the linear length of a culvert, reduces the entire inside perimeter of the culvert; or
    - (vi) Makes replacements, repairs, patches, or modifications to an existing culvert that are different than the original configuration and which reduce any level of fish passage for native migratory fish with current access, as determined by the Department, to the culvert.

WaterWatch                      Line 26                      Clarify that percentage replacement can included cumulative work for all obstruction types (not just tidegates and floodgates). We suggest a 30 percent threshold for all obstructions on grounds that constitutes "major replacement."

8                      14                      "1020 NW Foxwood, Bend OR 97703"                      "635-412-0005 (9, (a) (b) (A),..... lines 19-23"                      19                      "The history of obstructed fish passage at the Mirror Pond dam on the Deschutes River exemplifies the need for revision of applicable administrative rules. The PacifiCorp hydroelectric dam on Mirror Pond in Bend was constructed circa 1910. At that time it included fish passage. Fish passage fell into disrepair and was decommissioned in the 1960s. Jurisdiction over the project and fish passage was returned to the state of Oregon when

PacifiCorp obtained exemption from Federal Energy Regulatory Commission (FERC) relicensure in 1995. Subsequently no requirements for fish passage have been imposed by state agencies. Previous arguments that Mirror Pond passage would yield limited benefits were based on passage barriers immediately above and below the dam as well as severely compromised instream flows. These factors are understood to be the reason the obstruction was allowed to persist for years. PacifiCorp concluded that the dam was nearing the end of its lifespan within the last decade, which led to a multiyear process during which divestiture of the dam was proposed. An independent structural analysis also reached the conclusion that the dam was at the end of its lifespan (Gannett, 2014, commissioned by Bend Park and Rec District). PacifiCorp however tabled its interest in divestiture and instead undertook multiple "emergency" repairs through 2019. These repairs have essentially replaced the entire upstream facing of the dam from 2007 through 2018, as well as crib ballast replacement in 2019 of 20% of dam volume and sluiceway repair in 2018. Central Oregon stakeholders were very disappointed that restoration fish passage was not incorporated into these projects. Multiple publicly financed projects have resolved passage barriers immediately above and below the dam, and instream flows improved with resultant improvement in the fishery. There is strong community support for restoration of passage at the Mirror Pond dam. Based on current OARs, the Oregon Department of Fish and Wildlife (ODFW) has held the position that the state had no authority to enforce fish passage remedies during these years. This was based first on interpretation of OAR 635-412-0005 (9(b)(A)); the projects had not exceeded 30% of dam volume non-cumulatively, and secondly because the Mirror Pond dam was not ranked in the artificial obstruction priority list categories that call for Commission enforcement action (OAR 635-412-0015). However based on ODFW information obtained by the Freedom of Information Act (FOIA), the repairs cumulatively did exceed the 30% threshold. And notably, the Army Corp of Engineers felt in 2016 that PacifiCorp could anticipate needed work and be permitted as one project, not separate projects - a "Nationwide 3" ( Andazola email 10.27.2016 from ODFW FOIA). But the issuance of separate permits by the Department of State Lands (DSL) and the interpretation of the "major construction" 30% volume definition as a non-cumulative threshold provided a loophole that allowed all this work to be done without addressing remedy of the fish passage obstruction. There is another twist to consider when one analyses the 30% rule. It has been stated that the 30% rule was developed with the rationale that repair of that magnitude would provide an opportunity for efficient and economical installation of fish passage at a dam. But consider that when PacifiCorp undertook crib repairs in 2019, Mirror Pond was drained, huge cranes able to span the dam were brought on site to repair 20% of dam volume in addition to completing the steel sheet pile repairs. Was that not an opportunity to efficiently and economically incorporate remedy of fish passage into the replacement work? Another perspective is that the 30% threshold set a precedent that maintenance other than new dam construction could be recognized as a triggering event that calls for remedy of passage obstruction. Conceptually it is easy to see that other work might merit categorization as "major construction" for purposes of this OAR, its "intent". The Mirror Pond dam is a case in point. PacifiCorp as described above undertook restoration of the end of life dam from 2007 through 2019. PacifiCorp has now

publicly stated that it intends to maintain the dam for the foreseeable future. If these repairs suffice to resurrect an end of life dam for the foreseeable future, as well as justifying a long-term corporate strategic infrastructure commitment, how can that not be considered ""major replacement"" construction? It certainly provided opportunities to incorporate restoration of fish passage into the projects. And yet another perspective is germane. In email exchanges between a local private engineer and ODFW from December 2018 through February 2019 (contained in ODFW FOIA responses), the engineer's opinion was that the sheet pile repairs now constituted 100% of the structural integrity of the dam. Yet department response reverted to analyses based on 30% non-cumulative volumes. Clearly volume is not the right metric for assessing repairs of this character. To interpret sheet pile repairs only in term of volumes in essence creates a loophole for sheet pile repairs to avoid fish passage requirements. That could have consequences for many passage obstacles around the state. Greg Apke acknowledged in this exchange that one option was to ask the Department of Justice (DOJ) for a ruling. He also concluded that a rule change in the future was possible. Under current OARs, ODFW was left without jurisdiction for action as these events unfolded. A more detailed exposition of these points is available on request. "

"1) Revise the OAR so that passage requirement can be triggered by cumulative major replacement work that reaches thresholds. Rationale: To avoid the unacceptable consequences of the non-cumulative OAR interpretation as currently administered, and exemplified by the Mirror Pond dam history. 2) Revise the OAR to acknowledge that ""major replacement"" can be defined by percent of dam volume or percent of dam length, or by professional judgment of ODFW"" (see below). Rationale: As the Mirror Pond case shows, repairs such as the steel sheet pile methods can effectively replace a dam while only leading to a minor volume percent calculation. For sheet pile repairs, dam length impacted by maintenance is more appropriate than dam volume for quantitation of the work. Other yet to be identified circumstances may arise. 3) Revise the OAR to require every dam maintenance or repair project, whether or not deemed ""construction"" for purposes of ORS 509.585(4), to require ODFW permitting, such permitting to include evaluation by ODFW as to whether the maintenance work provides an opportunity to remedy passage obstruction.

Rationale: Given the discussion at the 03.09.2021 RAC meeting re: OAR revisions vs guideline development, some of this point may be better addressed in guidelines than OARs. And ORS 509.585(4) may already cover this, subject to the modifications suggested for OAR 635-412 - 0005 above. But it is not clear that dam work is brought to the attention of ODFW in a sufficiently timely fashion. Also, while it is convenient administratively to have a simple percentage threshold in the OAR, this oversimplifies how to define a triggering threshold. If the intent of the ""major replacement"" provision is to recognize that some dam projects provide opportunity to remedy fish passage obstructions, then a single simple percent trigger can be a dysfunctional oversimplification in some circumstances, as exemplified by the Mirror Pond dam history presented above. 4) Possible revised wording - change lines 22&23, or possibly 22 through 25 to ""(A) for dams and diversions major replacement includes any maintenance work, including seasonal, periodic or emergency work, which offers an opportunity to incorporate remedy of fish passage obstruction at the dam or diversion undergoing

**maintenance work.** Examples, inclusive but not exclusive, could be sufficient volume replacement or repair of a sufficient length of the dam, as executed cumulatively, to allow for incorporation of the fish passage remedy. Professional judgement by ODFW may allow categorization of a project as major replacement if unique circumstances are identified for the proposed project." It is noted that this change in definition of "construction" has implications for other OARs eg 635-412-0020, lines 261 and following. I do not appreciate any adverse impacts of this definition change on these other OARs. The impact of this nexus in fact is conceptually consistent with the rationale of #(3) above. " 2021-03-12 15:57:03

116 na Lambert TU Definition of "Construction" and "Major Replacement": OAR 635-412-0005 (9): Lines 21-23/36-38 19 "In reviewing the legislative history, it is clear that the goal of the fish passage statute was to ensure that fish passage was secured on all new and existing structures. However, it was acknowledged that this was significantly more challenging to do in the context of existing structures given the amount of investment it might take. Accordingly, the concept of "triggers" was established to ensure that owners/operators would take fish passage costs into account as part of a larger project/expenditure but not for minor maintenance. Unfortunately, the structure of the existing rule has created a system that upends this goal by allowing project owner/operators to avoid fish passage obligations by breaking up investments such that the trigger amounts are never exceeded but are cumulatively considerable over time. This is contrary to the goals of the statute.

Accordingly, we recommend that the trigger definition be modified to clarify that a "major replacement" occurs when a cumulative threshold of 30 percent is reached for all obstruction types, including dams. Additionally, we recommend that "major replacement" be defined by "percent of dam volume or by professional judgment of ODFW." This would help address circumstances where significant repairs occur that effectively replace a dam but result in only minor changes to volume. Defining what constitutes "structure volume" could also help address this point.

TU recommends the following definition: "Structure volume" means "the volume of a dam as the total space occupied by the materials forming the dam structure computed between abutments and from the top to the bottom of the dam. No deduction is made for small openings such as galleries, adits, and operating chambers within the dam structure. Portions of powerhouses, locks, spillways etc. may be included only if they are necessary for the structural stability of the dam."

241 na Conservation Angler Definition Section: Construction 19  
There is a problem with defining or establishing numeric thresholds that trigger the

statute's requirements when it results in management decisions to partition work in increments under the threshold when either the work or the obstacle impairs fish passage.

176 na ODOT 635-412-0005 - Definitions- Line 21: 21 "Add "or modification" to read: (b) "Major replacement, or modification, which includes:""

11 17 Portland Definitions - 635-412-0005 (9)(b); line 21 - Major Replacement 21 "need clarity around how to calculate percentages for purposes of triggering the OARs - AO size should be the whole of the structure, which include the earthen embankments, not just the concrete portion. " "Line 22: ""...for dams and diversions, excavation or replacement of 30 percent of embankment or concrete dam by volume, including periodic or seasonal replacements, unless: " 2021-03-22 11:28:16

125 na Rogers TU "Lines 21-23: diversions, excavations, or replacement of 30% of structure volume of the dam." 21 "Lines 21-23: Clarify the Major Replacement trigger. The 30% structural revision or repair trigger for fish passage review, should be triggered whether the barrier structure was modified as a single project or as a series of separate structural repairs or revisions, over time." "Lines 21-23: 21(b) Major replacement, which includes:

22(A) for dams and diversions, excavation, or replacement of 30 percent by structure volume of the dam, including periodic or seasonal replacements, whether completed as a single project or as the result of an accumulated series of non-contiguous structural additions and revisions, unless:"

76 na CCFB 635-412-0005 (9)(b) (lines 47 - 96) 21 "Regarding the definition for Major Replacement, the regulation exceeds what major replacement is by defining 50% as a major replacement. It has also interpreted repairs as major replacements. For example, they have defined relining a culvert as a major replacement whereas this is actually just routine maintenance. CCFB recommends that the definition for major replacement to revised to correctly define what a major replacement is. " Email

143 na PacifiCorp "Definitions (-0005 (b)(A)); Line 22 and 23" 21 ""Major replacement" denotes a majority (i.e., more than 50 percent). The volumetric threshold for excavation or replacement of dams and diversions

should be brought in line with the other facility types that require over 50 percent to meet this definition.

In consideration of the change above, structure volume would be inclusive of the entirety of the Artificial Obstruction, including any earthen embankments, and not just the concrete portion of the obstruction."

101 na Mary-Ann Farm Bureau Definitions 21 "The definition of "major replacement" should be narrowed – is has been used to capture very minor repairs, which do not significantly alter the structure or change its relationship to fish passage. Routine maintenance should not trigger application of this statute. We strongly object to the introduction of a cumulative standard for determining if something is a major replacement."

7 13 La Pine The Wild River Owners Association (WROA) "Line 1: ODFW and any relevant state agency shall fully enforce its Fish Passage Rules, especially when native fish species are barred from volitional migration up and down stream. Lines 22/23 should make all maintenance cumulative over time. Once the 30% level is reached owners of barriers should be required to provide and bear the costs of volitional fish passage. The Wild River Owners Association (WROA) represents over 200 homeowners who live on or near the Deschutes River at Pringle Falls just below Wickiup Reservoir. Our development straddles the river just north of Burgess Road in Deschutes County. We are directly affected by Deschutes River fish and wildlife habitat. WROA supports efforts by Trout Unlimited, the Sierra Club, the Native Fish Society and other groups to require the restoration of fish passage at the PacifiCorp Newport Avenue Bridge Dam on Mirror Pond. Fish passage was provided into the 1960's at which time the fish passage structure was removed without appropriate approval from ODFW. " 22 "Many species of fish that occupy the Deschutes, including redband and brown trout, steelhead, various salmon species and mountain whitefish, require movement up and down long reaches of streams to maintain healthy populations and genetic diversity. Unrestricted movement allows species to adapt to seasonally changing water conditions such as those caused by irrigation flows and ongoing climate change. An example of what should be prohibited by the rules is the Deschutes River Newport Dam which is the only remaining barrier to fish passage from Big Falls to Wickiup Reservoir. It is a complete barrier to fish movement up and down the river. In recent years all other man-made barriers to fish passage on this reach have been circumvented. Creating a passage here would open up 190 stream miles to fish movement and migration. " Lines 22/23 should make all maintenance cumulative over time. Once the 30% level is reached owners of barriers should be required to provide and bear the costs of volitional fish passage. No rule changes matter if rules are not respected and enforced.

2021-03-12 13:04:32

3 9 BEND 635-412-0005 line 22 22 "I would like to add the word **cumulative** to this line. As has happened at the Bend Hydro Project, repairs totaling less than 30% in one event can add up to well over 30% over time. This can lead to major repairs or modifications being made over time which should trigger the need to include fish passage but don't because they are considered one time events. Adding the word cumulative to this definition would prevent the deliberate avoidance of providing passage. **As a side note the word cumulative appears in line 27,28,34 but not on 22.** " "I would like to add the word cumulative to this line. As has happened at the Bend Hydro Project, repairs totaling less than 30% in one event can add up to well over 30% over time. This can lead to major repairs or modifications being made over time which should trigger the need to include fish passage but don't because they are considered one time events. Adding the word cumulative to this definition would prevent the deliberate avoidance of providing passage. As a side note the word cumulative appears in line 27,28,34 but not on 22. " 2021-03-11 11:15:14

4 10 Bend self "635-412-0005 Fish Passage 19 (9) ""**Construction**"" means: 22 (A) for dams and diversions, excavation or replacement of 30 percent by structure volume of the dam, including periodic or seasonal replacements, unless: (i) Only checkboards are replaced; or (ii) Fish passage approval has already been obtained in writing from the Department for expected replacement." 22 "The **rule should be amended to lower the percentage threshold and to clarify that construction means over the life of the structure, not just an individual event** (specifically, the cumulative modifications, repairs and upgrades of a dam over time). This will address the problem of the Pacific Power dam in Bend where over the years substantive upgrades and restorations to the dam have been made, but never exceeding the 30% volume threshold that would require fish passage. Related, the Pacific Power dam once had fish passage and was apparently given a temporary waiver by ODFW with the expectation it would be added later. The rule change is necessary to close the loophole a dam owner can use to avoid the expense of adding fish passage. As the rule is currently interpreted, any dam owner could rebuild their dam over time yet never incur the cost of adding fish passage. This rule change is important in this particular situation as the Pacific Power dam is the only remaining blockage in this reach of the Deschutes River." "19 (9) ""**Construction**"" means: 22 (A) for dams and diversions, excavation or replacement of **10 percent by structure volume of the dam, or exceeding 10% of the cost to add/replace fish passage to the dam,** including periodic or seasonal replacements, unless: (i) Only checkboards are replaced; or (ii) Fish passage approval has already been obtained in writing from the Department for expected replacement **within 2 years.** 22 (AA) for dams and diversions where older fish passage structures are obsolete, unusable or out of compliance with current guidelines, any modification, excavation or replacement of the dam, unless: (i) Only checkboards are replaced; or (ii) Fish passage approval has been obtained in writing from the Department for expected replacement within 2 years." 2021-03-11 12:28:47

86 na Water Watch Line 22 22 To address a potential loophole in triggering events for dams. "Clarify that percentage replacement can included cumulative work for all obstruction types (not just tidegates and floodgates). We suggest a 30 percent threshold for all obstructions on grounds that constitutes ""major replacement.""

42 48 Portland PacifiCorp 635-412- Definition Section 22 "PacifiCorp owns over 3,000 megawatts of renewable energy generating facilities, including several hydroelectric projects on waters of the state of Oregon inhabited by native migratory fish. The company is also expanding its renewable generation portfolio to address climate change impacts and ultimately achieve net zero greenhouse gas emissions in service of over 2 million customers across six western states. Therefore, PacifiCorp hereby expresses its support and interest in Oregon Department of Fish and Wildlife (ODFW)'s current review and revision of the fish passage administrative rules (Oregon Administrative Rules (OAR) 635-412-) as motivated, in part, by ODFW's new Climate and Ocean Change Policy (OAR 635-900-). Addressing climate change will require prudent, near-term actions to support ODFW's mission to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. PacifiCorp supports science-based decision-making regarding fish passage in Oregon for the purposes of achieving recovering and sustainable populations of native migratory fish. PacifiCorp also notes that hydropower has a significant role to play in moving towards carbon-neutral operations in Oregon and ameliorating the causes and effects of climate change. Therefore, the climate change benefits of hydroelectricity should be considered in net benefit analyses of fish passage at hydropower facilities. PacifiCorp has gained experience implementing fish passage solutions at our federally-licensed hydroelectric projects, and we have learned that site-specific information on current and, to the extent possible, future conditions must be considered in implementation of the administrative rules to maximize long-term net benefits to native migratory fish. In certain cases, biological research has concluded that there may be little value to local fish populations in light of the expense of constructing, operating, and maintaining fish passage at an artificial obstruction. Off-site mitigation projects with lower costs than implementing fish passage at an artificial obstruction can provide a greater net benefit to at-risk fish populations, including some that may not be present at the site. The revised administrative rules should clarify that it is the intent of the state to achieve the highest net benefit to fish populations when considering the impacts of an artificial obstruction and any proposed mitigation measures. " " Definitions (-0005 (b)(A)); Line 22 and 23 "Major replacement" denotes a majority (i.e., more than 50 percent). The volumetric threshold for excavation or replacement of dams and diversions should be brought in line with the other facility types that require over 50 percent to meet this definition. In consideration of the change above, structure volume would be inclusive of the entirety of the



Artificial Obstruction, including any earthen embankments, and not just the concrete portion of the obstruction. " 2021-05-04 14:06:40

6 12 BEND River in Bend 635-412-0005 line 22 line 109 22 It has been used by industry to block their responsibility for providing fish passage...it is unenforceable as written Migratory fish can not be changed to favor anadromous over resident fish present or historically present. rule/line 22 will read as follows: All blockages of fish passage will provide to the commission a plan that within a period of five years fish passage will be available. A waiver for good cause can be provided unless fish passage was historically provided in which case no waiver will be granted. General maintenance will be permitted on blockages but won't impact fish passage rules. Migratory resident fish are vitally important for the gene pool of O. Mykiss which depends on resident trout for spawning with anadromous brethren in the global warming of our rivers. Other species such as Bull Trout also used a migratory life style to facilitate different water conditions. The Bend Hydro Project is a prime example of not letting fish move through the system and represents how different the arid East Side of the Cascades from the West side. 2021-03-12 10:08:21

132 na Deschutes TU Lines 22-23: excavation or replacement of 30% structure volume of dam 22 "Lines 22-23: There is general consensus among involved conservation groups in the Bend area that this provision was not properly applied in the case of the major rehabilitation work done on the Mirror Pond dam. The 30% factor specified in OAR was reached at Mirror Pond but fish passage requirements were not triggered. This indicates a lack of clarity in the current language with specific reference to the phrase "by structure volume" which is pivotal in applying this rule. Structure volume should be defined and included in the definitions section of the OAR.

The phrase "structure volume" is not readily found in a search of terms related to dam engineering. The closest was provided by Stanford University in their National Performance of Dams Program where "the volume of a dam is the total space occupied by the materials forming the dam structure computed between abutments and from the top to the bottom of the dam. No deduction is made for small openings such as galleries, adits, and operating chambers within the dam structure. Portions of powerhouses, locks, spillways etc. may be included only if they are necessary for the structural stability of the dam." This may not be the best definition for "structure volume" but highlights the need that something more specific be included in the OAR to better define the context of the 30% factor." "Lines 22-23: Note: to add some clarity for this section, a definition should be added after the current line 161. This suggested language is offered as a starting point, there may be a better definition available:

"Structure volume" means the volume of a dam as the total space occupied by the materials forming the dam structure computed between abutments and from the top to the bottom of

the dam. No deduction is made for small openings such as galleries, adits, and operating chambers within the dam structure. Portions of powerhouses, locks, spillways etc. may be included only if they are necessary for the structural stability of the dam."

42 48 Portland PacifiCorp 635-412- Definition Section 24 "PacifiCorp owns over 3,000 megawatts of renewable energy generating facilities, including several hydroelectric projects on waters of the state of Oregon inhabited by native migratory fish. The company is also expanding its renewable generation portfolio to address climate change impacts and ultimately achieve net zero greenhouse gas emissions in service of over 2 million customers across six western states. Therefore, PacifiCorp hereby expresses its support and interest in Oregon Department of Fish and Wildlife (ODFW)'s current review and revision of the fish passage administrative rules (Oregon Administrative Rules (OAR) 635-412-) as motivated, in part, by ODFW's new Climate and Ocean Change Policy (OAR 635-900-). Addressing climate change will require prudent, near-term actions to support ODFW's mission to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. PacifiCorp supports science-based decision-making regarding fish passage in Oregon for the purposes of achieving recovering and sustainable populations of native migratory fish. PacifiCorp also notes that hydropower has a significant role to play in moving towards carbon-neutral operations in Oregon and ameliorating the causes and effects of climate change. Therefore, the climate change benefits of hydroelectricity should be considered in net benefit analyses of fish passage at hydropower facilities. PacifiCorp has gained experience implementing fish passage solutions at our federally-licensed hydroelectric projects, and we have learned that site-specific information on current and, to the extent possible, future conditions must be considered in implementation of the administrative rules to maximize long-term net benefits to native migratory fish. In certain cases, biological research has concluded that there may be little value to local fish populations in light of the expense of constructing, operating, and maintaining fish passage at an artificial obstruction. Off-site mitigation projects with lower costs than implementing fish passage at an artificial obstruction can provide a greater net benefit to at-risk fish populations, including some that may not be present at the site. The revised administrative rules should clarify that it is the intent of the state to achieve the highest net benefit to fish populations when considering the impacts of an artificial obstruction and any proposed mitigation measures. " " Definitions (-0005 (b)(A)(i)); Line 24 and 25 Insert between (i) and (ii) the following: (ii) The major replacement is for the purpose of addressing dam safety deficiencies and does not increase operating storage or diversion capacity. Modifications that are for dam safety and/or to increase reservoir storage solely to address high runoff conditions and protection of downstream resources should be exempt from this requirement. For example, the Federal Energy Regulatory Commission (FERC) may require an increase in dam height to help pass a Probable Maximum Flood (PMF), however that newly gained storage would not be part of normal operations, and would only be used during a PMF event. " 2021-05-04 14:06:40

12 18 Portland 635-412-0005: 9(b)(A) 24 "If changes are required to address public health and safety needs (needs a larger spillway for example), this should not trigger the OARs. Otherwise this can lead to extended delays in addressing safety needs which is not in the public interest. " Line 24- ...unless: (i) Only checkboards are replaced; (ii) Fish passage approval has already been obtained in writing from the Department for expected replacement; or (iii) changes are required by Federal or State Dam Safety Jurisdiction to address public safety or health concern" 2021-03-22 11:41:33

144 na PacifiCorp Definitions (-0005 (b)(A)(i)); Line 24 and 25 24  
"Insert between (i) and (ii) the following:

(ii) The major replacement is for the purpose of addressing dam safety deficiencies and does not increase operating storage or diversion capacity.

Modifications that are for dam safety and/or to increase reservoir storage solely to address high runoff conditions and protection of downstream resources should be exempt from this requirement. For example, the Federal Energy Regulatory Commission (FERC) may require an increase in dam height to help pass a Probable Maximum Flood (PMF), however that newly gained storage would not be part of normal operations, and would only be used during a PMF event."

75 na CCFB 635-412-0005 (lines 25- 26) 25 "Regarding artificial obstruction, this section detail dikes, berms, and levees as artificial obstructions. Dikes, berms, and levees were never included in the original legislation. This is an overreach of the fish passage regulations. CCFB recommends that reference to dikes, berms and levees be deleted from this section. " Email

13 19 Portland "635-412-0005 / 9(c) Clarification of ""storage capacity""  
38 "Modifications that are for dam safety and/or to increase reservoir storage to address only high runoff conditions and protection of downstream resources should be exempt from this. For example, FERC may require a dam height increased to help handle a PMF, but that extra storage would not be part of normal operations but is only used during a PMF. Such an improvement or modification should not be a trigger for fish passage. Using such a requirement as a trigger causes delay to critical dam safety needs. the proposed change clarifies that increasing OPERATING storage could trigger the OAR" Line 38 (c) Structural  
modifications that increase operating storage or diversion capacity; or 2021-03-22  
12:07:29

15 21 Grants Pass Public "63 (i) Activities defined under OAR 635-412-0005(9)(d) in all locations where current channels cross the artificial obstruction segmenting the estuary, floodplain, or wetland; or (ii) The cumulative removal, fill, replacement, or addition of over 50 percent by volume of the existing material directly above an historic channel or historically-inundated area; and (D) For other artificial obstructions, the cumulative removal, fill, replacement, or addition of over 50 percent of the structure within, below or above the channel..." 39 This proposal isn't feasible. Who is going to track cumulative metrics and determine the 50% threshold from the time the artificial obstruction is built until the magic 50% number is hit? Can the unrealistic 50% threshold. 2021-03-23 09:25:25

179 na ODOT 635-412-0005 – Definitions - Line 43 43 "“Fills or removes over 50 percent by volume of the existing roadbed material directly above a culvert, except when this volume is exclusively composed of the top 1 foot of roadbed material.”

- Paving projects that do not extend the service life of the stream crossing should not trigger fish passage criteria. During these types of projects, the structural integrity of the crossing is not addressed, and service life is not extended. Paving, ADA, and safety projects have avoided areas where they would trigger fish passage, even though the location may be best suited for the traveling public. Recommend removing this section altogether"

### General Comments on Triggers at Culverts and Bridges:

#### Bridges

174 na ODOT 635-412-0005 – Definitions – “Bridge” - "The word road is limiting. Assume this also applies to pedestrian/bike bridges, train bridges, etc"

"“Bridge” – It is inappropriate in the engineering discipline to classify a 20 ft clear span as the appropriate definition of a bridge. 20 ft is an NBI threshold used to define what types of structures are required to be inspected and included in the National Bridge Inventory.

- The current definition is ignoring open bottomed, arches and single-span structures that are less than 20 ft? These are not classified as “culverts”. How are these types of structures defined, and how are these captured in OARs / Design criteria, etc?"

#### Clear Span

180 na ODOT 635-412-0005 – Definitions – “Clear Span” - "“Clear Span” as defined in Bridge clarification document (2008): “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". Is there a way to specify if this is based on road or stream centerline in the cases of skew?

- The bridge and hydraulic engineering disciplines define span differently. The Bridge discipline measures span along the centerline of the roadway / bridge structure. The Hydraulic discipline measures span perpendicular to the centerline of the flowline of the hydraulic structure. When the hydraulic structure is oriented perpendicular to the road

centerline the measurements are the same. When the hydraulic structure is on skew these measurements differ. This is described in the ODOT Hydraulic Design Manual as well as in the ODOT Bridge Design Manual. For this document, it is recommended recommend using the term "Bridge Span" and "Hydraulic Span" instead of "Clear Span" depending on what is attempting to be conveyed."

### Culverts

175 na ODOT 635-412-0005 – Definitions – potential for definition of "Culvert".  
- There needs to be some definition for a structure that has a clear span of less than 20 feet and does have earthen fill.

234 na ODOT General Pertaining to Bridges49 Clarity on triggers:  
"...through time makes significant repairs or patches to over 50 percent of the linear length of a culvert or over 50 percent of the structural elements of a bridge"

235 na ODOT General Pertaining to Bridges49 "How is "50 percent of the structural elements of a bridge" measured? There seems to be many ways this can be interpreted, clarity is suggested."

236 na ODOT General Pertaining to Bridges49 ""50% of the structural elements of the bridge. Structural elements do not include road wearing surfaces, deck, guard rails, sidewalks, or atheistic elements. Structural elements do include bridge bents, footings, major sub structure, riprap or other bank and scour protective elements, etc" or similar. 50% is per repair incident, not cumulatively over all time – no way to track this."

237 na ODOT Bridge Maintenance 49 "Comment Received, and relates to definition of trigger event on bridges requiring clarity. "ODOT needs the ability to be able to do maintenance on deteriorated timber piles to keep bridges in service and not trigger

fish passage. Even if a pile is repaired in place, the repair may be slightly larger than the original pile. Or, perhaps another pile needs to be added. **We should not have to replace a bridge simply because we can't do reasonable maintenance on it."**

177 na ODOT 635-412-0005 – Definitions - **Line 51** 51 ""(iv) Replaces any part of a culvert, except ends which become misaligned or eroded and which are replaced to their original configuration;" – **Need to define "ends"** – Is this 10% of the culvert length? 25%? Or, a single "segment", regardless of length? **Recommend either 25%, or, align with bridge criteria (50%)."**

178 na ODOT "635-412-0005 - Definitions– Line 54, 55" 54  
"clarification: "Makes replacements, repairs, patches, or modifications to an existing culvert that are different than the original configuration and which reduce any level of fish passage for native migratory fish with current access, as determined by the Department, to the culvert."

- **If the repair restores the structure to its original configuration, and does not reduce the level of fish passage compared to the pre - repair action, does this constitute a trigger?** (interpreted by applicants as "no"). If yes, **recommend editing text in lines 54 and 55 to make trigger action clear.** If no, recommend allowing repairs up to 50% that do not extend the design life of the structure."

**Lines 63-64 Current Language: (14) "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.**

181 na ODOT 635-412-0005 – Definitions – **Line 63** "**Emergency**"63  
""Emergency" – **Need for definition in OARs?** Currently referenced once. If definition is warranted, recommend including "as deemed by local, state or federal jurisdictions" or similar."

**Line 71-73 Current Language: (17) "Experimental fish passage structure" means a fish passage structure based on new ideas, new technology, or unique, site-specific conditions determined by the Department to not be covered by existing fish passage criteria but to have a reasonable possibility of providing fish passage.**

255 na Whooshh "**Definition Section** ""**Experimental**"" line 113" 113  
"**What is ""new""?** How long does a technology need to be around before it is no longer

""new""? What is the ""existing fish passage criteria"" - are you referring? Where do NMFS guidelines play a role. Of course guidelines are not criteria, so they shouldn't control but .... Also delete ""to move volitionally"". Every time a fish is delayed or falls back in a ladder, this is not a volitional movement, when the fish is trying to migrate upstream. Propose instead: ""volitionally enter the Fishway entrance and passage with minimal stress ..."". Add a sentence to definition of Fish Passage to clarify that fish passage may mean more than one fishway to achieve the upstream and downstream passage. For example, there may be separate downstream passage or there may species specific passage differnt than otehr species - e.g. lampray. Another option is to change the word ""and"" between ""upstream and downstream"" and then change it to ""and/or"" ." 5/18/2021

**Line 74(18) Current Language: "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 volitionally, with minimal stress, and without physical or physiological injury upstream and downstream of an artificial obstruction.**

247 na Portland Ted Labee Defintions Section NMF Lines 74-76 and 109-144  
74 "At lines 74-76 and 109-144: the definition of "Fish passage" requires that the Department identify the weakest native migratory fish and life history stage from a specific list of "Native migratory fish." This places undue burden on ODFW, and it is too narrow in scope. Please require unimpeded passage for all species of adult and juvenile fishes, not just the migratory species identified. Alternatively, ODFW should at least consider identifying a design target fish size/life stage for the various species. In Washington State, in most small stream situations, proponents must meet the minimum fish passage requirements for a 6-inch resident trout." 5/18/2021

242 na Conservation Angler Definition Section: Fish Passage 74  
"The use of this term appears undefined in statute or elsewhere in this rule - and yet refers to a Department determination of what is the ""weakest"" fish and life history stage. What does ""weakest"" mean - does it refer to population status or ability to swim? What are the criteria that are used in this determination?"

58 64 Portland Definitions (-0005 (18)); Line 75 75 "Suggest striking "with minimal stress" as it is a subjective term, using criterion of physiological injury" Strike 2021-05-07 07:48:10

145 na PacifiCorp Definitions (-0005 (18)); Line 75 75

Suggest striking "with minimal stress" as it is a subjective term and there is a better criterion below (physiological injury).

42 48 Portland PacifiCorp 635-412- Definition Section 75 "PacifiCorp owns over 3,000 megawatts of renewable energy generating facilities, including several hydroelectric projects on waters of the state of Oregon inhabited by native migratory fish. The company is also expanding its renewable generation portfolio to address climate change impacts and ultimately achieve net zero greenhouse gas emissions in service of over 2 million customers across six western states. Therefore, PacifiCorp hereby expresses its support and interest in Oregon Department of Fish and Wildlife (ODFW)'s current review and revision of the fish passage administrative rules (Oregon Administrative Rules (OAR) 635-412-) as motivated, in part, by ODFW's new Climate and Ocean Change Policy (OAR 635-900-). Addressing climate change will require prudent, near-term actions to support ODFW's mission to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. PacifiCorp supports science-based decision-making regarding fish passage in Oregon for the purposes of achieving recovering and sustainable populations of native migratory fish. PacifiCorp also notes that hydropower has a significant role to play in moving towards carbon-neutral operations in Oregon and ameliorating the causes and effects of climate change. Therefore, the climate change benefits of hydroelectricity should be considered in net benefit analyses of fish passage at hydropower facilities. PacifiCorp has gained experience implementing fish passage solutions at our federally-licensed hydroelectric projects, and we have learned that site-specific information on current and, to the extent possible, future conditions must be considered in implementation of the administrative rules to maximize long-term net benefits to native migratory fish. In certain cases, biological research has concluded that there may be little value to local fish populations in light of the expense of constructing, operating, and maintaining fish passage at an artificial obstruction. Off-site mitigation projects with lower costs than implementing fish passage at an artificial obstruction can provide a greater net benefit to at-risk fish populations, including some that may not be present at the site. The revised administrative rules should clarify that it is the intent of the state to achieve the highest net benefit to fish populations when considering the impacts of an artificial obstruction and any proposed mitigation measures. " Definitions (-0005 (18)); Line 75 Suggest striking "with minimal stress" as it is a subjective term and there is a better criterion below (physiological injury).

2021-05-04 14:06:40



**Lines 77-79 Current Language: (19) "Fish passage structure" means any human-built structure that allows fish passage past an artificial obstruction, including, but not limited to, fishways and road-stream crossing structures such as culverts and bridges.**

182 na ODOT 635-412-0005 – Definitions – Line 77 "Fish Passage Structure"  
77 "add "conveyance" to cover constructed or restored channels that use native and or natural materials (e.g. large wood, substrate, etc.)."

254 na Whooshh Definition Section 77 "Include  
""experimental fish passage structures"" to section where fishway is defined for trigger purposes."  
5/18/2021

**Lines 84-85 Current Language: (21) "Fishway entrance" means the component of a fishway that discharges attraction flow into the tailrace and where upstream migrant fish enter the fishway.**

42 48 Portland PacifiCorp 635-412- Definition Section 84 "PacifiCorp owns over 3,000 megawatts of renewable energy generating facilities, including several hydroelectric projects on waters of the state of Oregon inhabited by native migratory fish. The company is also expanding its renewable generation portfolio to address climate change impacts and ultimately achieve net zero greenhouse gas emissions in service of over 2 million customers across six western states. Therefore, PacifiCorp hereby expresses its support and interest in Oregon Department of Fish and Wildlife (ODFW)'s current review and revision of the fish passage administrative rules (Oregon Administrative Rules (OAR) 635-412-) as motivated, in part, by ODFW's new Climate and Ocean Change Policy (OAR 635-900-). Addressing climate change will require prudent, near-term actions to support ODFW's mission to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. PacifiCorp supports science-based decision-making regarding fish passage in Oregon for the purposes of achieving recovering and sustainable populations of native migratory fish. PacifiCorp also notes that hydropower has a significant role to play in moving towards carbon-neutral operations in Oregon and ameliorating the causes and effects of climate change. Therefore, the climate change benefits of hydroelectricity should be considered in net benefit analyses of fish passage at hydropower facilities. PacifiCorp has gained experience implementing fish passage solutions at our federally-licensed hydroelectric projects, and we have learned that site-specific information on current and, to the extent possible, future conditions must be considered in implementation of the administrative rules to maximize long-term net benefits to native migratory fish. In certain cases, biological research has concluded that there may be little value to local fish populations in light of the expense of

constructing, operating, and maintaining fish passage at an artificial obstruction. Off-site mitigation projects with lower costs than implementing fish passage at an artificial obstruction can provide a greater net benefit to at-risk fish populations, including some that may not be present at the site. The revised administrative rules should clarify that it is the intent of the state to achieve the highest net benefit to fish populations when considering the impacts of an artificial obstruction and any proposed mitigation measures. " Definitions (-0005 (21)); Lines 84-85 Suggest the following edit: "...flow into the waterway downstream of an artificial obstruction tailrace and where upstream..." 2021-05-04 14:06:40

146 na PacifiCorp Definitions (-0005 (21)); Lines 84-85 84  
"Suggest the following edit:

"...flow into the waterway downstream of an artificial obstruction tailrace and where upstream..."

**Line 91 Current Rule Language: (24) "Forebay" means the water impounded immediately upstream of an artificial obstruction.**

42 48 Portland PacifiCorp 635-412- Definition Section 91 "PacifiCorp owns over 3,000 megawatts of renewable energy generating facilities, including several hydroelectric projects on waters of the state of Oregon inhabited by native migratory fish. The company is also expanding its renewable generation portfolio to address climate change impacts and ultimately achieve net zero greenhouse gas emissions in service of over 2 million customers across six western states. Therefore, PacifiCorp hereby expresses its support and interest in Oregon Department of Fish and Wildlife (ODFW)'s current review and revision of the fish passage administrative rules (Oregon Administrative Rules (OAR) 635-412-) as motivated, in part, by ODFW's new Climate and Ocean Change Policy (OAR 635-900-). Addressing climate change will require prudent, near-term actions to support ODFW's mission to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. PacifiCorp supports science-based decision-making regarding fish passage in Oregon for the purposes of achieving recovering and sustainable populations of native migratory fish. PacifiCorp also notes that hydropower has a significant role to play in moving towards carbon-neutral operations in Oregon and ameliorating the causes and effects of climate change. Therefore, the climate change benefits of hydroelectricity should be considered in net benefit analyses of fish passage at hydropower facilities. PacifiCorp has gained experience implementing fish passage solutions at our federally-licensed hydroelectric projects, and we have learned that site-specific information on current and, to the extent possible, future conditions must be considered in implementation of the administrative rules to maximize long-term net benefits to native migratory fish. In certain cases, biological research has concluded that there may be little value to local fish populations in light of the expense of

constructing, operating, and maintaining fish passage at an artificial obstruction. Off-site mitigation projects with lower costs than implementing fish passage at an artificial obstruction can provide a greater net benefit to at-risk fish populations, including some that may not be present at the site. The revised administrative rules should clarify that it is the intent of the state to achieve the highest net benefit to fish populations when considering the impacts of an artificial obstruction and any proposed mitigation measures. " " Definitions (-0005 (24)); Line 91 "Impoundment" or "reservoir" are more appropriate terms than "Forebay". A forebay is generally something else entirely in hydropower: temporary storage basin upstream of an intake chamber (i.e., penstock). " 2021-05-04 14:06:40

147 na PacifiCorp Definitions (-0005 (24)); Line 91 91  
" "Impoundment" or "reservoir" are more appropriate terms than "Forebay". A forebay is generally something else entirely in hydropower: temporary storage basin upstream of an intake chamber (i.e., penstock)."

**Lines 92-96 Current Rule Language: (25) "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 unless they involve construction or abandonment of an artificial obstruction.**

17 23 "Prineville, OR" Crook County IDENTIFY WHAT RULE(S) YOU WOULD LIKE TO SEE REVISED. PROVIDE SPECIFIC LINE NUMBER. OAR 635-412-0005 (25); lines 92-96 OAR 635-412-0010 (4); lines 193-209 OAR 635-412-0025 (2); lines 320-324 OAR 635-412-0040 (3); lines 685-687 92 "WHY IS THIS RULE CHANGE IMPORTANT? Oregon's Fish Passage laws were written to enhance and restore populations of native migratory fish (NMF). There are many notable examples where these laws have succeeded in meeting this goal. However, a recent project proposal at Bowman Dam has brought to light serious shortcomings in Oregon's Fish Passage Administrative Rules. Ochoco Irrigation district, in collaboration with the City of Prineville and Crook County, applied for a fish passage waiver for the Bowman Dam Hydroelectric Project. This retrofit project was proposed on a federally-owned water storage and flood control dam, to generate carbon-free electricity in concert with existing water operations. While installing the hydropower turbines, project proponents proposed to modify the outlet structure of Bowman Dam to reduce downstream dissolved gas concentrations— a well-known water quality problem in the Crooked River. The project was also seen as an opportunity to modernize control of discharge at the dam, which would allow operators to reduce ramping rates and precisely control water releases from Prineville Reservoir for the benefit of fish in the lower Crooked River. Despite the clear environmental benefits of the

project, existing OARs required the Bowman Hydroelectric Project to apply for a Fish Passage Waiver because the proposed project represented a change in Artificial Obstruction permit status (OAR 635-412-0005 [25]). The applicants were informed in August 2019 by the Oregon Department of Fish and Wildlife ('Department') that OAR 635-412-0040 (3) disqualified water quality improvements as a form of fish passage mitigation because water quality is regulated by the Oregon Department of Environmental Quality (ODEQ). Therefore, in an effort to satisfy the waiver application process, project proponents offered three additional habitat restoration measures. The National Marine Fisheries Service and the U.S Fish and Wildlife Service concluded that the Bowman Hydroelectric Project offered significant benefits for NMF recovery in the lower Crooked River, including ESA-listed Chinook Salmon and steelhead trout. Nevertheless, Department staff continued to oppose the project because of their interpretation of the existing OARs. In October 2020, the Oregon Fish and Wildlife Commission denied our application for a Fish Passage Waiver, citing the Department's determination that the proposed mitigation measures failed to meet the net benefit requirement. As a result, this renewable energy project will not proceed and none of the proposed water quality or habitat restoration measures will be implemented. In short, we lost the opportunity to develop a project that would benefit both the environment and the economy. We believe that the Fish Passage Administrative Rules are being implemented in a manner that undermines Oregon's broader statutory goals to enhance fish populations and reduce greenhouse gas emissions. More specifically, the Department's discretionary authority over the waiver application process has led to inconsistent outcomes due to ridged interpretation of the OARs in some instances (e.g. OAR 635-412-0040 [3]) and lack of strict adherence to the OARs in others (e.g. OAR 635-412-0025 [2]). In the case of Bowman Dam, the Department's myopic focus on fish passage as the only acceptable alternative made construction of the hydroelectric project cost prohibitive and satisfaction the waiver application process impossible. We request that the following OARs be revised and implemented in a manner that supports Oregon's broader composite objective to provide fish passage, enhance stream habitat conditions, and foster renewable energy projects: OAR 635-412-0005 (25) Retrofit hydroelectric projects provide a unique opportunity for meeting Oregon's greenhouse gas reduction goals while limiting effects on NMF. However, these projects are often small-scale and cannot generate enough revenue to provide fish passage at existing artificial obstructions. The Bowman Dam Hydroelectric Project, for example, would have produced enough clean energy to power 1,400 homes, but \$15 million in anticipated revenue during the licensing period was only a fraction of the cost of passage facilities at the dam (\$138-250 million). Such projects should not trigger fish passage requirements because doing so hinders progress towards meeting Oregon's goals. OAR 635-412-0005 (25) should be modified such that retrofit hydroelectric projects that do not alter the primary purpose of existing Artificial Obstructions do not trigger fish passage requirements. OAR 635-412-0010 (4) There were several instances during the Department's review of the Bowman Dam Hydroelectric Project waiver application where the current Fish Passage administrative rules were ignored or overlooked. Perhaps the most consequential example of this involved the Department's evaluation of passage benefits under historical conditions. The

Department used a mile-for-mile approach to compare the quantity of habitat available upstream of Bowman Dam to the quantity of habitat improved by our proposed mitigation measures. Instead of using current data to determine the quantity of habitat upstream of the dam, the Department relied on assumed historical fish distributions. OAR 635-412-0025 (2) clearly states that the net benefit determination “shall be based upon conditions that exist at the time of comparison.” The Department’s decision to rely on historical conditions resulted in an enormous overestimate of the biological value of passage at Bowman Dam and subsequently required an unattainable amount of mitigation to receive a fish passage waiver. The Fish Passage Task Force should be required to review the Department’s interpretation of the Fish Passage Administrative Rules and ensure all rules are consistently followed. OAR 635-412-0025 (2) The Department often bases their Net Benefit determination on a mile-for-mile comparison between the habitat available upstream of an artificial obstruction and the habitat restored by proposed mitigation measures. This approach manifestly fails to incorporate pertinent biological information. A clear example of this occurred in the Department’s Net Benefit Analysis for the Bowman Dam Hydroelectric Project. The Department asserted that there were 57 miles of historical Chinook Salmon habitat located upstream of Bowman Dam. However, annual low flow conditions during the period of time when adult Chinook Salmon migrate would preclude access even if passage facilities were provided at the Dam. OAR 635-412-0025 (2) should require the Department to consider the biological needs of each species when quantifying the value of passage. This includes factors expected to impair the ability of a species to complete its life-cycle if passage is provided. OAR 635-412-0040 (3) The Department has applied OAR 635-412-0040 (3) in direct conflict with the goal of Oregon’s Fish Passage administrative rules to enhance and restore NMF populations. For example, in their Net Benefit Analysis of the Bowman Dam Hydroelectric Project, the Department refused to accept as mitigation structural modifications to the dam that would have resulted in significant improvements to water quality and NMF survival in the lower Crooked River. The Department interpreted OAR 635-412-0040 (3) such that the proposed modifications would eventually be required by ODEQ and therefore could not count as mitigation, despite the obvious benefits for fish. The Department then determined that the project would not meet the net benefit standard necessary to receive a fish passage waiver. OAR 635-412-0040 (3) should be modified to include as mitigation any activity that benefits NMF if the activity would only occur upon the approval of a Fish Passage Waiver. " "SUGGESTED RULE CHANGE FOR CONSIDERATION BY THE RULES ADVISORY COMMITTEE? PROVIDE SPECIFIC LINE NUMBER. 635-412-0005 (25); lines 92-96: “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 AND HYDROPOWER RETROFIT PROJECTS, unless they involve construction or abandonment of an artificial obstruction.” 635-412-0010 (4); lines 193-209: “The Task Force shall: (a) Serve as the public advisory committee and advise the Director and Commission regarding rulemaking to implement the fish passage and waiver requirements; (b)

Prioritize projects from the statewide inventory of artificial dams and obstructions for purposes of enforcement; (c) Recommend to the Director and Commission appropriate levels of funding and special conditions applicable to projects installing passage or alternatives to passage resulting in a net benefit to native migratory fish; (d) Select one of its members to serve as chair and one as vice chair of the Task Force; (e) Review and recommend to the Commission which projects should be exempt, and changes to the list of projects exempt from passage requirements under section 8 of Section 2 of HB 3002 (2001); (f) Report semiannually to the joint legislative committee created under ORS 171.551, or to the appropriate interim legislative committee with responsibility for salmon restoration or species recovery, advising the committee on matters related to fish passage; (g) Review applications for waivers of the fish passage requirement, **REVIEW THE DEPARTMENT'S INTERPRETATION OF THE FISH PASSAGE ADMINISTRATIVE RULES AS APPLIED TO EACH PASSAGE PROJECT AND PASSAGE WAIVER APPLICATION**, and advise the Commission as to whether alternative measures result in a net benefit to native migratory fish; (h) Perform such other duties relating to fish passage as requested by the Director or Commission; (i) The task force shall meet at such times and places as may be determined by the chair or by a majority of members of the task force." 635-412-0025 (2); **lines 320-324**: "Net benefit to native migratory fish is determined 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 mitigation. To qualify for a waiver of the requirement to install fish passage, mitigation shall result in a benefit to fish greater than that provided by the artificial obstruction with fish passage. **The net benefit to fish determination shall be based upon conditions that exist at the time of comparison AND SHALL CONSIDER THE AVAILABILITY OF THE FULL COMPLIMENT OF HABITAT CONDITIONS NECESSARY FOR EACH SPECIES TO COMPLETE ITS LIFE CYCLE.**" 635-412-0040 (3); **lines 685-687**: "Mitigation shall not include any activity that is a requirement or condition of any other agreement, law, permit, or authorization except if it is also for fish passage mitigation of the same action at the artificial obstruction for a different level of government **OR IF THE ACTIVITY IS CONDITIONAL ON APPROVAL OF A FISH PASSAGE WAIVER BY THE COMMISSION.**" " 2021-04-08 14:13:04

**42** 48 Portland PacifiCorp 635-412- Definition Section 92 "PacifiCorp owns over 3,000 megawatts of renewable energy generating facilities, including several hydroelectric projects on waters of the state of Oregon inhabited by native migratory fish. The company is also expanding its renewable generation portfolio to address climate change impacts and ultimately achieve net zero greenhouse gas emissions in service of over 2 million customers across six western states. Therefore, PacifiCorp hereby expresses its support and interest in Oregon Department of Fish and Wildlife (ODFW)'s current review and revision of the fish passage administrative rules (Oregon Administrative Rules (OAR) 635-412-) as motivated, in part, by ODFW's new Climate and Ocean Change Policy (OAR 635-900-). Addressing climate change will require prudent, near-term actions to support ODFW's mission to protect and

enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. PacifiCorp supports science-based decision-making regarding fish passage in Oregon for the purposes of achieving recovering and sustainable populations of native migratory fish. PacifiCorp also notes that hydropower has a significant role to play in moving towards carbon-neutral operations in Oregon and ameliorating the causes and effects of climate change. Therefore, the climate change benefits of hydroelectricity should be considered in net benefit analyses of fish passage at hydropower facilities. PacifiCorp has gained experience implementing fish passage solutions at our federally-licensed hydroelectric projects, and we have learned that site-specific information on current and, to the extent possible, future conditions must be considered in implementation of the administrative rules to maximize long-term net benefits to native migratory fish. In certain cases, biological research has concluded that there may be little value to local fish populations in light of the expense of constructing, operating, and maintaining fish passage at an artificial obstruction. Off-site mitigation projects with lower costs than implementing fish passage at an artificial obstruction can provide a greater net benefit to at-risk fish populations, including some that may not be present at the site. The revised administrative rules should clarify that it is the intent of the state to achieve the highest net benefit to fish populations when considering the impacts of an artificial obstruction and any proposed mitigation measures. " Definitions (-0005 (25)); Lines 92-96 Text should be revised so that adding new hydroelectric generation to existing dams and using the stream flow release as a non-consumptive use (e.g., hydro generation) does not trigger construction of fish passage. Suggested text: "...conditions on the applicant, where the proposed action creates a new Artificial Obstruction or increases the severity of an existing Artificial Obstruction including but not limited to licensing, relicensing, reauthorization or the granting of new water rights that affect availability of instream flows downstream of the artificial obstruction..." " 2021-05-04 14:06:40

148 na PacifiCorp Definitions (-0005 (25)); Lines 92-96 92 "Text should be revised so that adding new hydroelectric generation to existing dams and using the stream flow release as a non-consumptive use (e.g., hydro generation) does not trigger construction of fish passage.

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18 24 Prineville Ochoco Irrigation District OAR 635-412-0005 (25); lines 92-96 OAR 635-412-0010 (4); lines 193-209 OAR 635-412-0025 (2); lines 320-324 OAR 635-412-0040 (3); lines 685-687 92 "Oregon's Fish Passage laws were written to enhance and restore



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19      25      City of Prineville      City of Prineville      OAR 635-412-0005 (25); lines 92-96  
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Retrofit hydroelectric projects provide a unique opportunity for meeting Oregon's greenhouse gas reduction goals while limiting effects on NMF. However, these projects are often small-scale and cannot generate enough revenue to provide fish passage at existing artificial obstructions. The Bowman Dam Hydroelectric Project, for example, would have produced enough clean energy to power 1,400 homes, but \$15 million in anticipated revenue during the licensing period was only a fraction of the cost of passage facilities at the dam (\$138-250 million). Such projects should not trigger fish passage requirements because doing so hinders progress towards meeting Oregon's goals. OAR 635-412-0005 (25) should be modified such that retrofit hydroelectric projects that do not alter the primary purpose of existing Artificial Obstructions do not trigger fish passage requirements. OAR 635-412-0010 (4)

There were several instances during the Department's review of the Bowman Dam Hydroelectric Project waiver application where the current Fish Passage administrative rules were ignored or overlooked. Perhaps the most consequential example of this involved the Department's evaluation of passage benefits under historical conditions. The Department used a mile-for-mile approach to compare the quantity of habitat available upstream of Bowman Dam to the quantity of habitat improved by our proposed mitigation measures. Instead of using current data to determine the quantity of habitat upstream of the dam, the Department relied on assumed historical fish distributions. OAR 635-412-0025 (2) clearly states that the net benefit determination "shall be based upon conditions that exist at the time of comparison." The Department's decision to rely on historical conditions resulted in an enormous overestimate of the biological value of passage at Bowman Dam and subsequently required an unattainable amount of mitigation to receive a fish passage waiver. The Fish Passage Task Force should be required to review the Department's interpretation of the Fish Passage Administrative Rules and ensure all rules are consistently followed. OAR 635-412-0025 (2) The Department often bases their Net Benefit determination on a mile-for-mile comparison between the habitat available upstream of an artificial obstruction and the habitat restored by proposed mitigation measures. This approach manifestly fails to incorporate pertinent biological information. A clear example of this occurred in the Department's Net Benefit Analysis for the Bowman Dam Hydroelectric Project. The Department asserted that there were 57 miles of historical Chinook Salmon habitat located upstream of Bowman Dam. However, annual low flow conditions during the period of time when adult Chinook Salmon migrate would preclude access even if passage facilities were provided at the Dam. OAR 635-412-0025 (2) should require the Department to consider the biological needs of each species when quantifying the value of passage. This includes factors expected to impair the ability of a species to complete its life-cycle if passage is provided. OAR 635-412-0040 (3) The Department has applied OAR 635-412-0040 (3) in direct conflict with the goal of Oregon's Fish Passage administrative rules to enhance and restore NMF populations. For example, in their Net Benefit Analysis of the Bowman Dam Hydroelectric Project, the Department refused to accept as mitigation structural modifications to the dam that would have resulted in significant improvements to water quality and NMF survival in the lower

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133 na Deschutes TU Lines 95-96: change in permit status 92 "Lines 95-96: The definition for "fundamental change in permit status" should be broadened to

include a provision allowing some form of after-the-fact review of prior decisions regarding actions or nonactions taken by the Department. Again, citing the situation at Mirror Pond, it is

necessary to have a remedy for prior decisions/nondecisions affecting fish passage where information pertaining to the 30% trigger and structure volume was either not available,

inaccurate or misapplied in reaching a decision on fish passage status." "Lines 95-96:

...construction or abandonment of an artificial obstruction. This provision for change in permit status shall include conditions where it is determined that the original decision, including opting not to take action, may be subsequently reviewed by the Department where findings of fact materially affecting that action/inaction decision, were either unavailable, inaccurate or misapplied."

60 66 Portland Definitions (-0005 (25)); Lines 92-97 92 "In order to address climate change, its important to not close the door on opportunities to add new hydropower to non-power dams, if doing so does not negatively impact fish passage. Text should be revised so that adding new hydroelectric generation to existing dams and using the existing stream flow release as a non-consumptive use (e.g., hydro generation) does not trigger construction of fish passage." "Fundamental change in permit status" means a change in regulatory approval for the operation of an artificial obstruction where the regulatory agency 1) has discretion to impose additional conditions on the applicant, and 2) where the proposed action creates a new Artificial obstruction or increases the severity of an existing Artificial obstruction including but not limited to licensing, relicensing, reauthorization or the granting of new water rights that affect availability of instream flows, but not including water right transfers or routine maintenance permits unless they involve construction or abandonment of an Artificial obstruction "

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**Line 99 Current Language: (27) "Historically" means prior to 1859 (statehood).**

16 22 Grants Pass Public "141 (27) "Historically" means prior to 1859 (statehood).

" 71 This is so arbitrary and needs to be removed. None of us were alive in 1859 and there isn't a statewide dataset that accurately. Folks are relying on a local ODFW biologist to make an opinion that could cost them millions of dollars. There is no method to contest their



opinion and use science to come up with a different outcome. Climate change is real and has been occurring even before the industrial revolution. The world we live in today is not the world that existed in 1859. **Remove historic.** The world we live in today is not the world that existed in 1859 nor will it ever be 1859 conditions again. Focus on the changes we can make for tomorrow and remove the historic opinion based criteria. 2021-03-23 10:23:45

**Lines 102-104 Current Language: (29) "In-proximity" means within the same watershed or water basin, as defined by the Oregon Water Resources Department, and having the highest likelihood of benefiting the native migratory fish populations, as defined by the Oregon Department of Fish and Wildlife, directly affected by an artificial obstruction.**

77 na CCFB 635-412-0005(29) (lines 102 to 104) 102 "This section defines "In Proximity" as defined by the Oregon Water Resources Department. The regulation needs to, use the definition of "In Proximity" as provided in the Statute (Oregon Revised Statute 509-580(5). **CCFB rec:ommends that the reference to the Oregon Water Resources Department be deleted.** " Email

102 na Mary-Ann Farm Bureau Definitions 102 The definition of "in proximity" is inconsistent with the statute and should be changed to reflect the statutory language. **We recommend that the reference to "directly affected by an artificial obstruction" be removed from the definition of in-proximity.** It is too subjective and allow for too much agency interpretation and inconsistent application.

**Lines 109-112 Current Language: (32) "Native migratory fish" means native fish (as defined under OAR 635-007-0501) that migrate for their life cycle needs. These fish include all sub-species and life history patterns of the following species listed by scientific name in use as of 2005. Common names are provided for reference but are not intended to be a complete listing of common names, sub-species, or life history patterns for each species.**

115 na Lambert TU Definition of "Native Migratory Fish": OAR 635-412-0005 (32): **Line 109** 109 "The regulations define "native migratory fish" by including a reference to a related OAR 635-007-0501 which defines ""native fish"" as meaning indigenous to Oregon, not introduced. This includes both naturally produced and hatchery produced fish. This indicates that hatchery stock produced from fish native to Oregon are included in the "native migratory fish" definition. This is an important component that should be clearly stated in the definition, not simply referenced.

**TU recommends the following definition: "Native migratory fish" means "native fish as defined under OAR 635-007-0501 to be fish indigenous to Oregon, not introduced. This includes both**

naturally produced and hatchery produced fish that migrate for their life cycle needs.””

42 48 Portland PacifiCorp 635-412- Definition Section 109 "PacifiCorp owns over 3,000 megawatts of renewable energy generating facilities, including several hydroelectric projects on waters of the state of Oregon inhabited by native migratory fish. The company is also expanding its renewable generation portfolio to address climate change impacts and ultimately achieve net zero greenhouse gas emissions in service of over 2 million customers across six western states. Therefore, PacifiCorp hereby expresses its support and interest in Oregon Department of Fish and Wildlife (ODFW)'s current review and revision of the fish passage administrative rules (Oregon Administrative Rules (OAR) 635-412-) as motivated, in part, by ODFW's new Climate and Ocean Change Policy (OAR 635-900-). Addressing climate change will require prudent, near-term actions to support ODFW's mission to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and future generations. PacifiCorp supports science-based decision-making regarding fish passage in Oregon for the purposes of achieving recovering and sustainable populations of native migratory fish. PacifiCorp also notes that hydropower has a significant role to play in moving towards carbon-neutral operations in Oregon and ameliorating the causes and effects of climate change. Therefore, the climate change benefits of hydroelectricity should be considered in net benefit analyses of fish passage at hydropower facilities. PacifiCorp has gained experience implementing fish passage solutions at our federally-licensed hydroelectric projects, and we have learned that site-specific information on current and, to the extent possible, future conditions must be considered in implementation of the administrative rules to maximize long-term net benefits to native migratory fish. In certain cases, biological research has concluded that there may be little value to local fish populations in light of the expense of constructing, operating, and maintaining fish passage at an artificial obstruction. Off-site mitigation projects with lower costs than implementing fish passage at an artificial obstruction can provide a greater net benefit to at-risk fish populations, including some that may not be present at the site. The revised administrative rules should clarify that it is the intent of the state to achieve the highest net benefit to fish populations when considering the impacts of an artificial obstruction and any proposed mitigation measures. " " Definitions (-0005 (32)); Line 109-112 The rules need to be able to distinguish diadromous migrations, more specifically anadromy, from other life history strategies. Fish movements are biologically distinct from migration and should be represented as such in the rules. Consider adding a definition of "migration" to include a persistent, undistracted and straightened-out movement, achieved through the fish's locomotory means or by actively seeking a transport medium (e.g., water currents), during which individuals remain undistracted by the resources they might find during migration by temporarily inhibiting 'station-keeping responses' (i.e., residency) and that might be repeated later in life (adapted from Dingle 1996 in Morais and Daverat 2016). This definition would impact 635-412-0025 (2) and discussion of relative value of anadromous benefit versus resident species benefits in a net benefit analysis. Alternately consider adding "obligated" to



the definition so as to read "... native fish and their life stages.....that are obligated to migrate..." " 2021-05-04 14:06:40

61 67 Portland Definitions (-0005 (32)); Line 109-112 109 "The rules need to be able to distinguish diadromous migrations, more specifically anadromy, from other life history strategies. Fish movements are biologically distinct from migration and should be represented as such in the rules; otherwise there is risk that the fish passage may be required when there is not biological imperative for the fish to migrate. " "Line 110-111: replace.... :that migrate for their life cycle needs" with ""that are obligated to migrate for their specific life cycle needs""." 2021-05-07 08:01:07

149 na PacifiCorp Definitions (-0005 (32)); Line 109-112 109 "The rules need to be able to distinguish diadromous migrations, more specifically anadromy, from other life history strategies. Fish movements are biologically distinct from migration and should be represented as such in the rules.

Consider adding a definition of "migration" to include a persistent, undistracted and straightened-out movement, achieved through the fish's locomotory means or by actively seeking a transport medium (e.g., water currents), during which individuals remain undistracted by the resources they might find during migration by temporarily inhibiting 'station-keeping responses' (i.e., residency) and that might be repeated later in life (adapted from Dingle 1996 in Morais and Daverat 2016). This definition would impact 635-412-0025 (2) and discussion of relative value of anadromous benefit versus resident species benefits in a net benefit analysis.

Alternately consider adding "obligated" to the definition so as to read "... native fish and their life stages.....that are obligated to migrate....""

134 na Deschutes TU Lines 109-111: definition of native migratory fish 109 "Lines 109-111: The OAR defines "native migratory fish" by including a reference to a related OAR 635-007-0501 which defines ""native fish as meaning indigenous to Oregon, not introduced. This includes both naturally produced and hatchery produced fish." This indicates that hatchery stock produced from fish native to Oregon are included in the "native migratory fish" definition. This is an important component that should be clearly stated in the definition, not simply referenced." "Lines 109-111: "Native migratory fish" means native fish as defined under OAR 635-007-0501 to be fish indigenous to Oregon, not introduced. This includes both naturally produced and hatchery produced fish that migrate for their life cycle needs."

**WaterWatch** Add definition of "native fish" (same as OAR 635-007-0501(36)) so people don't need to go find the cross-reference to understand the rules: "'Native fish' means indigenous to Oregon, not introduced. This includes both naturally produced and hatchery produced fish." Do not narrow the range of species requiring passage (andromous, wild, salmonid, etc.). Statutes require passage for all "native fish" that migrate; Commission does not have authority to narrow the range of species for which the statutes require passage.

**WaterWatch** Existing fish passage statutes and rules apply to all "native migratory fish" regardless of anadromy and/or listing status. We would oppose any change to that. All native fish species are important and all should have passage up and down a stream system. A fish species should not have to be a risk of extinction, or migrate to the ocean and back, before its migration and habitat needs are protected.

**87** na Water Watch **Line 109** 109 To make rules easier to review and understand. "Add definition of "'native fish'" (same as OAR 635-007-0501(36)) so people don't need to go find the cross-reference to understand the rules: "' 'Native fish' means indigenous to Oregon, not introduced. This includes both naturally produced and hatchery produced fish.'" Do not narrow the range of species requiring passage (andromous, wild, salmonid, etc.). Statutes require passage for all "'native fish'" that migrate; Commission does not have authority to narrow the range of species for which the statutes require passage."

**183** na ODOT "635-412-005 – Definitions, NMF Line 136 "Oncorhynchus mykiss - Steelhead, Rainbow and Redband trout"" 109 "If fish passage is required for instances where only hatchery produced fish are present, recommend including footnote or including in definition. Of note, hatchery progeny are oftentimes not "native" (strains originating from out of state)."

**24** 30 Portland USFWS144 109 **Consider adding Peamouth Chub (Mylocheilus caurinus) as a migratory fish.** This species has fluvial movement patterns (perhaps adfluvial in some places) during its spawning period. It utilizes similar spawning habitat as steelhead. **Insert Peamouth Chub (Mylocheilus caurinus) as a migratory fish at line 144.**

2021-05-03 15:44:02

**Lines 145-147 Current Language: (33) "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.**

184 na ODOT 635-412-0005 – Definitions – Line 145 "Net Benefit" 145  
"Reword to include: "means an increase in the overall, in-proximity habitat quality and or quantity at the population scale that is biologically likely to lead to the increased fitness and or number of native migratory fish species impacted by the action"

185 na ODOT 635-412-0005 – Definitions - Line 145. NBA process 145  
"Potential for OAR change, where a reference to "based on current calculation analysis process used in Statewide Priority List development") or similar. Suggest additional language to current definition of 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. "The Net Benefit Analysis can use the current calculation process as described in the Statewide High Priority Barrier Assessment White Paper to weigh potential benefits to NMF at trigger and mitigation locations"."

186 na ODOT 635-412-0005 – Definitions - Line 145. 145 "NBA process should include climate change projections: Potential for OAR change, where a reference to "based on current calculation analysis process used in Statewide Priority List development") or similar. Suggest additional language to current definition of Net Benefit to capture habitats value in lens of climate change: "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. The Net Benefit Analysis can use the current calculation process as described in the Statewide High Priority Barrier Assessment White Paper to weigh potential benefits to NMF at trigger and mitigation locations. The calculations can also include a score metric for each location including projected habitat conditions resulting from climate change impacts, including water quality, quantity, temperature, and other factors"."

78 na CCFB 635-412-0005 (33) (lines 145 to 147) 145 "This section of the Regulation defines "Net Benefit". "Net Benefit"1 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. This definition is used in determination of granting a waiver from fish

passage. The Fish Passage Task Force has incorrectly applied "Net Benefit" by its myopic view. In the definition of net benefit, in-proximity is included. In Proximity's defined in Oregon Revised Statute 509-580(5); it states "'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'1• The Task Force focuses on each tide gate and does not consider the broader view when fish friendly tide gates are installed along the river, thus should provide for waivers for other properties in the area. Every single tide gate does not need to provide fish passage. Net Benefit Analysis performed by ODFW only look at specific artificial obstructions and not the other artificial obstructions that provide fish passage in the geographic area as "In-Proximity" requires. This can be seen time after time in Waiver request by ODOT where they will fix one culvert in another area to avoid removing the barrier in one area. CCFB recommends that ODFW Commission follow ORS 509-580(5) regarding the definition of "in-proximity" in evaluating the exemption of artificial obstructions without fish passage. Requiring fish passage tide gates on small farms and ranches do not "provide the highest likelihood of benefiting the native migratory fish population1'. We recommend that ODFW develop a willingness to work with farmers and ranchers on solutions and exemptions for artificial obstructions such as tide gates. "

Email

103 na Mary-Ann Farm Bureau Definitions 145 "We would like you to revise the definition of "net benefit" to avoid its unintended application of killing projects that actually improve fish habitat versus the current project. We also strongly encourage adopting a definition and view of "in proximity" that is more in line with the statutory view of proximity as being 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. It is simply not necessary for every single obstruction of provide fish passage, and a net benefit analysis should account for where other passage is in the watershed and passage is most needed, as appears to happen with ODOT frequently."

**Lines 157-159 Current Language: (38) "Roadfill footprint" means the area occupied by soil, aggregate, and/or other materials or structures necessary to support a road, including, but not limited to, appurtenant features such as wing walls, retaining walls, or headwalls.**

187 na ODOT 635-412-0005 – Definitions - Line 157 157  
"Roadfill footprint" Perhaps simply state that the footprint includes the roadway prism and all crossings including its supporting elements. This covers everything including rip-rap and fill-slopes.

## New Term – “:Roughened Channel”

243 na Conservation Angler Definition Section: Roughened Channel -  
"There needs to be some refinement of this definition to ensure a distinction between a what is a fishway and what is a stream if it is envisioned that a ""roughened channel"" can encompass the entire channel. It appears quite unclear as currently written."

**Lines 160-161 Current Language: (39) "Stream" means a body of running waters of this state moving over the surface of the land in a channel or bed including stream types classified as perennial or intermittent and channelized or relocated streams.**

88 na Water Watch Line 161 160 To clarify types of streams covered.  
"Include ""ephemeral"" in definition of stream. Some may consider this different from ""intermittent,"" but both should be included if currently or historically used by native migratory fish."

244 na Conservation Angler Definition Section: Stream 160 "The definition of ""stream"" and the definition of ""bed"" need some alignment.

TCA supports addressing fish passage for intermittent streams that may only carry streamflow during very short but critical periods."

WaterWatch Include "ephemeral" in definition of stream. Some may consider this different from "intermittent," but both should be included if currently or historically used by native migratory fish.

**Line 163 Current Language: (41) "Tailrace" means the water immediately downstream of an instream structure.**

42 48 Portland PacifiCorp 635-412- Definition Section 163 "PacifiCorp owns over 3,000 megawatts of renewable energy generating facilities, including several hydroelectric projects on waters of the state of Oregon inhabited by native migratory fish. The company is also expanding its renewable generation portfolio to address climate change impacts and ultimately achieve net zero greenhouse gas emissions in service of over 2 million customers across six western states. Therefore, PacifiCorp hereby expresses its support and interest in Oregon Department of Fish and Wildlife (ODFW)'s current review and revision of the fish passage administrative rules (Oregon Administrative Rules (OAR) 635-412-) as motivated, in part, by ODFW's new Climate and Ocean Change Policy (OAR 635-900-). Addressing climate change will require prudent, near-term actions to support ODFW's mission to protect and enhance Oregon's fish and wildlife and their habitats for use and enjoyment by present and

future generations. PacifiCorp supports science-based decision-making regarding fish passage in Oregon for the purposes of achieving recovering and sustainable populations of native migratory fish. PacifiCorp also notes that hydropower has a significant role to play in moving towards carbon-neutral operations in Oregon and ameliorating the causes and effects of climate change. Therefore, the climate change benefits of hydroelectricity should be considered in net benefit analyses of fish passage at hydropower facilities. PacifiCorp has gained experience implementing fish passage solutions at our federally-licensed hydroelectric projects, and we have learned that site-specific information on current and, to the extent possible, future conditions must be considered in implementation of the administrative rules to maximize long-term net benefits to native migratory fish. In certain cases, biological research has concluded that there may be little value to local fish populations in light of the expense of constructing, operating, and maintaining fish passage at an artificial obstruction. Off-site mitigation projects with lower costs than implementing fish passage at an artificial obstruction can provide a greater net benefit to at-risk fish populations, including some that may not be present at the site. The revised administrative rules should clarify that it is the intent of the state to achieve the highest net benefit to fish populations when considering the impacts of an artificial obstruction and any proposed mitigation measures. " Definitions (-0005 (41)); Line 163 Suggested text: "...of an instream structure discharging flow to a receiving water body."

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150 na PacifiCorp Definitions (-0005 (41)); Line 163 163  
Suggested text: "...of an instream structure discharging flow to a receiving water body,"

**Lines 166-167 Current Language: (43) "Trap" means the set of human-built and/or operated facilities, structures, devices, and measures that hold fish and prevent them from passing volitionally.**

256 na Whooshh "Defintion Section: ""Trap"" 166 "delete  
""volitionally"" and change sentence to read: ""... and intentionally prevent them from passing without delay""  
5/18/2021

**New Term to Define – “Trigger Event”**

71 77 Oregon City Native Fish Society Fish Passage OARs (comments on suggestions below) - "Fish passage at artificial obstructions is critical to the conservation and recovery of Oregon's native, migratory fish populations. This is made even more important given the information we have and are gaining on the impacts of climate change on the range, distribution, and life-history requirements of species. We urge the advisory committee to consider changes which: 1) Adhere to statute; 2) Align with existing

departmental policies, specifically the Native Fish Conservation Policy and Climate and Ocean Change Policy; 3) Have a high level of specificity to provide direction for the task force and clarity for stakeholders." " Line 68: "within, below or above the channel" may narrow the trigger application. Wording should consider how to incorporate any component contributing to an artificial obstruction including those which are outside the channel itself. Lines 223-225: Support adding a definition of trigger event, but current wording is confusing. Recommend refining to ensure clarity. Lines 248-250: Support cleaning up language of task force terms. "

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**Lines 173-174 Current Language: (45) "Volitionally" means with minimal delay and without being trapped, transferred, or handled by any person, unless specifically allowed under OAR 635-412-0035(6).**

246 na Conservation Angler Definition Section: Volitional 173 "TCA understands volitional passage to be a fish passage event where the fish passes upstream of an obstruction or fish passage structure on its own power and at any time it chooses to pass over the obstruction or passage structure. The phrase ""with minimal delay"" adds an important temporal component to passage but since it appears undefined, it may not be very helpful. Perhaps there is a better overall definition for ""volitional passage"" that would fit."

**Lines 175-177 Current Language: (46) "Waters of this state" means natural waterways including all tidal and non-tidal bays, intermittent and perennial streams, constantly flowing streams, lakes, wetlands and other bodies of water in this state, navigable and non-navigable, including that portion of the Pacific Ocean that is within the boundaries of Oregon.**

89 na Water Watch Line 175 175 To clarify waters covered. "Include ""ephemeral"" streams in definition - or just refer to ""streams"" since its been defined (along with other types of water bodies described), which may be better to ensure consistency. Some may consider different from ""intermittent"" but all should be covered if native migratory fish currently or historically present."

**Lines 178-180 Current Language: (47) "Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.**

188 na ODOT 635-412-0005 – Definitions - Line 178 "Wetlands" 178 Is there a DSL OAR to be cited?

## General Comments:

71 77 Oregon City Native Fish Society Fish Passage OARs (comments on suggestions below) - "Fish passage at artificial obstructions is critical to the conservation and recovery of Oregon's native, migratory fish populations. This is made even more important given the information we have and are gaining on the impacts of climate change on the range, distribution, and life-history requirements of species. We urge the advisory committee to consider changes which: 1) Adhere to statute; 2) Align with existing departmental policies, specifically the Native Fish Conservation Policy and Climate and Ocean Change Policy; 3) Have a high level of specificity to provide direction for the task force and clarity for stakeholders." " Line 68: "within, below or above the channel" may narrow the trigger application. Wording should consider how to incorporate any component contributing to an artificial obstruction including those which are outside the channel itself. Lines 223-225: Support adding a definition of trigger event, but current wording is confusing. Recommend refining to ensure clarity. Lines 248-250: Support cleaning up language of task force terms. "

2021-05-07 16:42:25

104 na Mary-Ann Farm Bureau Definitions - We also recommend that ODFW create a path to work with farmers and ranchers on solutions and exemptions for artificial obstructions such as dams and tide gates.

140 na Myron Self Net Benefit - "Do the proposed rules make any changes to the process of getting a fish passage waiver. As a member of the original passage task force that worked to develop the current statutes, I would be disappointed it getting a waiver was made easier by changing the "net benefit" requirement." "Do the proposed rules make any changes to the process of getting a fish passage waiver. As a member of the original passage task force that worked to develop the current statutes, I would be disappointed it getting a waiver was made easier by changing the "net benefit" requirement."

252 na Portland Ted Labee Definition Section - Missing and needed information - "1. Develop a State protocol for identification and assessment of fish passage barriers. 2. Host free trainings on use of the protocol. 3. Develop a more robust fish passage database, to augment and quality check information contained therein, and 4. Develop (or at least reference) detailed water crossing design guidelines.

By comparison, Washington State does all of these things. Please see <https://wdfw.wa.gov/specieshabitats/habitat-recovery/fish-passage/assessment> for an example of a website that better supports the public with regard to fish passage concerns. Beyond just updating a priority fish passage barriers list every seven years, there is an urgent



need for ODFW technical staff to quality check and refine the list. The current ODFW fish passage barrier inventory contains data that is old and out-of-date. There are no ODFW resources to investigate and clean up data errors, nor to develop a better representation of the true extent of the problem. Washington has 19,000 known barriers State-wide, and Oregon has only 590 in its latest 2019 inventory of fish passage barriers. This is likely a large under-count of the true number of fish passage barriers in Oregon. Though ODFW may not at present have sufficient resources to develop this type of program, it could

strengthen its approach by developing a better website with links to available resources. There are free technical tools like the U.S. Forest Service FishXing software

<https://www.fs.fed.us/biology/nsaec/products-tools.html#tools-fishxing> that could be provided or linked to. At a minimum, the ODFW fish passage website should provide a description of the standard

fish passage design guidelines in use and how landowners can learn more or get advice from the appropriate ODFW biologist, especially for those without sufficient resources to hire a technical expert

or hydraulic engineer."

5/18/2021

105 na Mary-Ann Farm Bureau Waivers - Exemptions - "This section of the regulation provides for granting an exemption from fish passage requirements when there is no appreciable benefit. The Fish Passage Task Force has never provided guidance as to what no appreciable benefit to fish passage is or when an exemption is appropriate. The current regulation includes many definitions, but there is no definition for "no appreciable benefit"."