DEPARTMENT OF NATURAL RESOURCES

FOREST PRACTICES DIVISION
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December 19, 2018

To: Interested Stakeholders

From: Marc Engel, Assistant Division Manager for Policy and Services

Subject: Water Typing System Rule Making – SEPA Analysis

The Department of Natural Resources (DNR), as staff to the Forest Practices Board (Board), is gathering information for the preparation of an environmental checklist under the State Environmental Policy Act (SEPA). The general public, agencies, Tribes, counties and cities, and Timber, Fish and Wildlife (TFW) participants are invited to provide suggestions for DNR to consider during its analysis to identify potential environmental impacts resulting from the Board's water typing system rulemaking.

The Forest Practices Board has directed staff to prepare a draft permanent water typing system rule following the goals of the 1999 Forests and Fish Report to improve and protect riparian habitat for fish and other aquatic resources.

The Forests and Fish Report includes the following goals:

- Provide compliance with the Endangered Species Act for aquatic and riparian-dependent species on non-federal forest lands;
- Restore and maintain riparian habitat on non-federal forest lands to support a harvestable supply of fish;
- Meet the requirements of the Clean Water Act for water quality on non-federal forest lands; and
- Keep the timber industry economically viable in the State of Washington.

The proposed water typing system rules (attached) are based on the Board-accepted recommendations from the TFW Policy Committee to amend the 2001 forest practices rules for achieving consistency in delineating the break between waters containing fish habitat (Type F) and non-fish habitat (Type N). The effect of the rulemaking is to adopt succinct methods to delineate the break between Type F/N Waters by replacing the rule currently in effect, WAC 222-16-031 *Interim Water Typing System*, with an amended WAC 222-16-030 *Water Typing System* rule. The environmental analysis will focus on comparing the current rules to the proposed rules.

The proposed draft rules retain certain aspects of the current water typing system rule including several administrative processes. The rules also incorporate new definitions for Type F Waters and

a new field based methodology for determining the break between Type F/N Waters. The proposed rules:

- Maintain:
  - The mapped locations of existing Type F/N points previously concurred through DNR's water type modification process;
  - The use of interdisciplinary teams to review proposed changes to the water type map;
  - The current process of using the default physical stream criteria when submitting a Forest Practices Application; and
  - The current process for identifying off-channel habitat used by fish.

- Add:
  - An Anadromous Fish Overlay to the existing classification of Type F Waters to define specific waters used by anadromous fish beginning at salt water and extending to an upstream gradient;
  - A fish habitat assessment methodology (FHAM) to determine the upper most extent of fish habitat, which corresponds to the regulatory break between Type F and Type N Waters; and
  - Specific in-stream characteristics defined as potential habitat breaks (PHB) to be used as part of the fish habitat assessment. The FHAM relies on PHBs to help identify features which potentially prevent upstream migration to fish for delineating the extent of fish habitat. The PHBs include variations of the same geomorphic conditions found in the field, which are: increases in stream gradient; decreases in the bankfull width of the stream; or the presence of a permanent natural obstacle to fish movement upstream.

The Board is considering five different rule alternatives based on Board-accepted proposals to evaluate the extent of the Anadromous Fish Overlay and which PHBs to use when conducting the FHAM. These different combinations are identified in the proposed rules as Alternatives A, B, C1, C2, and C3.

At this time, DNR seeks your suggestions on the following topics:

1. Key environmental issues you believe need to be addressed and analyzed in consideration of the proposed rule amendments and alternatives.
2. Specific mitigation measures to consider to address the environmental issues of concern.
3. Identification of environmental information, studies, or reports relevant to this SEPA analysis.

Please send your suggestions by January 4, 2019 to Sherri.Felix@dnr.wa.gov or fax to 360-902-1428 attn. Sherri Felix.

Please note the official SEPA review and comment period is scheduled to occur sometime during May-June 2019.

DRAFT
Rule Proposal for a Permanent Water Typing System
FOREST PRACTICES BOARD
December 2018
Alternative A

WAC 222-12-090 *Forest practices board manual.

. . .

(13) ~~**Guidelines** for determining fish use for the purpose of typing waters under WAC 222-16-031~~**Reserved**.

. . .

WAC 222-16-030 Water typing system.

~~Until the fish habitat water type maps described below are adopted by the board, the Interim Water Typing System established in WAC 222-16-031 will continue to be used.~~ The department in cooperation with the departments of fish and wildlife, and ecology, and in consultation with affected Indian tribes ~~will classify~~ classifies streams, lakes and ponds.

The department ~~will~~ prepares water type maps showing the location of Type S, F, and N (Np and Ns) Waters within the forested areas of the state. ~~The maps will be based on a multiparameter, field-verified geographic information system (GIS) logistic regression model. The multiparameter model will be designed to identify fish habitat by using geomorphic parameters such as basin size, gradient, elevation and other indicators. The modeling process shall be designed to achieve a level of statistical accuracy of 95% in separating fish habitat streams and nonfish habitat streams. Furthermore, the demarcation of fish and nonfish habitat waters shall be equally likely to over and under estimate the presence of fish habitat. These maps shall be referred to as "fish habitat water typing maps" and shall, when completed, be available for public inspection at region offices of the department.~~ The department shall provide the public access to these maps.

~~Fish habitat water type maps will be updated every five years where necessary to better reflect observed, in-field conditions. Except for these periodic revisions of the maps, on-the-ground observations of fish or habitat characteristics will generally not be used to adjust mapped water types. However, if an on-site interdisciplinary team using nonlethal methods identifies fish, or finds that habitat is not accessible due to naturally occurring conditions and no fish reside above the blockage, then the water type will be immediately changed to reflect the findings of the interdisciplinary team. The finding will be documented on a water type update form provided by the department and the fish habitat water type map will be updated as soon as practicable. If a dispute arises concerning a water type the department shall make available informal conferences, as established in WAC 222-46-020 which shall include the departments of fish and wildlife, and ecology, and affected Indian tribes and those contesting the adopted water types.~~The department may convene an interdisciplinary team, as defined in WAC 222-16-010, to consider proposed modifications to the water type map to better reflect observed in-field conditions, including if observations of fish occur, or if conditions change making habitat inaccessible to fish due to naturally occurring conditions and no fish reside above the blockage, or if a dispute arises concerning a water-type classification.

An interdisciplinary team includes participants from the departments of fish and wildlife, and ecology, and affected Indian tribes, and those proposing or contesting a water classification. The department shall consider the findings of an interdisciplinary team to determine the water classification. The department shall document the findings and make changes to the water type map shall as soon as practicable. Water-type classifications concurred by the department prior to January 1, 2020, are regulatory water-type classifications.

~~The w~~Waters ~~will be~~ are classified using the following criteria:

*(1) **"Type S Water"** means all waters, within their bankfull width, as inventoried as "shorelines of the state" under chapter 90.58 RCW and the rules promulgated pursuant to chapter 90.58 RCW including periodically inundated areas of their associated wetlands.

*(2) **"Type F Water"** means segments of natural waters, other than Type S Waters, ~~which are~~ within the bankfull widths of defined channels and periodically inundated areas of ~~their~~ associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and ~~which~~ in any case contain fish habitat or are ~~described by one of the following four categories:~~used by fish or humans. Type F Water includes any of the following:

(a) Waters within the anadromous fish habitat overlay. These are waters connected to saltwater and extending up to a sustained ten-percent gradient or a permanent natural barrier, whichever comes first. These waters include main stem stream segments and associated tributaries.

(b) Waters that meet default physical stream criteria are presumed fish habitat.

(i) Default physical stream criteria include any of the following:

(A) Stream segments having a bankfull width of two feet or greater in western Washington or three feet or greater in eastern Washington; and having a gradient of sixteen percent or less;

(B) Stream segments having a bankfull width of two feet or greater in western Washington or three feet or greater in eastern Washington; and having a gradient greater than sixteen percent and less than or equal to twenty percent, and having greater than fifty acres in contributing basin size in western Washington or greater than one hundred seventy five acres contributing basin size in eastern Washington, based on hydrographic boundaries;

(ii) The department shall waive or modify the requirements of (i) of this subsection if:

(A) Waters have confirmed, long-term, naturally occurring water quality parameters incapable of supporting fish; or

(B) Snowmelt streams have short flow cycles that do not support successful life history phases of fish. These streams typically have no flow in the winter months and discontinue flow by June 1; or

(C) Sufficient information about a geomorphic region is available to support a departure from the characteristics in (i) of this subsection, as determined in consultation with the department of fish and wildlife, department of ecology, affected tribes and interested parties.

(c) Waters containing off-channel habitat connected to a fish habitat stream and accessible to fish during some portion of the year. Off-channel habitat includes riverine ponds, wall-based channels, and other areas critical to the maintenance of optimum survival of fish. Off-channel habitat is measured from the edge of:

(i) Bankfull width; or

(ii) The ordinary high water line of associated wetlands.

(d) Waters~~, which are~~ diverted for domestic use by more than ~~10~~ ten residential or camping units or by a public accommodation facility licensed to serve more than ~~10~~ ten persons, where ~~such diversion is determined by~~ the department determines the diversion ~~to be~~is a valid appropriation of water and the only practical water source for such users. ~~Such~~ These waters ~~shall be considered to be~~are classified as Type F Water ~~upstream from the point of such diversion~~ for ~~1,500~~fifteen hundred feet upstream from the point of diversion or until the drainage area is reduced by ~~50~~ fifty percent, whichever is less~~;~~.

(~~b~~e) Waters~~, which are~~ diverted for use by a federal, state, tribal, local government or private fish ~~hatcheries~~hatchery. ~~Such~~ These waters ~~shall be~~are ~~considered~~ Type F Water for fifteen hundred

feet upstream from the point of diversion~~ for 1,500 feet~~, including tributaries if highly significant for protection of downstream water quality. The department may allow additional harvest beyond the requirements of Type F Water ~~designation provided~~ classification if the department determines after a landowner-requested ~~on-site~~interdisciplinary team assessment ~~by the department of fish and wildlife, department of ecology, the affected tribes and interested parties~~ that:

(i) The management practices proposed by the landowner will adequately protect water quality for the fish hatchery; and

(ii) ~~Such additional~~The proposed harvest within the riparian management zone meets the requirements of the water type ~~designation~~ classification that would apply in the absence of the hatchery;

(~~e~~f) Waters~~, which are~~ within a federal, state, local government, or private campground having more than ~~10~~ ten camping units~~: Provided, That~~ if the water ~~shall not be~~is considered to enter a campground ~~until it reaches~~at the boundary of the park lands available for public use and comes within ~~100~~ one hundred feet of a camping unit, trail or other park improvement~~;~~.

~~(d) Riverine ponds, wall-based channels, and other channel features that are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria:~~

~~(i) The site must be connected to a fish habitat stream and accessible during some period of the year; and~~

~~(ii) The off-channel water must be accessible to fish.~~

(3) **"Type Np Water"** means all segments of natural waters within the bankfull width of defined channels that are perennial non-fish habitat streams. Perennial streams are flowing waters that do not go dry any time of a year of normal rainfall and include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.

(4) **"Type Ns Water"** means all segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np Waters. These are seasonal, non-fish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from ~~any stream reach that is a~~ Type Np Water. Type Ns Waters must be physically connected by an above-ground channel system to Type S, F, or Np Waters.

*(5) Verification of water classifications and fish habitat

(a) For purposes of submitting a Forest Practices Application, verification of water classifications occurs by one of the following:

(i) Use of the default physical stream criteria in section (2)(b) of this chapter; or

(ii) The Fish Habitat Assessment Methodology (FHAM) may be used to delineate the extent of fish habitat coincident with the regulatory boundary between Type F Water and Type N Water. Use of the FHAM must be conducted in accordance with the requirements of WAC 222-16-0301.

(b) Proposals to change the department water type map must include documentation of the use of the FHAM on a water-type modification form designated by the department.

*(6) For purposes of this section:

(a) "Residential unit" means a home, apartment, residential condominium unit or mobile home, serving as the principal place of residence.

(b) "Camping unit" means an area intended and used for:

(i) Overnight camping or picnicking by the public containing at least a fireplace, picnic table and access to water and sanitary facilities; or

(ii) A permanent home or condominium unit or mobile home not qualifying as a "residential unit" because of part time occupancy.

(c) "Public accommodation facility" means a business establishment ~~open to and~~ licensed to serve the public, such as a restaurant, tavern, motel or hotel.

(d) "Natural waters" only excludes water conveyance systems which are artificially constructed and actively maintained for irrigation.

(e) "Seasonal ~~low flow" and "seasonal~~ low water" means the conditions of the ~~7-~~seven-day, ~~2-~~two-year low water situation, as measured or estimated by accepted hydrologic techniques recognized by the department.

(f) "Channel width and gradient" means a measurement over a representative section of at least ~~500~~ five hundred linear feet with at least ~~10~~ ten evenly spaced measurement points along the normal stream channel but excluding unusually wide areas of negligible gradient such as marshy or swampy areas, beaver ponds and impoundments. Channel gradient may be determined utilizing stream profiles plotted from United States geological survey topographic maps (see board manual section 23).

(g) "Intermittent ~~streams~~" means those segments of streams that normally go dry.

~~(h) "Fish habitat" means habitat which is used by any fish at any life stage at any time of the year, including potential habitat likely to be used by fish which could be recovered by restoration or management and includes off-channel habitat.~~

NEW SECTION

WAC 222-16-0301 Fish Habitat Assessment Methodology.

The Fish Habitat Assessment Methodology (FHAM) may be used to delineate the extent of fish habitat coincident with the regulatory boundary between Type F Water and Type N Water. The FHAM may be conducted only in waters situated upstream of known fish habitat or if the department authorizes conducting the FHAM after convening an interdisciplinary team.

*(1) The FHAM requires practitioners to start the protocol electro-fishing survey above a Potential Habitat Break (PHB) that is situated upstream of known fish habitat, and proceed upstream to each subsequent PHB to delineate the extent of fish habitat in a stream. Practitioners conducting electro-fishing surveys must be certified. The FHAM requirements include:

(a) Locate the PHB situated upstream of known fish habitat. The process and sources used to determine known fish habitat must be documented. Proponents are encouraged to contact the departments of natural resources and fish and wildlife, and the affected Indian tribes to determine the extent of known fish habitat; and

(b) Beginning upstream of the PHB described in (a) of this subsection, conduct the survey to determine if fish do not occur in the stream segment. If a fish is observed above a PHB, stop the survey and proceed upstream to the next PHB. Repeat this process until no fish are observed upstream of a PHB; and

(c) If no fish are observed upstream of a PHB in the upper most stream segments, then the PHB that blocked fish from moving upstream becomes the end of fish habitat for the stream.

*(2) **Potential Habitat Breaks (PHB)**

For purposes of the FHAM, the PHB criteria include any of the following:

(a) Western Washington

(i) Stream gradient increase equal to or greater than five-percent.

(A) Changes in stream gradient are measured for a distance of twenty-times the average bankfull width.

(ii) Bankfull width equal to or less than two feet.

(A) Changes in bankfull width are measured for a distance of twenty-times the average bankfull width.

(iii) Permanent Natural Obstacle having:

(A) A vertical obstacle height equal to or greater than the bankfull width and not less than three feet; or

(B) A non-vertical step equal to or greater than thirty percent, if the elevation increase is equal to or greater than two times the upstream bankfull width.

(iv) For tributaries, the protocol survey continues from the junction with the associated stream and proceeds upstream along the tributary until a PHB is located.

(b) Eastern Washington - reserved

*(3) For purposes of this section:

(a) **"Permanent Natural Obstacle"** means a natural, non-deformable obstacle that completely blocks upstream fish movement. "Permanent natural obstacles" include vertical drops, steep cascades, bedrock sheets and bedrock chutes. A permanent natural obstacle excludes large woody debris and sedimentary deposits.

(b) **"Potential Habitat Break"** means a permanent, distinct and measurable change of physical in-stream characteristics of gradient or bankfull width or permanent natural obstacle, any of which or a combination thereof prevent fish from moving upstream.

<u>REPEAL</u>

WAC 222-16-031 Interim water typing system.

222-30-021 *Western Washington riparian management zones

. . .

*(1)(b)(i)(B) In addition to the conditions set forth above, permitted conversion activities in the **inner zone** of any harvest unit are limited by the following:

- Each continuous conversion area is not more than five hundred feet in length; two conversion areas will be considered "continuous" unless the no-harvest area separating the two conversion areas is at least half the length of the larger of the two conversion areas.
- Type S and F ~~(Type 1, 2, or 3)~~ Water: Up to fifty percent of the inner zone area of the harvest unit on one side of the stream may be converted provided that:
  - The landowner owns the opposite side of the stream and the landowner's riparian area on the opposite bank meets the shade requirements of WAC 222-30-040 or has a seventy-five foot buffer of trees at least forty feet tall or:

. . .

(2)(b)(v) No timber harvest is permitted within a fifty-six foot radius buffer patch centered on a headwater spring or, in the absence of a headwater spring, on a point at the upper most extent of a Type Np Water as defined in WAC 222-16-030(3)~~ and 222-16-031~~.

DRAFT
Rule Proposal for a Permanent Water Typing System
FOREST PRACTICES BOARD
December 2018
Alternative B

WAC 222-12-090 *Forest practices board manual.

. . .

(13) ~~**Guidelines** for determining fish use for the purpose of typing waters under WAC 222-16-031~~**Reserved**.

. . .

WAC 222-16-030 Water typing system.

~~Until the fish habitat water type maps described below are adopted by the board, the Interim Water Typing System established in WAC 222-16-031 will continue to be used.~~ The department in cooperation with the departments of fish and wildlife, and ecology, and in consultation with affected Indian tribes ~~will classify~~ classifies streams, lakes and ponds.

The department ~~will~~ prepares water type maps showing the location of Type S, F, and N (Np and Ns) Waters within the forested areas of the state. ~~The maps will be based on a multiparameter, field-verified geographic information system (GIS) logistic regression model. The multiparameter model will be designed to identify fish habitat by using geomorphic parameters such as basin size, gradient, elevation and other indicators. The modeling process shall be designed to achieve a level of statistical accuracy of 95% in separating fish habitat streams and nonfish habitat streams. Furthermore, the demarcation of fish and nonfish habitat waters shall be equally likely to over and under estimate the presence of fish habitat. These maps shall be referred to as "fish habitat water typing maps" and shall, when completed, be available for public inspection at region offices of the department.~~ The department shall provide the public access to these maps.

~~Fish habitat water type maps will be updated every five years where necessary to better reflect observed, in-field conditions. Except for these periodic revisions of the maps, on-the-ground observations of fish or habitat characteristics will generally not be used to adjust mapped water types. However, if an on-site interdisciplinary team using nonlethal methods identifies fish, or finds that habitat is not accessible due to naturally occurring conditions and no fish reside above the blockage, then the water type will be immediately changed to reflect the findings of the interdisciplinary team. The finding will be documented on a water type update form provided by the department and the fish habitat water type map will be updated as soon as practicable. If a dispute arises concerning a water type the department shall make available informal conferences, as established in WAC 222-46-020 which shall include the departments of fish and wildlife, and ecology, and affected Indian tribes and those contesting the adopted water types.~~The department may convene an interdisciplinary team, as defined in WAC 222-16-010, to consider proposed modifications to the water type map to better reflect observed in-field conditions, including if observations of fish occur, or if conditions change making habitat inaccessible to fish due to naturally occurring conditions and no fish reside above the blockage, or if a dispute arises concerning a water-type classification.

An interdisciplinary team includes participants from the departments of fish and wildlife, and ecology, and affected Indian tribes, and those proposing or contesting a water classification. The department shall consider the findings of an interdisciplinary team to determine the water classification. The department shall document the findings and make changes to the water type map shall as soon as practicable. Water-type classifications concurred by the department prior to January 1, 2020, are regulatory water-type classifications.

~~The w~~Waters ~~will be~~ are classified using the following criteria:

*(1) **"Type S Water"** means all waters, within their bankfull width, as inventoried as "shorelines of the state" under chapter 90.58 RCW and the rules promulgated pursuant to chapter 90.58 RCW including periodically inundated areas of their associated wetlands.

*(2) **"Type F Water"** means segments of natural waters, other than Type S Waters, ~~which are~~ within the bankfull widths of defined channels and periodically inundated areas of ~~their~~ associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and ~~which~~ in any case contain fish habitat or are ~~described by one of the following four categories:~~used by fish or humans. Type F Water includes any of the following:

(a) Waters within the anadromous fish habitat overlay. These are waters connected to saltwater and extending up to a sustained ten-percent gradient or a permanent natural barrier, whichever comes first. These waters include main stem stream segments and associated tributaries.

(b) Waters that meet default physical stream criteria are presumed fish habitat.

(i) Default physical stream criteria include any of the following:

(A) Stream segments having a bankfull width of two feet or greater in western Washington or three feet or greater in eastern Washington; and having a gradient of sixteen percent or less;

(B) Stream segments having a bankfull width of two feet or greater in western Washington or three feet or greater in eastern Washington; and having a gradient greater than sixteen percent and less than or equal to twenty percent, and having greater than fifty acres in contributing basin size in western Washington or greater than one hundred seventy five acres contributing basin size in eastern Washington, based on hydrographic boundaries;

(ii) The department shall waive or modify the requirements of (i) of this subsection if:

(A) Waters have confirmed, long-term, naturally occurring water quality parameters incapable of supporting fish; or

(B) Snowmelt streams have short flow cycles that do not support successful life history phases of fish. These streams typically have no flow in the winter months and discontinue flow by June 1; or

(C) Sufficient information about a geomorphic region is available to support a departure from the characteristics in (i) of this subsection, as determined in consultation with the department of fish and wildlife, department of ecology, affected tribes and interested parties.

(c) Waters containing off-channel habitat connected to a fish habitat stream and accessible to fish during some portion of the year. Off-channel habitat includes riverine ponds, wall-based channels, and other areas critical to the maintenance of optimum survival of fish. Off-channel habitat is measured from the edge of:

(i) Bankfull width; or

(ii) The ordinary high water line of associated wetlands.

(d) Waters~~, which are~~ diverted for domestic use by more than ~~10~~ ten residential or camping units or by a public accommodation facility licensed to serve more than ~~10~~ ten persons, where ~~such diversion is determined by~~ the department determines the diversion ~~to be~~is a valid appropriation of water and the only practical water source for such users. ~~Such~~ These waters ~~shall be considered to be~~are classified as Type F Water ~~upstream from the point of such diversion~~ for ~~1,500~~fifteen hundred feet upstream from the point of diversion or until the drainage area is reduced by ~~50~~ fifty percent, whichever is less~~;~~.

(~~b~~e) Waters~~, which are~~ diverted for use by a federal, state, tribal, local government or private fish ~~hatcheries~~hatchery. ~~Such~~ These waters ~~shall be~~are ~~considered~~ Type F Water for fifteen hundred

feet upstream from the point of diversion~~ for 1,500 feet~~, including tributaries if highly significant for protection of downstream water quality. The department may allow additional harvest beyond the requirements of Type F Water ~~designation provided~~ classification if the department determines after a landowner-requested ~~on-site~~interdisciplinary team assessment ~~by the department of fish and wildlife, department of ecology, the affected tribes and interested parties~~ that:

(i) The management practices proposed by the landowner will adequately protect water quality for the fish hatchery; and

(ii) ~~Such additional~~The proposed harvest within the riparian management zone meets the requirements of the water type ~~designation~~ classification that would apply in the absence of the hatchery;

(~~c~~f) Waters~~, which are~~ within a federal, state, local government, or private campground having more than ~~10~~ ten camping units~~: Provided, That~~ if the water ~~shall not be~~is considered to enter a campground ~~until it reaches~~at the boundary of the park lands available for public use and comes within ~~100~~ one hundred feet of a camping unit, trail or other park improvement~~;~~.

~~(d) Riverine ponds, wall-based channels, and other channel features that are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria:~~

~~(i) The site must be connected to a fish habitat stream and accessible during some period of the year; and~~

~~(ii) The off-channel water must be accessible to fish.~~

(3) **"Type Np Water"** means all segments of natural waters within the bankfull width of defined channels that are perennial non-fish habitat streams. Perennial streams are flowing waters that do not go dry any time of a year of normal rainfall and include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.

(4) **"Type Ns Water"** means all segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np Waters. These are seasonal, non-fish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from ~~any stream reach that is a~~ Type Np Water. Type Ns Waters must be physically connected by an above-ground channel system to Type S, F, or Np Waters.

*(5) Verification of water classifications and fish habitat

(a) For purposes of submitting a Forest Practices Application, verification of water classifications occurs by one of the following:

(i) Use of the default physical stream criteria in section (2)(b) of this chapter; or

(ii) The Fish Habitat Assessment Methodology (FHAM) may be used to delineate the extent of fish habitat coincident with the regulatory boundary between Type F Water and Type N Water. Use of the FHAM must be conducted in accordance with the requirements of WAC 222-16-0301.

(b) Proposals to change the department water type map must include documentation of the use of the FHAM on a water-type modification form designated by the department.

*(6) For purposes of this section:

(a) "Residential unit" means a home, apartment, residential condominium unit or mobile home, serving as the principal place of residence.

(b) "Camping unit" means an area intended and used for:

(i) Overnight camping or picnicking by the public containing at least a fireplace, picnic table and access to water and sanitary facilities; or

(ii) A permanent home or condominium unit or mobile home not qualifying as a "residential unit" because of part time occupancy.

(c) "Public accommodation facility" means a business establishment ~~open to and~~ licensed to serve the public, such as a restaurant, tavern, motel or hotel.

(d) "Natural waters" only excludes water conveyance systems which are artificially constructed and actively maintained for irrigation.

(e) "Seasonal ~~low flow" and "seasonal~~ low water" means the conditions of the ~~7-~~seven-day, ~~2-~~two-year low water situation, as measured or estimated by accepted hydrologic techniques recognized by the department.

(f) "Channel width and gradient" means a measurement over a representative section of at least ~~500~~ five hundred linear feet with at least ~~10~~ ten evenly spaced measurement points along the normal stream channel but excluding unusually wide areas of negligible gradient such as marshy or swampy areas, beaver ponds and impoundments. Channel gradient may be determined utilizing stream profiles plotted from United States geological survey topographic maps (see board manual section 23).

(g) "Intermittent ~~streams~~" means those segments of streams that normally go dry.

~~(h) "Fish habitat" means habitat which is used by any fish at any life stage at any time of the year, including potential habitat likely to be used by fish which could be recovered by restoration or management and includes off-channel habitat.~~

NEW SECTION

WAC 222-16-0301 Fish Habitat Assessment Methodology.

The Fish Habitat Assessment Methodology (FHAM) may be used to delineate the extent of fish habitat coincident with the regulatory boundary between Type F Water and Type N Water.

The FHAM may be conducted only in waters situated upstream of known fish habitat or if the department authorizes conducting the FHAM after convening an interdisciplinary team.

*(1) The FHAM requires practitioners to start the protocol electro-fishing survey above a Potential Habitat Break (PHB) that is situated upstream of known fish habitat, and proceed upstream to each subsequent PHB to delineate the extent of fish habitat in a stream. Practitioners conducting electro-fishing surveys must be certified. The FHAM requirements include:

(a) Locate the PHB situated upstream of known fish habitat. The process and sources used to determine known fish habitat must be documented. Proponents are encouraged to contact the departments of natural resources and fish and wildlife, and the affected Indian tribes to determine the extent of known fish habitat; and

(b) Beginning upstream of the PHB described in (a) of this subsection, conduct the survey to determine if fish do not occur in the stream segment. If a fish is observed above a PHB, stop the survey and proceed upstream to the next PHB. Repeat this process until no fish are observed upstream of a PHB; and

(c) If no fish are observed upstream of a PHB in the upper most stream segments, then the PHB that blocked fish from moving upstream becomes the end of fish habitat for the stream.

*(2) **Potential Habitat Breaks (PHB)**

(a) For purposes of the FHAM, the statewide PHB criteria include any of the following:

(i) Stream gradient equal to or greater than ten-percent.

(A) Changes in stream gradient are measured for a distance of twenty-times the average bankfull width.

(ii) Bankfull width equal to or less than two feet.

(A) Changes in bankfull width are measured for a distance of twenty-times the average bankfull width.

(iii) Permanent Natural Obstacle having:

(A) A vertical obstacle height equal to or greater than the bankfull width and not less than three feet; or

(B) A non-vertical step equal to or greater than twenty percent, if the elevation increase is equal to or greater than two times the upstream bankfull width.

(iv) For tributaries, the protocol survey continues from the junction with the associated stream and proceeds upstream along the tributary until a PHB is located.

*(3) For purposes of this section:

(a) **"Permanent Natural Obstacle"** means a natural, non-deformable obstacle that completely blocks upstream fish movement. "Permanent natural obstacles" include vertical drops, steep cascades, bedrock sheets and bedrock chutes. A permanent natural obstacle excludes large woody debris and sedimentary deposits.

(b) **"Potential Habitat Break"** means a permanent, distinct and measurable change of physical in-stream characteristics of gradient or bankfull width or permanent natural obstacle, any of which or a combination thereof prevent fish from moving upstream.

REPEAL

WAC 222-16-031 Interim water typing system.

222-30-021 *Western Washington riparian management zones

. . .

*(1)(b)(i)(B) In addition to the conditions set forth above, permitted conversion activities in the **inner zone** of any harvest unit are limited by the following:

- Each continuous conversion area is not more than five hundred feet in length; two conversion areas will be considered "continuous" unless the no-harvest area separating the two conversion areas is at least half the length of the larger of the two conversion areas.
- Type S and F ~~(Type 1, 2, or 3)~~ Water: Up to fifty percent of the inner zone area of the harvest unit on one side of the stream may be converted provided that:
  - The landowner owns the opposite side of the stream and the landowner's riparian area on the opposite bank meets the shade requirements of WAC 222-30-040 or has a seventy-five foot buffer of trees at least forty feet tall or:

  . . .

  (2)(b)(v) No timber harvest is permitted within a fifty-six foot radius buffer patch centered on a headwater spring or, in the absence of a headwater spring, on a point at the upper most extent of a Type Np Water as defined in WAC 222-16-030(3)~~ and 222-16-031~~.

DRAFT
Rule Proposal for a Permanent Water Typing System
FOREST PRACTICES BOARD
December 2018
Alternative C-1

WAC 222-12-090 *Forest practices board manual.

. . .

(13) ~~**Guidelines** for determining fish use for the purpose of typing waters under WAC 222-16-031~~**Reserved**.

. . .

WAC 222-16-030 Water typing system.

~~Until the fish habitat water type maps described below are adopted by the board, the Interim Water Typing System established in WAC 222-16-031 will continue to be used.~~ The department in cooperation with the departments of fish and wildlife, and ecology, and in consultation with affected Indian tribes ~~will classify~~ classifies streams, lakes and ponds.

The department ~~will~~ prepares water type maps showing the location of Type S, F, and N (Np and Ns) Waters within the forested areas of the state. ~~The maps will be based on a multiparameter, field-verified geographic information system (GIS) logistic regression model. The multiparameter model will be designed to identify fish habitat by using geomorphic parameters such as basin size, gradient, elevation and other indicators. The modeling process shall be designed to achieve a level of statistical accuracy of 95% in separating fish habitat streams and nonfish habitat streams. Furthermore, the demarcation of fish and nonfish habitat waters shall be equally likely to over and under estimate the presence of fish habitat. These maps shall be referred to as "fish habitat water typing maps" and shall, when completed, be available for public inspection at region offices of the department.~~ The department shall provide the public access to these maps.

~~Fish habitat water type maps will be updated every five years where necessary to better reflect observed, in-field conditions. Except for these periodic revisions of the maps, on-the-ground observations of fish or habitat characteristics will generally not be used to adjust mapped water types. However, if an on-site interdisciplinary team using nonlethal methods identifies fish, or finds that habitat is not accessible due to naturally occurring conditions and no fish reside above the blockage, then the water type will be immediately changed to reflect the findings of the interdisciplinary team. The finding will be documented on a water type update form provided by the department and the fish habitat water type map will be updated as soon as practicable. If a dispute arises concerning a water type the department shall make available informal conferences, as established in WAC 222-46-020 which shall include the departments of fish and wildlife, and ecology, and affected Indian tribes and those contesting the adopted water types.~~The department may convene an interdisciplinary team, as defined in WAC 222-16-010, to consider proposed modifications to the water type map to better reflect observed in-field conditions, including if observations of fish occur, or if conditions change making habitat inaccessible to fish due to naturally occurring conditions and no fish reside above the blockage, or if a dispute arises concerning a water-type classification.

An interdisciplinary team includes participants from the departments of fish and wildlife, and ecology, and affected Indian tribes, and those proposing or contesting a water classification. The department shall consider the findings of an interdisciplinary team to determine the water classification. The department shall document the findings and make changes to the water type map shall as soon as practicable. Water-type classifications concurred by the department prior to January 1, 2020, are regulatory water-type classifications.

~~The w~~Waters ~~will be~~ are classified using the following criteria:

*(1) **"Type S Water"** means all waters, within their bankfull width, as inventoried as "shorelines of the state" under chapter 90.58 RCW and the rules promulgated pursuant to chapter 90.58 RCW including periodically inundated areas of their associated wetlands.

*(2) **"Type F Water"** means segments of natural waters, other than Type S Waters, ~~which are~~ within the bankfull widths of defined channels and periodically inundated areas of ~~their~~ associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and ~~which~~ in any case contain fish habitat or are ~~described by one of the following four categories:~~used by fish or humans. Type F Water includes any of the following:

(a) Waters within the anadromous fish habitat overlay. These are waters connected to saltwater that have a sustained gradient of five-percent or less, and include associated tributaries lacking a five-percent gradient increase or permanent natural obstacle at the junction with the main stem.

(b) Waters that meet default physical stream criteria are presumed fish habitat.

(i) Default physical stream criteria include any of the following:

(A) Stream segments having a bankfull width of two feet or greater in western Washington or three feet or greater in eastern Washington; and having a gradient of sixteen percent or less;

(B) Stream segments having a bankfull width of two feet or greater in western Washington or three feet or greater in eastern Washington; and having a gradient greater than sixteen percent and less than or equal to twenty percent, and having greater than fifty acres in contributing basin size in western Washington or greater than one hundred seventy five acres contributing basin size in eastern Washington, based on hydrographic boundaries;

(ii) The department shall waive or modify the requirements of (i) of this subsection if:

(A) Waters have confirmed, long-term, naturally occurring water quality parameters incapable of supporting fish; or

(B) Snowmelt streams have short flow cycles that do not support successful life history phases of fish. These streams typically have no flow in the winter months and discontinue flow by June 1; or

(C) Sufficient information about a geomorphic region is available to support a departure from the characteristics in (i) of this subsection, as determined in consultation with the department of fish and wildlife, department of ecology, affected tribes and interested parties.

(c) Waters containing off-channel habitat connected to a fish habitat stream and accessible to fish during some portion of the year. Off-channel habitat includes riverine ponds, wall-based channels, and other areas critical to the maintenance of optimum survival of fish. Off-channel habitat is measured from the edge of:

(i) Bankfull width; or

(ii) The ordinary high water line of associated wetlands.

(d) Waters~~, which are~~ diverted for domestic use by more than ~~10~~ ten residential or camping units or by a public accommodation facility licensed to serve more than ~~10~~ ten persons, where ~~such diversion is determined by~~ the department determines the diversion ~~to be~~is a valid appropriation of water and the only practical water source for such users. ~~Such~~ These waters ~~shall be considered to be~~are classified as Type F Water ~~upstream from the point of such diversion~~ for ~~1,500~~fifteen hundred feet upstream from the point of diversion or until the drainage area is reduced by ~~50~~ fifty percent, whichever is less~~;~~.

(~~b~~e) Waters~~, which are~~ diverted for use by a federal, state, tribal, local government or private fish ~~hatcheries~~hatchery. ~~Such~~ These waters ~~shall be~~are ~~considered~~ Type F Water for fifteen hundred

feet upstream from the point of diversion~~ for 1,500 feet~~, including tributaries if highly significant for protection of downstream water quality. The department may allow additional harvest beyond the requirements of Type F Water ~~designation provided~~ classification if the department determines after a landowner-requested ~~on-site~~interdisciplinary team assessment ~~by the department of fish and wildlife, department of ecology, the affected tribes and interested parties~~ that:

(i) The management practices proposed by the landowner will adequately protect water quality for the fish hatchery; and

(ii) ~~Such additional~~The proposed harvest within the riparian management zone meets the requirements of the water type ~~designation~~ classification that would apply in the absence of the hatchery;

(~~c~~f) Waters~~, which are~~ within a federal, state, local government, or private campground having more than ~~10~~ ten camping units~~: Provided, That~~ if the water ~~shall not be~~is considered to enter a campground ~~until it reaches~~at the boundary of the park lands available for public use and comes within ~~100~~ one hundred feet of a camping unit, trail or other park improvement~~;~~.

~~(d) Riverine ponds, wall-based channels, and other channel features that are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria:~~

~~(i) The site must be connected to a fish habitat stream and accessible during some period of the year; and~~

~~(ii) The off-channel water must be accessible to fish.~~

(3) **"Type Np Water"** means all segments of natural waters within the bankfull width of defined channels that are perennial non-fish habitat streams. Perennial streams are flowing waters that do not go dry any time of a year of normal rainfall and include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.

(4) **"Type Ns Water"** means all segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np Waters. These are seasonal, non-fish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from ~~any stream reach that is a~~ Type Np Water. Type Ns Waters must be physically connected by an above-ground channel system to Type S, F, or Np Waters.

*(5) Verification of water classifications and fish habitat

(a) For purposes of submitting a Forest Practices Application, verification of water classifications occurs by one of the following:

(i) Use of the default physical stream criteria in section (2)(b) of this chapter; or

(ii) The Fish Habitat Assessment Methodology (FHAM) may be used to delineate the extent of fish habitat coincident with the regulatory boundary between Type F Water and Type N Water. Use of the FHAM must be conducted in accordance with the requirements of WAC 222-16-0301.

(b) Proposals to change the department water type map must include documentation of the use of the FHAM on a water-type modification form designated by the department.

*(6) For purposes of this section:

(a) "Residential unit" means a home, apartment, residential condominium unit or mobile home, serving as the principal place of residence.

(b) "Camping unit" means an area intended and used for:

(i) Overnight camping or picnicking by the public containing at least a fireplace, picnic table and access to water and sanitary facilities; or

(ii) A permanent home or condominium unit or mobile home not qualifying as a "residential unit" because of part time occupancy.

(c) "Public accommodation facility" means a business establishment ~~open to and~~ licensed to serve the public, such as a restaurant, tavern, motel or hotel.

(d) "Natural waters" only excludes water conveyance systems which are artificially constructed and actively maintained for irrigation.

(e) "Seasonal ~~low flow" and "seasonal~~ low water" means the conditions of the ~~7-~~seven-day, ~~2-~~two-year low water situation, as measured or estimated by accepted hydrologic techniques recognized by the department.

(f) "Channel width and gradient" means a measurement over a representative section of at least ~~500~~ five hundred linear feet with at least ~~10~~ ten evenly spaced measurement points along the normal stream channel but excluding unusually wide areas of negligible gradient such as marshy or swampy areas, beaver ponds and impoundments. Channel gradient may be determined utilizing stream profiles plotted from United States geological survey topographic maps (see board manual section 23).

(g) "Intermittent ~~streams~~" means those segments of streams that normally go dry.

~~(h) "Fish habitat" means habitat which is used by any fish at any life stage at any time of the year, including potential habitat likely to be used by fish which could be recovered by restoration or management and includes off-channel habitat.~~

NEW SECTION

WAC 222-16-0301 Fish Habitat Assessment Methodology.

The Fish Habitat Assessment Methodology (FHAM) may be used to delineate the extent of fish habitat coincident with the regulatory boundary between Type F Water and Type N Water.

The FHAM may be conducted only in waters situated upstream of known fish habitat or if the department authorizes conducting the FHAM after convening an interdisciplinary team.

*(1) The FHAM requires practitioners to start the protocol electro-fishing survey above a Potential Habitat Break (PHB) that is situated upstream of known fish habitat, and proceed upstream to each subsequent PHB to delineate the extent of fish habitat in a stream. Practitioners conducting electro-fishing surveys must be certified. The FHAM requirements include:

(a) Locate the PHB situated upstream of known fish habitat. The process and sources used to determine known fish habitat must be documented. Proponents are encouraged to contact the departments of natural resources and fish and wildlife, and the affected Indian tribes to determine the extent of known fish habitat; and

(b) Beginning upstream of the PHB described in (a) of this subsection, conduct the survey to determine if fish do not occur in the stream segment. If a fish is observed above a PHB, stop the survey and proceed upstream to the next PHB. Repeat this process until no fish are observed upstream of a PHB; and

(c) If no fish are observed upstream of a PHB in the upper most stream segments, then the PHB that blocked fish from moving upstream becomes the end of fish habitat for the stream.

*(2) **Potential Habitat Breaks (PHB)**

(a) For purposes of the FHAM, the statewide PHB criteria include any of the following:

(i) Stream gradient equal to or greater than five-percent.

(A) Changes in stream gradient are measured for a distance of twenty-times the average bankfull width.

(ii) Upstream to downstream bankfull width decrease greater than twenty percent.

(A) Changes in bankfull width are measured for a distance of twenty-times the average bankfull width.

(iii) Permanent Natural Obstacle having:

(A) A vertical obstacle height equal to or greater than the bankfull width and not less than three feet; or

(B) A non-vertical step equal to or greater than twenty percent, if the elevation increase is equal to or greater than two times the upstream bankfull width.

(iv) Tributary junctions are considered a PHB if they coincide with the criteria in (i), (ii), or (iii) of this subsection.

*(3) For purposes of this section:

(a) **"Permanent Natural Obstacle"** means a natural, non-deformable obstacle that completely blocks upstream fish movement. "Permanent natural obstacles" include vertical drops, steep cascades, bedrock sheets and bedrock chutes. A permanent natural obstacle excludes large woody debris and sedimentary deposits.

(b) **"Potential Habitat Break"** means a permanent, distinct and measurable change of physical in-stream characteristics of gradient or bankfull width or permanent natural obstacle, any of which or a combination thereof prevent fish from moving upstream.

REPEAL

WAC 222-16-031 Interim water typing system.

222-30-021 *Western Washington riparian management zones

. . .

*(1)(b)(i)(B) In addition to the conditions set forth above, permitted conversion activities in the **inner zone** of any harvest unit are limited by the following:

- Each continuous conversion area is not more than five hundred feet in length; two conversion areas will be considered "continuous" unless the no-harvest area separating the two conversion areas is at least half the length of the larger of the two conversion areas.
- Type S and F ~~(Type 1, 2, or 3)~~ Water: Up to fifty percent of the inner zone area of the harvest unit on one side of the stream may be converted provided that:
  - The landowner owns the opposite side of the stream and the landowner's riparian area on the opposite bank meets the shade requirements of WAC 222-30-040 or has a seventy-five foot buffer of trees at least forty feet tall or:

  . . .

  (2)(b)(v) No timber harvest is permitted within a fifty-six foot radius buffer patch centered on a headwater spring or, in the absence of a headwater spring, on a point at the upper most extent of a Type Np Water as defined in WAC 222-16-030(3)~~ and 222-16-031~~.

DRAFT
Rule Proposal for a Permanent Water Typing System
FOREST PRACTICES BOARD
December 2018
Alternative C-2

WAC 222-12-090 *Forest practices board manual.

. . .

(13) ~~**Guidelines** for determining fish use for the purpose of typing waters under WAC 222-16-031~~**Reserved**.

. . .

WAC 222-16-030 Water typing system.

~~Until the fish habitat water type maps described below are adopted by the board, the Interim Water Typing System established in WAC 222-16-031 will continue to be used.~~ The department in cooperation with the departments of fish and wildlife, and ecology, and in consultation with affected Indian tribes ~~will classify~~ classifies streams, lakes and ponds.

The department ~~will~~ prepares water type maps showing the location of Type S, F, and N (Np and Ns) Waters within the forested areas of the state. ~~The maps will be based on a multiparameter, field-verified geographic information system (GIS) logistic regression model. The multiparameter model will be designed to identify fish habitat by using geomorphic parameters such as basin size, gradient, elevation and other indicators. The modeling process shall be designed to achieve a level of statistical accuracy of 95% in separating fish habitat streams and nonfish habitat streams. Furthermore, the demarcation of fish and nonfish habitat waters shall be equally likely to over and under estimate the presence of fish habitat. These maps shall be referred to as "fish habitat water typing maps" and shall, when completed, be available for public inspection at region offices of the department.~~ The department shall provide the public access to these maps.

~~Fish habitat water type maps will be updated every five years where necessary to better reflect observed, in-field conditions. Except for these periodic revisions of the maps, on-the-ground observations of fish or habitat characteristics will generally not be used to adjust mapped water types. However, if an on-site interdisciplinary team using nonlethal methods identifies fish, or finds that habitat is not accessible due to naturally occurring conditions and no fish reside above the blockage, then the water type will be immediately changed to reflect the findings of the interdisciplinary team. The finding will be documented on a water type update form provided by the department and the fish habitat water type map will be updated as soon as practicable. If a dispute arises concerning a water type the department shall make available informal conferences, as established in WAC 222-46-020 which shall include the departments of fish and wildlife, and ecology, and affected Indian tribes and those contesting the adopted water types.~~The department may convene an interdisciplinary team, as defined in WAC 222-16-010, to consider proposed modifications to the water type map to better reflect observed in-field conditions, including if observations of fish occur, or if conditions change making habitat inaccessible to fish due to naturally occurring conditions and no fish reside above the blockage, or if a dispute arises concerning a water-type classification.

An interdisciplinary team includes participants from the departments of fish and wildlife, and ecology, and affected Indian tribes, and those proposing or contesting a water classification. The department shall consider the findings of an interdisciplinary team to determine the water classification. The department shall document the findings and make changes to the water type map shall as soon as practicable. Water-type classifications concurred by the department prior to January 1, 2020, are regulatory water-type classifications.

~~The w~~Waters ~~will be~~ are classified using the following criteria:

*(1) **"Type S Water"** means all waters, within their bankfull width, as inventoried as "shorelines of the state" under chapter 90.58 RCW and the rules promulgated pursuant to chapter 90.58 RCW including periodically inundated areas of their associated wetlands.

*(2) **"Type F Water"** means segments of natural waters, other than Type S Waters, ~~which are~~ within the bankfull widths of defined channels and periodically inundated areas of ~~their~~ associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and ~~which~~ in any case contain fish habitat or are ~~described by one of the following four categories:~~used by fish or humans. Type F Water includes any of the following:

(a) Waters within the anadromous fish habitat overlay. These are waters connected to saltwater that have a sustained gradient of seven-percent or less, and include associated tributaries lacking a five-percent gradient increase or permanent natural obstacle at the junction with the main stem.

(b) Waters that meet default physical stream criteria are presumed fish habitat.

(i) Default physical stream criteria include any of the following:

(A) Stream segments having a bankfull width of two feet or greater in western Washington or three feet or greater in eastern Washington; and having a gradient of sixteen percent or less;

(B) Stream segments having a bankfull width of two feet or greater in western Washington or three feet or greater in eastern Washington; and having a gradient greater than sixteen percent and less than or equal to twenty percent, and having greater than fifty acres in contributing basin size in western Washington or greater than one hundred seventy five acres contributing basin size in eastern Washington, based on hydrographic boundaries;

(ii) The department shall waive or modify the requirements of (i) of this subsection if:

(A) Waters have confirmed, long-term, naturally occurring water quality parameters incapable of supporting fish; or

(B) Snowmelt streams have short flow cycles that do not support successful life history phases of fish. These streams typically have no flow in the winter months and discontinue flow by June 1; or

(C) Sufficient information about a geomorphic region is available to support a departure from the characteristics in (i) of this subsection, as determined in consultation with the department of fish and wildlife, department of ecology, affected tribes and interested parties.

(c) Waters containing off-channel habitat connected to a fish habitat stream and accessible to fish during some portion of the year. Off-channel habitat includes riverine ponds, wall-based channels, and other areas critical to the maintenance of optimum survival of fish. Off-channel habitat is measured from the edge of:

(i) Bankfull width; or

(ii) The ordinary high water line of associated wetlands.

(d) Waters~~, which are~~ diverted for domestic use by more than ~~10~~ ten residential or camping units or by a public accommodation facility licensed to serve more than ~~10~~ ten persons, where ~~such diversion is determined by~~ the department determines the diversion ~~to be~~is a valid appropriation of water and the only practical water source for such users. ~~Such~~ These waters ~~shall be considered to be~~are classified as Type F Water ~~upstream from the point of such diversion~~ for ~~1,500~~fifteen hundred feet upstream from the point of diversion or until the drainage area is reduced by ~~50~~ fifty percent, whichever is less~~;~~.

(~~b~~e) Waters~~, which are~~ diverted for use by a federal, state, tribal, local government or private fish ~~hatcheries~~hatchery. ~~Such~~ These waters ~~shall be~~are ~~considered~~ Type F Water for fifteen hundred feet upstream from the point of diversion ~~for 1,500 feet~~, including tributaries if highly significant for protection of downstream water quality. The department may allow additional harvest beyond the requirements of Type F Water ~~designation provided~~ classification if the department determines after a landowner-requested ~~on-site~~interdisciplinary team assessment ~~by the department of fish and wildlife, department of ecology, the affected tribes and interested parties~~ that:

(i) The management practices proposed by the landowner will adequately protect water quality for the fish hatchery; and

(ii) ~~Such additional~~The proposed harvest within the riparian management zone meets the requirements of the water type ~~designation~~ classification that would apply in the absence of the hatchery;

(~~c~~f) Waters~~, which are~~ within a federal, state, local government, or private campground having more than ~~10~~ ten camping units~~: Provided, That~~ if the water ~~shall not be~~is considered to enter a campground ~~until it reaches~~at the boundary of the park lands available for public use and comes within ~~100~~ one hundred feet of a camping unit, trail or other park improvement~~;~~.

~~(d) Riverine ponds, wall-based channels, and other channel features that are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria:~~

~~(i) The site must be connected to a fish habitat stream and accessible during some period of the year; and~~

~~(ii) The off-channel water must be accessible to fish.~~

(3) **"Type Np Water"** means all segments of natural waters within the bankfull width of defined channels that are perennial non-fish habitat streams. Perennial streams are flowing waters that do not go dry any time of a year of normal rainfall and include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.

(4) **"Type Ns Water"** means all segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np Waters. These are seasonal, non-fish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from ~~any stream reach that is a~~ Type Np Water. Type Ns Waters must be physically connected by an above-ground channel system to Type S, F, or Np Waters.

*(5) Verification of water classifications and fish habitat

(a) For purposes of submitting a Forest Practices Application, verification of water classifications occurs by one of the following:

(i) Use of the default physical stream criteria in section (2)(b) of this chapter; or

(ii) The Fish Habitat Assessment Methodology (FHAM) may be used to delineate the extent of fish habitat coincident with the regulatory boundary between Type F Water and Type N Water. Use of the FHAM must be conducted in accordance with the requirements of WAC 222-16-0301.

(b) Proposals to change the department water type map must include documentation of the use of the FHAM on a water-type modification form designated by the department.

*(6) For purposes of this section:

(a) "Residential unit" means a home, apartment, residential condominium unit or mobile home, serving as the principal place of residence.

(b) "Camping unit" means an area intended and used for:

(i) Overnight camping or picnicking by the public containing at least a fireplace, picnic table and access to water and sanitary facilities; or

(ii) A permanent home or condominium unit or mobile home not qualifying as a "residential unit" because of part time occupancy.

(c) "Public accommodation facility" means a business establishment ~~open to and~~ licensed to serve the public, such as a restaurant, tavern, motel or hotel.

(d) "Natural waters" only excludes water conveyance systems which are artificially constructed and actively maintained for irrigation.

(e) "Seasonal ~~low flow" and "seasonal~~ low water" means the conditions of the ~~7~~ seven-day, ~~2~~ two-year low water situation, as measured or estimated by accepted hydrologic techniques recognized by the department.

(f) "Channel width and gradient" means a measurement over a representative section of at least ~~500~~ five hundred linear feet with at least ~~10~~ ten evenly spaced measurement points along the normal stream channel but excluding unusually wide areas of negligible gradient such as marshy or swampy areas, beaver ponds and impoundments. Channel gradient may be determined utilizing stream profiles plotted from United States geological survey topographic maps (see board manual section 23).

(g) "Intermittent ~~streams~~" means those segments of streams that normally go dry.

~~(h) "Fish habitat" means habitat which is used by any fish at any life stage at any time of the year, including potential habitat likely to be used by fish which could be recovered by restoration or management and includes off-channel habitat.~~

NEW SECTION

WAC 222-16-0301 Fish Habitat Assessment Methodology.

The Fish Habitat Assessment Methodology (FHAM) may be used to delineate the extent of fish habitat coincident with the regulatory boundary between Type F Water and Type N Water. The FHAM may be conducted only in waters situated upstream of known fish habitat or if the department authorizes conducting the FHAM after convening an interdisciplinary team.

*(1) The FHAM requires practitioners to start the protocol electro-fishing survey above a Potential Habitat Break (PHB) that is situated upstream of known fish habitat, and proceed upstream to each subsequent PHB to delineate the extent of fish habitat in a stream. Practitioners conducting electro-fishing surveys must be certified. The FHAM requirements include:

(a) Locate the PHB situated upstream of known fish habitat. The process and sources used to determine known fish habitat must be documented. Proponents are encouraged to contact the departments of natural resources and fish and wildlife, and the affected Indian tribes to determine the extent of known fish habitat; and

(b) Beginning upstream of the PHB described in (a) of this subsection, conduct the survey to determine if fish do not occur in the stream segment. If a fish is observed above a PHB, stop the survey and proceed upstream to the next PHB. Repeat this process until no fish are observed upstream of a PHB; and

(c) If no fish are observed upstream of a PHB in the upper most stream segments, then the PHB that blocked fish from moving upstream becomes the end of fish habitat for the stream.

*(2) **Potential Habitat Breaks (PHB)**

(a) For purposes of the FHAM, the statewide PHB criteria include any of the following:

(i) Stream gradient equal to or greater than five-percent.

(A) Changes in stream gradient are measured for a distance of twenty-times the average bankfull width.

(ii) Upstream to downstream bankfull width decrease greater than twenty percent.

(A) Changes in bankfull width are measured for a distance of twenty-times the average bankfull width.

(iii) Permanent Natural Obstacle having:

(A) A vertical obstacle height equal to or greater than the bankfull width and not less than three feet; or

(B) A non-vertical step equal to or greater than twenty percent, if the elevation increase is equal to or greater than two times the upstream bankfull width.

(iv) Tributary junctions are considered a PHB if they coincide with the criteria in (i), (ii), or (iii) of this subsection.

*(3) For purposes of this section:

(a) **"Permanent Natural Obstacle"** means a natural, non-deformable obstacle that completely blocks upstream fish movement. "Permanent natural obstacles" include vertical drops, steep cascades, bedrock sheets and bedrock chutes. A permanent natural obstacle excludes large woody debris and sedimentary deposits.

(b) **"Potential Habitat Break"** means a permanent, distinct and measurable change of physical in-stream characteristics of gradient or bankfull width or permanent natural obstacle, any of which or a combination thereof prevent fish from moving upstream.

REPEAL

WAC 222-16-031 Interim water typing system.

222-30-021 *Western Washington riparian management zones

. . .

*(1)(b)(i)(B) In addition to the conditions set forth above, permitted conversion activities in the **inner zone** of any harvest unit are limited by the following:

- Each continuous conversion area is not more than five hundred feet in length; two conversion areas will be considered "continuous" unless the no-harvest area separating the two conversion areas is at least half the length of the larger of the two conversion areas.
- Type S and F ~~(Type 1, 2, or 3)~~ Water: Up to fifty percent of the inner zone area of the harvest unit on one side of the stream may be converted provided that:
  - The landowner owns the opposite side of the stream and the landowner's riparian area on the opposite bank meets the shade requirements of WAC 222-30-040 or has a seventy-five foot buffer of trees at least forty feet tall or:

. . .

(2)(b)(v) No timber harvest is permitted within a fifty-six foot radius buffer patch centered on a headwater spring or, in the absence of a headwater spring, on a point at the upper most extent of a Type Np Water as defined in WAC 222-16-030(3)~~ and 222-16-031~~.

DRAFT
Rule Proposal for a Permanent Water Typing System
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Alternative C-3

WAC 222-12-090 *Forest practices board manual.

. . .

(13) ~~**Guidelines** for determining fish use for the purpose of typing waters under WAC 222-16-031~~**Reserved**.

. . .

WAC 222-16-030 Water typing system.

~~Until the fish habitat water type maps described below are adopted by the board, the Interim Water Typing System established in WAC 222-16-031 will continue to be used.~~ The department in cooperation with the departments of fish and wildlife, and ecology, and in consultation with affected Indian tribes ~~will classify~~ classifies streams, lakes and ponds.

The department ~~will~~ prepares water type maps showing the location of Type S, F, and N (Np and Ns) Waters within the forested areas of the state. ~~The maps will be based on a multiparameter, field-verified geographic information system (GIS) logistic regression model. The multiparameter model will be designed to identify fish habitat by using geomorphic parameters such as basin size, gradient, elevation and other indicators. The modeling process shall be designed to achieve a level of statistical accuracy of 95% in separating fish habitat streams and nonfish habitat streams. Furthermore, the demarcation of fish and nonfish habitat waters shall be equally likely to over and under estimate the presence of fish habitat. These maps shall be referred to as "fish habitat water typing maps" and shall, when completed, be available for public inspection at region offices of the department.~~ The department shall provide the public access to these maps.

~~Fish habitat water type maps will be updated every five years where necessary to better reflect observed, in-field conditions. Except for these periodic revisions of the maps, on-the-ground observations of fish or habitat characteristics will generally not be used to adjust mapped water types. However, if an on-site interdisciplinary team using nonlethal methods identifies fish, or finds that habitat is not accessible due to naturally occurring conditions and no fish reside above the blockage, then the water type will be immediately changed to reflect the findings of the interdisciplinary team. The finding will be documented on a water type update form provided by the department and the fish habitat water type map will be updated as soon as practicable. If a dispute arises concerning a water type the department shall make available informal conferences, as established in WAC 222-46-020 which shall include the departments of fish and wildlife, and ecology, and affected Indian tribes and those contesting the adopted water types.~~The department may convene an interdisciplinary team, as defined in WAC 222-16-010, to consider proposed modifications to the water type map to better reflect observed in-field conditions, including if observations of fish occur, or if conditions change making habitat inaccessible to fish due to naturally occurring conditions and no fish reside above the blockage, or if a dispute arises concerning a water-type classification.

An interdisciplinary team includes participants from the departments of fish and wildlife, and ecology, and affected Indian tribes, and those proposing or contesting a water classification. The department shall consider the findings of an interdisciplinary team to determine the water classification. The department shall document the findings and make changes to the water type map shall as soon as practicable. Water-type classifications concurred by the department prior to January 1, 2020, are regulatory water-type classifications.

~~The w~~Waters ~~will be~~ are classified using the following criteria:

*(1) **"Type S Water"** means all waters, within their bankfull width, as inventoried as "shorelines of the state" under chapter 90.58 RCW and the rules promulgated pursuant to chapter 90.58 RCW including periodically inundated areas of their associated wetlands.

*(2) **"Type F Water"** means segments of natural waters, other than Type S Waters, ~~which are~~ within the bankfull widths of defined channels and periodically inundated areas of ~~their~~ associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and ~~which~~ in any case contain fish habitat or are ~~described by one of the following four categories:~~used by fish or humans. Type F Water includes any of the following:

(a) Waters within the anadromous fish habitat overlay. These are waters connected to saltwater that have a sustained gradient of ten-percent or less, and include associated tributaries lacking a five-percent gradient increase or permanent natural obstacle at the junction with the main stem.

(b) Waters that meet default physical stream criteria are presumed fish habitat.

(i) Default physical stream criteria include any of the following:

(A) Stream segments having a bankfull width of two feet or greater in western Washington or three feet or greater in eastern Washington; and having a gradient of sixteen percent or less;

(B) Stream segments having a bankfull width of two feet or greater in western Washington or three feet or greater in eastern Washington; and having a gradient greater than sixteen percent and less than or equal to twenty percent, and having greater than fifty acres in contributing basin size in western Washington or greater than one hundred seventy five acres contributing basin size in eastern Washington, based on hydrographic boundaries;

(ii) The department shall waive or modify the requirements of (i) of this subsection if:

(A) Waters have confirmed, long-term, naturally occurring water quality parameters incapable of supporting fish; or

(B) Snowmelt streams have short flow cycles that do not support successful life history phases of fish. These streams typically have no flow in the winter months and discontinue flow by June 1; or

(C) Sufficient information about a geomorphic region is available to support a departure from the characteristics in (i) of this subsection, as determined in consultation with the department of fish and wildlife, department of ecology, affected tribes and interested parties.

(c) Waters containing off-channel habitat connected to a fish habitat stream and accessible to fish during some portion of the year. Off-channel habitat includes riverine ponds, wall-based channels, and other areas critical to the maintenance of optimum survival of fish. Off-channel habitat is measured from the edge of:

(i) Bankfull width; or

(ii) The ordinary high water line of associated wetlands.

(d) Waters~~, which are~~ diverted for domestic use by more than ~~10~~ ten residential or camping units or by a public accommodation facility licensed to serve more than ~~10~~ ten persons, where ~~such diversion is determined by~~ the department determines the diversion ~~to be~~is a valid appropriation of water and the only practical water source for such users. ~~Such~~ These waters ~~shall be considered to be~~are classified as Type F Water ~~upstream from the point of such diversion~~ for ~~1,500~~fifteen hundred feet upstream from the point of diversion or until the drainage area is reduced by ~~50~~ fifty percent, whichever is less~~;~~.

(~~b~~e) Waters~~, which are~~ diverted for use by a federal, state, tribal, local government or private fish ~~hatcheries~~hatchery. ~~Such~~ These waters ~~shall be~~are ~~considered~~ Type F Water for fifteen hundred

feet upstream from the point of diversion~~ for 1,500 feet~~, including tributaries if highly significant for protection of downstream water quality. The department may allow additional harvest beyond the requirements of Type F Water ~~designation provided~~ classification if the department determines after a landowner-requested ~~on-site~~interdisciplinary team assessment ~~by the department of fish and wildlife, department of ecology, the affected tribes and interested parties~~ that:

(i) The management practices proposed by the landowner will adequately protect water quality for the fish hatchery; and

(ii) ~~Such additional~~The proposed harvest within the riparian management zone meets the requirements of the water type ~~designation~~ classification that would apply in the absence of the hatchery;

(~~c~~f) Waters~~, which are~~ within a federal, state, local government, or private campground having more than ~~10~~ ten camping units~~: Provided, That~~ if the water ~~shall not be~~is considered to enter a campground ~~until it reaches~~at the boundary of the park lands available for public use and comes within ~~100~~ one hundred feet of a camping unit, trail or other park improvement~~;~~.

~~(d) Riverine ponds, wall-based channels, and other channel features that are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria:~~

~~(i) The site must be connected to a fish habitat stream and accessible during some period of the year; and~~

~~(ii) The off-channel water must be accessible to fish.~~

(3) **"Type Np Water"** means all segments of natural waters within the bankfull width of defined channels that are perennial non-fish habitat streams. Perennial streams are flowing waters that do not go dry any time of a year of normal rainfall and include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.

(4) **"Type Ns Water"** means all segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np Waters. These are seasonal, non-fish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from ~~any stream reach that is a~~ Type Np Water. Type Ns Waters must be physically connected by an above-ground channel system to Type S, F, or Np Waters.

*(5) Verification of water classifications and fish habitat

(a) For purposes of submitting a Forest Practices Application, verification of water classifications occurs by one of the following:

(i) Use of the default physical stream criteria in section (2)(b) of this chapter; or

(ii) The Fish Habitat Assessment Methodology (FHAM) may be used to delineate the extent of fish habitat coincident with the regulatory boundary between Type F Water and Type N Water. Use of the FHAM must be conducted in accordance with the requirements of WAC 222-16-0301.

(b) Proposals to change the department water type map must include documentation of the use of the FHAM on a water-type modification form designated by the department.

*(6) For purposes of this section:

(a) "Residential unit" means a home, apartment, residential condominium unit or mobile home, serving as the principal place of residence.

(b) "Camping unit" means an area intended and used for:

(i) Overnight camping or picnicking by the public containing at least a fireplace, picnic table and access to water and sanitary facilities; or

(ii) A permanent home or condominium unit or mobile home not qualifying as a "residential unit" because of part time occupancy.

(c) "Public accommodation facility" means a business establishment ~~open to and~~ licensed to serve the public, such as a restaurant, tavern, motel or hotel.

(d) "Natural waters" only excludes water conveyance systems which are artificially constructed and actively maintained for irrigation.

(e) "Seasonal ~~low flow" and "seasonal~~ low water" means the conditions of the ~~7-~~seven-day, ~~2-~~two-year low water situation, as measured or estimated by accepted hydrologic techniques recognized by the department.

(f) "Channel width and gradient" means a measurement over a representative section of at least ~~500~~ five hundred linear feet with at least ~~10~~ ten evenly spaced measurement points along the normal stream channel but excluding unusually wide areas of negligible gradient such as marshy or swampy areas, beaver ponds and impoundments. Channel gradient may be determined utilizing stream profiles plotted from United States geological survey topographic maps (see board manual section 23).

(g) "Intermittent ~~streams~~" means those segments of streams that normally go dry.

~~(h) "Fish habitat" means habitat which is used by any fish at any life stage at any time of the year, including potential habitat likely to be used by fish which could be recovered by restoration or management and includes off-channel habitat.~~

NEW SECTION

WAC 222-16-0301 Fish Habitat Assessment Methodology.

The Fish Habitat Assessment Methodology (FHAM) may be used to delineate the extent of fish habitat coincident with the regulatory boundary between Type F Water and Type N Water. The FHAM may be conducted only in waters situated upstream of known fish habitat or if the department authorizes conducting the FHAM after convening an interdisciplinary team.

*(1) The FHAM requires practitioners to start the protocol electro-fishing survey above a Potential Habitat Break (PHB) that is situated upstream of known fish habitat, and proceed upstream to each subsequent PHB to delineate the extent of fish habitat in a stream. Practitioners conducting electro-fishing surveys must be certified. The FHAM requirements include:

(a) Locate the PHB situated upstream of known fish habitat. The process and sources used to determine known fish habitat must be documented. Proponents are encouraged to contact the departments of natural resources and fish and wildlife, and the affected Indian tribes to determine the extent of known fish habitat; and

(b) Beginning upstream of the PHB described in (a) of this subsection, conduct the survey to determine if fish do not occur in the stream segment. If a fish is observed above a PHB, stop the survey and proceed upstream to the next PHB. Repeat this process until no fish are observed upstream of a PHB; and

(c) If no fish are observed upstream of a PHB in the upper most stream segments, then the PHB that blocked fish from moving upstream becomes the end of fish habitat for the stream.

*(2) **Potential Habitat Breaks (PHB)**

(a) For purposes of the FHAM, the statewide PHB criteria include any of the following:

(i) Stream gradient equal to or greater than five-percent.

(A) Changes in stream gradient are measured for a distance of twenty-times the average bankfull width.

(ii) Upstream to downstream bankfull width decrease greater than twenty percent.

(A) Changes in bankfull width are measured for a distance of twenty-times the average bankfull width.

(iii) Permanent Natural Obstacle having:

(A) A vertical obstacle height equal to or greater than the bankfull width and not less than three feet; or

(B) A non-vertical step equal to or greater than twenty percent, if the elevation increase is equal to or greater than two times the upstream bankfull width.

(iv) Tributary junctions are considered a PHB if they coincide with the criteria in (i), (ii), or (iii) of this subsection.

*(3) For purposes of this section:

(a) **"Permanent Natural Obstacle"** means a natural, non-deformable obstacle that completely blocks upstream fish movement. "Permanent natural obstacles" include vertical drops, steep cascades, bedrock sheets and bedrock chutes. A permanent natural obstacle excludes large woody debris and sedimentary deposits.

(b) **"Potential Habitat Break"** means a permanent, distinct and measurable change of physical in-stream characteristics of gradient or bankfull width or permanent natural obstacle, any of which or a combination thereof prevent fish from moving upstream.

REPEAL

WAC 222-16-031 Interim water typing system.

222-30-021 *Western Washington riparian management zones

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*(1)(b)(i)(B) In addition to the conditions set forth above, permitted conversion activities in the **inner zone** of any harvest unit are limited by the following:

- Each continuous conversion area is not more than five hundred feet in length; two conversion areas will be considered "continuous" unless the no-harvest area separating the two conversion areas is at least half the length of the larger of the two conversion areas.
- Type S and F ~~(Type 1, 2, or 3)~~ Water: Up to fifty percent of the inner zone area of the harvest unit on one side of the stream may be converted provided that:
  - The landowner owns the opposite side of the stream and the landowner's riparian area on the opposite bank meets the shade requirements of WAC 222-30-040 or has a seventy-five foot buffer of trees at least forty feet tall or:

  . . .

  (2)(b)(v) No timber harvest is permitted within a fifty-six foot radius buffer patch centered on a headwater spring or, in the absence of a headwater spring, on a point at the upper most extent of a Type Np Water as defined in WAC 222-16-030(3)~~ and 222-16-031~~.