DRAFT
Rule Proposal for a Permanent Water Typing System
FOREST PRACTICES BOARD
April 2019

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

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

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REPEAL

WAC 222-16-031 Interim water typing system.

WAC 222-24-040 *Water crossing structures for all typed waters.

(1) When the water type break between the Type F and Type N Water is adjusted upstream beyond an existing water crossing structure, the structure will not require replacement until the end of the structures functional life when:

- The water type change is from an on-site interdisciplinary team or a protocol survey in WAC 222-16-0301(2) and has been approved by the department;
- The water crossing structure has been installed under an approved forest practices hydraulic project or a hydraulic project approval by the department of fish and wildlife; and
- The structure is functioning with little risk to public resources.

(2) Bridges are required for new crossings and reconstructed crossings of any typed waters regularly used for recreational boating.

(~~2~~3) Structures containing concrete must be sufficiently cured prior to contact with water.

(~~3~~4) One end of each new or reconstructed permanent log or wood bridge shall be tied or firmly anchored if any of the bridge structure is within ten vertical feet of the 100-year flood level.

(~~4~~5) Alterations or disturbance of the stream bed, bank or bank vegetation must be limited to that necessary to construct the project. All disturbed areas must be stabilized and restored according to the recommended schedule and procedures found in board manual section 5. This requirement may be modified or waived by the department, in consultation with the department of fish and wildlife, if precluded by engineering or safety factors.

(~~5~~6) When earthen materials are used for bridge surfacing, only clean sorted gravel may be used, a geotextile lining must be installed and curbs of sufficient size shall be installed to a height above the surface material to prevent surface material from falling into the stream bed.

(~~6~~7) Wood removed from the upstream end of culverts and bridges will be placed at the downstream end of such culverts and bridges in such a way as to minimize obstruction of fish passage and to the extent practical, while avoiding significant disturbance of sediment in connection with maintenance activities.

(~~7~~8) Fords.

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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~~.

WAC 222-16-030 Water typing system.

The forest practices water typing system is constructed to provide a repeatable method of classifying waters within the non-federal, forested areas of the state. The goal of the water typing system is to ensure that riparian buffers are properly placed at each stream, protecting aquatic resources and their respective habitats. It is intended that across the landscape, the water typing system will equally over and under estimate the presence or absence of fish habitat across the landscape.

~~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 classifies streams, lakes and ponds in cooperation with the departments of fish and wildlife, and ecology, and in consultation with affected Indian tribes ~~will classify streams, lakes and ponds~~. To assist forest practices applicants in determining the water type classification, ~~The~~ the department ~~will~~ prepares and updates water type maps showing the location of Type S, F, and N (Np and Ns) Waters ~~within the forested areas of the state~~as defined in this section. ~~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 location of the water type maps and instructions for use are available on the department's website.

~~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 shall consider the findings of an interdisciplinary team to determine the water type classification. The department will change the water type map to reflect water type changes resulting from an on-site interdisciplinary team or a department approval of a water type update form. The findings of a protocol survey using the Fish Habitat Assessment Method in WAC 222-16-0301(2) or an on-site interdisciplinary team will be documented on a water type update form provided by the department.

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 observations of fish, or if stream conditions change making habitat inaccessible to fish due to naturally occurring conditions, or if a dispute arises concerning a water type classification.

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

~~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~~ fish habitat streams 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 humans or wildlife, or diverted for fish use. Type F Waters includes:

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

Option C-1 *OR*

Waters within the anadromous fish floor. 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.

Option C-2 *OR*

Waters within the anadromous fish floor. 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.

Option C-3 *OR*

Waters within the anadromous fish floor. 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 within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water.

(c) Waters which meet the default physical stream criteria described in WAC 222-16-0301(1).

(d) Waters used by fish for off channel habitat. These are areas important for rearing and survival of fish and include riverine ponds, wall-based channels. The area must be connected to a Type F or Type S Water and accessible to fish during some portion of the year. The extent of off channel habitat is either the bankfull width or the ordinary high water line associated with a bankfull flow.

(e) 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~~ Type F Water upstream from the point of ~~such~~ diversion for ~~1,500~~fifteen hundred feet or until the drainage area is reduced by ~~50~~ fifty percent, whichever is less~~;~~.

(~~b~~f) Waters~~, which are~~ diverted for use by federal, state, tribal, local governmental entity or private fish ~~hatcheries~~hatchery. ~~Such~~ These waters shall be 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 additional 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~~g) Waters~~, which are~~ within a federal, state, local governmental entity, or private campground having more than ~~10~~ ten camping units~~:~~. ~~Provided, That the water shall not be considered to~~ These are waters that enter a campground ~~until it reaches~~at the boundary of the park lands available for public use and ~~comes~~ come 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~~streams 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) 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~~Average bankfull width" 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 (s~~See board manual section ~~23~~2).

(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.~~

Option A & B

"Permanent natural barrier" means a barrier that would exclude most adult salmonids, including:

(i) a waterfall greater than twelve vertical feet in height, or

(ii) a stream segment having a sustained gradient exceeding twenty percent for five hundred twenty five or more feet (continuous), or,

(iii) a channel having a sustained gradient greater than sixteen percent for a distance of five hundred twenty five feet and having a width less than two feet in western Washington or less than three feet in eastern Washington as measured at the bankfull width.

OR

Option C1, C2 &C3 "Permanent natural obstacle" means a natural, non-deformable obstacle that completely blocks upstream fish movement and includes vertical drops, steep cascades, bedrock sheets and bedrock chutes. A permanent natural obstacle excludes large woody debris and sedimentary deposits.

NEW SECTION

WAC 222-16-0301 Verification of Water Classifications.

For purposes of submitting a forest practices application, verification of water classifications may occur by use of the physical stream criteria described in (1) of this section; or by use of the Fish Habitat Assessment Method (FHAM) described in (2) of this section.

(1) **Default physical stream criteria.** The default criteria are a list of stream characteristics that presume fish use. It can only be applied when submitting a forest practices application where fish use of the streams in the forest practices application have not been determined. It does not delineate the regulatory break between Type F and Type N waters. Any of the following apply:

(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;

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

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

(ii) 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

(iii) 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 departments of fish and wildlife, ecology, affected tribes and interested parties.

*(2) **Fish Habitat Assessment Methodology (FHAM).** The FHAM is a series of steps required to delineate the extent of fish habitat coincident with the regulatory water type break between Type F and Type N Waters. Proposals to change the department water type map must include documentation of the use of the FHAM on a form designated by the department. The FHAM is applied in waters situated upstream from known fish presence or if the department authorizes conducting the FHAM after convening an interdisciplinary team. Water type classifications concurred by the department prior to January 1, 2020, are regulatory water type. Board manual section 23 provides additional technical guidance for conducting the FHAM.

The FHAM requires identification of a geomorphic feature meeting the definition of a potential habitat break (PHB) as described in (3) of this section. Practitioners conducting electro-fishing surveys must be certified. The steps to conduct FHAM are:

Step 1	Locate the point of known fish use. The process and sources used to determine known presence or fish habitat must be documented. Proponents are encouraged to contact the department of fish and wildlife and affected Indian tribes to determine areas of known fish use.

Step 2	Locate the first PHB situated upstream of known fish use. See the PHB criteria in (3) of this section to determine if the stream feature qualifies as a PHB.
Step 3	Begin the electrofishing survey directly upstream of the first PHB identified in the stream. The survey will be used to determine if fish occur in the stream segment.
3a	If fish are observed in the stream segment upstream from the first PHB, stop the electrofishing survey and proceed upstream to the next PHB. Repeat this process until no fish are observed upstream of a PHB.
	or
3b	If fish are not observed in the stream segment upstream of a PHB, stop the electrofishing survey and go to step 4.
Step 4	When fish are not observed in the stream segment directly above a PHB, document this location as the proposed habitat break. This point becomes the end of fish habitat for the stream segment and the proposed water type break between Type F and Type N Waters.

Option A

*(3) **Potential Habitat Breaks (PHB).** PHBs include increase in gradient, reduction in bankfull width or a permanent natural obstacle. For purposes of the FHAM, the criteria for a PHB include any of the following:

(a) Western Washington

(i) Stream segments having a sustained gradient increase equal to or greater than five-percent. The minimum distance for determining a sustained gradient is measured over twenty-times the average bankfull width; or

(ii) Stream segments having a bankfull width equal to or less than two feet. The minimum distance for determining a decrease in bankfull width is measured over twenty-times the average bankfull width; or

(iii) A permanent natural obstacle having:

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

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

(iv) Tributary junctions encountered during the assessment will not be considered a PHB unless the junction coincides with the criteria in (i), (ii), or (iii) of this subsection. If a PHB is **not** identified at a junction, the assessment described in (2) of this section continues upstream from the tributary junction until a PHB is identified.

(b) Eastern Washington - reserved

OR

Option B

*(3) **Potential Habitat Breaks (PHB).** PHBs include increase in gradient, reduction in bankfull width or a permanent natural obstacle. For purposes of the FHAM, the criteria for a PHB include any of the following:

(a) Stream segments having a gradient equal to or greater than ten-percent. The minimum distance for determining a sustained gradient is measured over twenty-times the average bankfull width.

(b) Stream segments having a bankfull width equal to or less than two feet. The minimum distance for determining a decrease in bankfull width is measured over twenty-times the average bankfull width.

(c) A permanent natural obstacle having:

(i) a vertical obstacle height equal to or greater than the bankfull width, but not less than three feet; or

(ii) a non-vertical step equal to or greater than twenty percent gradient, if the elevation increase is equal to or greater than the upstream bankfull width.

(d) Tributary junctions encountered during the assessment will not be considered a PHB unless the junction coincides with the criteria in (a), (b), or (c) of this subsection. If a PHB is **not** identified at a junction, the assessment described in (2) of this section continues upstream from the tributary junction until a PHB is identified.

OR

Option C

*(3) **Potential Habitat Breaks (PHB).** PHBs include increase in gradient, reduction in bankfull width or a permanent natural obstacle. For purposes of the FHAM, the criteria for a PHB include any of the following:

(i) Stream segments having a sustained gradient increase equal to or greater than five-percent. The minimum distance for determining a sustained gradient is measured over twenty-times the average bankfull width.

(ii) Upstream to downstream bankfull width decrease greater than twenty percent. The minimum distance for determining a decrease in bankfull width is measured over twenty-times the average bankfull width.

(iii) Permanent Natural Obstacle having:

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

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

(iv) Tributary junctions may be considered a PHB if they coincide with the criteria in (i), (ii), or (iii) of this subsection. If a PHB is **not** identified at a junction, the assessment described in (2) of this section continues upstream from the tributary junction until a PHB is identified.

*(4) 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 to in-stream physical characteristics. PHBs are typically associated with underlying geomorphic conditions and may consist of natural obstacles that physically prevent fish access to upstream reaches or a distinct measurable change in channel, bankfull width or a combination of the two.