




DEPARTMENT OF
NATURAL
RESOURCES

OFFICE OF THE
COMMISSIONER OF
PUBLIC LANDS
1111 WASHINGTON
STREET SE
OLYMPIA WA 98504

360-902-1000
WWW.DNR.WA.GOV

MEMORANDUM

October 23, 2023

TO: Forest Practices Board 
FROM: Marc Engel, Senior Policy Planner
Marc.Engel@dnr.wa.gov 360 628-1107
SUBJECT: Water Typing System Rule

The Board is receiving the draft water typing system rules amending WAC 222-16-030, WAC 222-24-040 and adding new WAC 222-16-0301 *Verification of fish habitat and the break between Type F and Type N Water*, attached.

This draft rule incorporates all Board approved elements to meet the Board's objective for inclusion in a permanent water typing system rule including: retained language from the interim rule, WAC 222-16-031; and, Board accepted Policy Committee and Board Committee recommendations. Staff has also created a water typing system rule crosswalk to show the Board approved language included in the rule package and the location of the proposed language, attached.

DNR staff also has received review comments and input from stakeholders. The stakeholder group process reviewed the Board approved elements for inclusion, and the Board's water typing system objectives for more accurate identification of end of fish habitat, to reduce electrofishing, and reduce the potential for subjectivity when delineating water type classifications.

Staff has prepared the rule language following the Board's decisions and is presenting the draft rule to the Board for review prior to completing the development of the full rule making packet.

ME

Forest Practices Board
WATER TYPING SYSTEM RULE
Crosswalk/Explanatory Information on Proposed Rule Amendments
Prepared for November 8, 2023, Regular Meeting

The purpose of the crosswalk is to show where in the proposed water typing system rule (WAC 222-16-030) language is retained from WAC 222-16-031 Interim water typing system and amended based on the Board approved rule elements.

The Board’s objective for this rule making is for more accurate identification of end of fish habitat through a system which reduces the potential for subjectivity when delineating water type classifications. Toward that objective, the Board has directed that the water typing system rule:

- Minimize and balance error;
- Reduce the use of electrofishing;
- Address stream segments not shown on the DNR map;
- Provide for making improvements to the DNR map over time;
- Include methods to locate the Type F/N Water break on the ground; and
- Ensure that the methods provide the ability to be applied by small forest landowners.

LANGUAGE TO INCLUDE IN WAC 222-16-030	LOCATION OF PROPOSED AMENDMENTS										
WAC 222-16-031 (Repealed. Some language retained as NEW language in WAC 222-16-030)											
Until the fish habitat water type maps mentioned above are available, waters will be classified according to the interim water typing system described below.	Not retained										
If a dispute arises concerning a water type, the department shall make available informal conferences, which shall include the departments of fish and wildlife, ecology, and affected Indian tribes and those contesting the adopted water types. These conferences shall be established under procedures established in WAC <u>222-46-020</u> .	Retained and amended / Page 3, lines 11-15										
For the purposes of this interim water typing system see the following table: <p style="text-align: center;">Water Type Conversion Table</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Permanent Water Typing</th> <th style="text-align: center;">Interim Water Typing</th> </tr> </thead> <tbody> <tr> <td>Type "S"</td> <td>Type 1 Water</td> </tr> <tr> <td>Type "F"</td> <td>Type 2 and 3 Water</td> </tr> <tr> <td>Type "Np"</td> <td>Type 4 Water</td> </tr> <tr> <td>Type "Ns"</td> <td>Type 5 Water</td> </tr> </tbody> </table>	Permanent Water Typing	Interim Water Typing	Type "S"	Type 1 Water	Type "F"	Type 2 and 3 Water	Type "Np"	Type 4 Water	Type "Ns"	Type 5 Water	Not retained
Permanent Water Typing	Interim Water Typing										
Type "S"	Type 1 Water										
Type "F"	Type 2 and 3 Water										
Type "Np"	Type 4 Water										
Type "Ns"	Type 5 Water										

LANGUAGE TO INCLUDE IN WAC 222-16-030	LOCATION OF PROPOSED AMENDMENTS
<p>* (1) "Type 1 Water" means all waters, within their ordinary high-water mark, as inventoried as "shorelines of the state" under chapter <u>90.58</u> RCW and the rules promulgated pursuant to chapter <u>90.58</u> RCW, but not including those waters' associated wetlands as defined in chapter <u>90.58</u> RCW.</p>	<p>Not retained. Amended language in WAC 222-16-030 Page 3, lines 18-20</p>
<p>* (2) "Type 2 Water" means segments of natural waters which are not classified as Type 1 Water and have a high fish, wildlife, or human use. These are segments of natural waters and periodically inundated areas of their associated wetlands, which:</p> <p>(a) Are diverted for domestic use by more than 100 residential or camping units or by a public accommodation facility licensed to serve more than 10 persons, where such diversion is determined by the department to be a valid appropriation of water and only considered Type 2 Water upstream from the point of such diversion for 1,500 feet or until the drainage area is reduced by 50 percent, whichever is less;</p> <p>(b) Are diverted for use by federal, state, tribal or private fish hatcheries. Such waters shall be considered Type 2 Water 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 2 Water designation provided by the department of fish and wildlife, department of ecology, the affected tribes and interested parties that:</p> <p>(i) The management practices proposed by the landowner will adequately protect water quality for the fish hatchery; and</p> <p>(ii) Such additional harvest meets the requirements of the water type designation that would apply in the absence of the hatchery;</p> <p>(c) Are within a federal, state, local or private campground having more than 30 camping units: Provided, That the water shall not be considered to enter a campground until it reaches the boundary of the park lands available for public use and comes within 100 feet of a camping unit.</p> <p>(d) Are used by fish for spawning, rearing or migration. Waters having the following characteristics are presumed to have highly significant fish populations:</p> <p>(i) Stream segments having a defined channel 20 feet or greater within the bankfull width and having a gradient of less than 4 percent.</p>	<p>Retained and amended. Page 3, line 21 through Page 5, line 1</p> <p>Retained and amended. Page 4, lines 19-25</p> <p>Retained and amended. Page 4, lines 26-38</p> <p>Retained, merged and amended. Page 4, lines 39-43</p>

LANGUAGE TO INCLUDE IN WAC 222-16-030	LOCATION OF PROPOSED AMENDMENTS
<p>(ii) Lakes, ponds, or impoundments having a surface area of 1 acre or greater at seasonal low water; or</p> <p>(e) 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:</p> <p>(i) The site must be connected to a fish bearing stream and be accessible during some period of the year; and</p> <p>(ii) The off-channel water must be accessible to fish through a drainage with less than a 5% gradient.</p>	<p>Retained and amended. Page 3, lines 31-36</p>
<p>*(3) "Type 3 Water" means segments of natural waters which are not classified as Type 1 or 2 Waters and have a moderate to slight fish, wildlife, or human use. These are segments of natural waters and periodically inundated areas of their associated wetlands which:</p> <p>(a) Are diverted for domestic use by more than 10 residential or camping units or by a public accommodation facility licensed to serve more than 10 persons, where such diversion is determined by the department to be a valid appropriation of water and the only practical water source for such users. Such waters shall be considered to be Type 3 Water upstream from the point of such diversion for 1,500 feet or until the drainage area is reduced by 50 percent, whichever is less;</p> <p>(b) Are used by fish for spawning, rearing or migration. The requirements for determining fish use are described in the board manual section 13. If fish use has not been determined:</p> <p>(i) Waters having any of the following characteristics are presumed to have fish use:</p> <p>(A) Stream segments having a defined channel of 2 feet or greater within the bankfull width in Western Washington; or 3 feet or greater in width in Eastern Washington; and having a gradient of 16 percent or less;</p> <p>(B) Stream segments having a defined channel of 2 feet or greater within the bankfull width in Western Washington; or 3 feet or greater within the bankfull width in Eastern Washington, and having a gradient greater than 16 percent and less than or equal to 20 percent, and having greater than 50 acres in contributing basin size in Western Washington or greater than 175 acres contributing basin size in Eastern Washington, based on hydrographic boundaries;</p>	<p>Retained and amended. Page 3, line 24</p> <p>Retained. Page 3, lines 37 through Page 4, line 18</p>

LANGUAGE TO INCLUDE IN WAC 222-16-030	LOCATION OF PROPOSED AMENDMENTS
<p>(C) Ponds or impoundments having a surface area of less than 1 acre at seasonal low water and having an outlet to a fish stream;</p> <p>(D) Ponds of impoundments having a surface area greater than 0.5 acre at seasonal low water.</p> <p>(ii) The department shall waive or modify the characteristics in (i) of this subsection where:</p> <p>(A) Waters have confirmed, long term, naturally occurring water quality parameters incapable of supporting fish;</p> <p>(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</p> <p>(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.</p>	<p>Retained. Page 4, lines 15-18</p>
<p>* (4) "Type 4 Water" means all segments of natural waters within the bankfull width of defined channels that are perennial nonfish 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.</p>	<p>Retained and amended. Page 5, lines 2-5</p>
<p>* (5) "Type 5 Waters" means all segments of natural waters within the bankfull width of the defined channels that are not Type 1, 2, 3, or 4 Waters. These are seasonal, nonfish habitat streams in which surface flow is not present for at least some portion of the year and are not located downstream from any stream reach that is a Type 4 Water. Type 5 Waters must be physically connected by an above-ground channel system to Type 1, 2, 3, or 4 Waters.</p>	<p>Retained and amended. Page 5, lines 6-10</p>
<p>* (6) For purposes of this section:</p> <p>(a) "Residential unit" means a home, apartment, residential condominium unit or mobile home, serving as the principal place of residence.</p>	<p>Retained and amended. Page 5, lines 11-36</p>

LANGUAGE TO INCLUDE IN WAC 222-16-030	LOCATION OF PROPOSED AMENDMENTS
<p>(b) "Camping unit" means an area intended and used for:</p> <p>(i) Overnight camping or picnicking by the public containing at least a fireplace, picnic table and access to water and sanitary facilities; or</p> <p>(ii) A permanent home or condominium unit or mobile home not qualifying as a "residential unit" because of part time occupancy.</p> <p>(c) "Public accommodation facility" means a business establishment open to and licensed to serve the public, such as a restaurant, tavern, motel or hotel.</p> <p>(d) "Natural waters" only excludes water conveyance systems which are artificially constructed and actively maintained for irrigation.</p> <p>(e) "Seasonal low flow" and "seasonal low water" mean the conditions of the 7-day, 2-year low water situation, as measured or estimated by accepted hydrologic techniques recognized by the department.</p> <p>(f) "Channel width and gradient" means a measurement over a representative section of at least 500 linear feet with at least 10 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.)</p>	
Board Approved Rule Elements	
previously approved WTMF break points as the regulatory water type break	New language. Page 3, lines 4-9
Do not include rule amendments for water crossing structures	Not included
<p>off-channel habitat (OCH) to include:</p> <ul style="list-style-type: none"> · Type F channelized streams: The edge of OCH is bankfull elevation, the outer edge of inundation as defined at the bankfull elevation ("edge" as defined in WAC 222-16-010); · Type F non-channelized streams: The edge of OCH is the ordinary high water line, which includes those portions of wetlands periodically inundated at the ordinary high water level. 	New language. Page 3, lines 31-36

LANGUAGE TO INCLUDE IN WAC 222-16-030	LOCATION OF PROPOSED AMENDMENTS
Anadromous fish floor alternatives - A4 (7%) and D (<i>for analysis and public review</i>)	Added language in new WAC 222-16-0301. Page 6, lines 12-45
Methods to locate the Type F/N break on the ground; and ensure the methods provide the ability to be applied by small forest landowners;	Added new WAC 222-16-0301 section. Page 5, line 38 through Page 7, line 9
Retain the current definition for wetlands, fish habitat, and bankfull width;	<p>Definitions are retained in WAC 222-16-010</p> <p>Bankfull width" means:</p> <p>(a) For streams - The measurement of the lateral extent of the water surface elevation perpendicular to the channel at bankfull depth. In cases where multiple channels exist, bankfull width is the sum of the individual channel widths along the cross-section (see board manual section 2).</p> <p>(b) For lakes, ponds, and impoundments - Line of mean high water.</p> <p>(c) For tidal water - Line of mean high tide.</p> <p>(d) For periodically inundated areas of associated wetlands - Line of periodic inundation, which will be found by examining the edge of inundation to ascertain where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland.</p> <p>"Wetland" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, such as swamps, bogs, fens, and similar areas. This includes wetlands created, restored, or enhanced as part of a mitigation procedure. This does not include constructed wetlands or the following surface waters of the state intentionally constructed from wetland sites: Irrigation and drainage ditches, grass lined swales, canals, agricultural detention facilities, farm ponds, and</p>

LANGUAGE TO INCLUDE IN WAC 222-16-030	LOCATION OF PROPOSED AMENDMENTS
	<p>landscape amenities.</p> <p>"Fish habitat" means habitat, which is used by 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.</p>
<p>Incorporate AFF definition “as: “measurable physical stream characteristics downstream from which anadromous fish habitat is presumed and an agreement that, for the permanent forest practices water typing system rule, the AFF would establish the location upstream of which protocol fish surveys to determine the water type may begin under the FHAM, thereby reducing electrofishing in waters that are presumed to have anadromous fish habitat.”</p>	<p>Not yet in rule. Propose adding to WAC 222-16-0301 *(3) For purposes of this section:</p>
<p>Develop a fish habitat assessment methodology (FHAM) to reduce electrofishing, locate known breaks limiting fish movement upstream, and achieve consistency in application.</p>	<p>Added language in new WAC 222-16-0301 Page 6, line 47 through Page 7, line 9</p>
<p>Potential Habitat Break alternatives - existing rule; western Washington tribal; industrial landowner; and eastern Washington tribal; <i>(for analysis and public review)</i></p>	<p>Added language for Options A, B & C in new WAC 222-16-0301. Existing rule yet to be included. Page 7, line 11 – Page 8, line 23</p>
<p>Retain map-based modeled water typing system is one of the goals of a permanent water typing system rule.</p>	<p>This is a goal that will be managed by the Division and the Board, not in rule.</p>

DRAFT
Rule Proposal for a Permanent Water Typing System
FOREST PRACTICES BOARD
November 9, 2023

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.

REPEAL

WAC 222-16-031 Interim water typing system.

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

(1) When a department approved water type change causes the location of the break between Type F and Type N Water to be upstream beyond an existing water crossing structure, it must be replaced with a fish passable structure. Replacement is not required if: the existing structure is fish passable per WAC 222-24-041; or, the structure is functioning with little risk to public resources and has been installed under a forest practices hydraulic approval in an approved forest practices application or a hydraulic project approval by the department of fish and wildlife.

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

(23) Structures containing concrete must be sufficiently cured prior to contact with water.

(34) 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.

(45) 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.

(56) 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.

(67) 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.

(78) Fords.

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:

- 1 • Each continuous conversion area is not more than five hundred feet in length; two conversion
- 2 areas will be considered "continuous" unless the no-harvest area separating the two conversion
- 3 areas is at least half the length of the larger of the two conversion areas.
- 4 • Type S and F (~~Type 1, 2, or 3~~) Water: Up to fifty percent of the inner zone area of the harvest unit
- 5 on one side of the stream may be converted provided that:
- 6 " The landowner owns the opposite side of the stream and the landowner's riparian area on the
- 7 opposite bank meets the shade requirements of WAC 222-30-040 or has a seventy-five foot
- 8 buffer of trees at least forty feet tall or:
- 9 ...
- 10 (2)(b)(v) No timber harvest is permitted within a fifty-six foot radius buffer patch centered on a
- 11 headwater spring or, in the absence of a headwater spring, on a point at the upper most extent of a
- 12 Type Np Water as defined in WAC 222-16-030(3) ~~and 222-16-031~~.

13

14

15 **WAC 222-16-030 Water typing system.**

16 ~~Until the fish habitat water type maps described below are adopted by the board, the Interim Water~~

17 ~~Typing System established in WAC 222-16-031 will continue to be used. The objective of the water~~

18 ~~typing system is to correctly classify waters to inform the appropriate riparian protection to be applied~~

19 ~~to each water type. The primary component of this objective is the accurate determination of the extent~~

20 ~~of fish habitat streams at the landscape scale. This section identifies the criteria to classify waters. The~~

21 ~~requirements for determining fish use are described in WAC 222-16-0301(1).~~

22

23 The department ~~classifies streams, lakes and ponds on state and private forest lands of Washington~~

24 ~~State~~ in cooperation with the departments of fish and wildlife, and ecology, and in consultation with

25 affected Indian tribes ~~will classify streams, lakes and ponds.~~

26

27 ~~The department will~~ To assist applicants in determining water type classifications, the department shall

28 prepare and update water type maps showing the location of Type S, F, and N (Np and Ns) Waters

29 within the forested areas of the state. ~~The maps will be based on a multiparameter, field-verified~~

30 ~~geographic information system (GIS) logistic regression model. The multiparameter model will be~~

31 ~~designed to identify fish habitat by using geomorphic parameters such as basin size, gradient, elevation~~

32 ~~and other indicators. The modeling process shall be designed to achieve a level of statistical accuracy~~

33 ~~of 95% in separating fish habitat streams and nonfish habitat streams. Furthermore, the demarcation of~~

34 ~~fish and nonfish habitat waters shall be equally likely to over and under estimate the presence of fish~~

35 ~~habitat. These maps shall be referred to as "fish habitat water typing maps" and shall, when~~

36 ~~completed, be available for public inspection at region offices of the department. All Type S Waters,~~

37 ~~and department concurred Type F and N Water and Type Np and Ns Water breaks shown on the water~~

38 ~~type map are official and may be relied upon by landowners.~~

39

40 ~~Fish habitat water type maps will be updated every five years where necessary to better reflect~~

41 ~~observed, in field conditions. Except for these periodic revisions of the maps, on the ground~~

42 ~~observations of fish or habitat characteristics will generally not be used to adjust mapped water types.~~

43 ~~However, if an on-site interdisciplinary team using nonlethal methods identifies fish, or finds that~~

44 ~~habitat is not accessible due to naturally occurring conditions and no fish reside above the blockage,~~

45 ~~then the water type will be immediately changed to reflect the findings of the interdisciplinary team.~~

46 ~~The finding will be documented on a water type update form provided by the department and the fish~~

47 ~~habitat water type map will be updated as soon as practicable. If a dispute arises concerning a water~~

48 ~~type the department shall make available informal conferences, as established in WAC 222-46-020~~

1 ~~which shall include the departments of fish and wildlife, and ecology, and affected Indian tribes and~~
2 ~~those contesting the adopted water types.~~

3
4 The water type maps and instructions for use are available for public review from the department. All
5 water breaks concurred by the department are regulatory water type classifications; all other mapped,
6 and unknown Type F and N Water or Type Np and Ns Water type breaks must be determined, in the
7 field, by forest landowners or their representative. The water type break can be determined per this section
8 or, for fish use, WAC 222-16-0301. Small forest landowners can contact the department for technical
9 assistance and/or ID teams to determine water typing breaks.

10
11 The department may convene an interdisciplinary team, as defined in WAC 222-16-010, to consider
12 proposed modifications to the departments water type map; to address observed in-field conditions,
13 including if observations of fish; to address naturally occurring stream conditions or blockages making
14 habitat inaccessible to fish; or, if a dispute arises concerning a water type classification in accordance
15 with WAC 222-46-020.

16
17 The waters will bere classified using the following criteria:

- 18 *(1) **“Type S Water”** means all waters, within their bankfull width, as inventoried as “shorelines of
19 the state” under chapter 90.58 RCW and the rules promulgated pursuant to chapter 90.58 RCW
20 including periodically inundated areas of ~~their~~ associated wetlands.
- 21 *(2) **“Type F Water”** means segments of natural waters ~~other than Type S Waters, which are~~
22 ~~within the bankfull widths of defined channels and~~including periodically inundated areas of
23 their associated wetlands, ~~or within lakes, ponds, or impoundments having a surface area of 0.5~~
24 ~~acre or greater at seasonal low water~~not classified as Type S Waters, which have a fish,
25 wildlife, or human use; and which in any case contain fish habitat or are described by one of
26 the following four categories:
- 27 (a) Waters within lakes, ponds or impoundments having a surface of 0.5 acre or great at
28 seasonal low water.
- 29 (b) Stream segments having a defined channel 20 feet or greater within the bankfull width
30 and having a gradient of less than 4 percent.
- 31 (c) Waters which are off channel habitat. These are areas important for rearing and survival
32 of fish and include riverine ponds, wall-based channels, and stream associated wetlands.
33 The area must be connected to a Type F or Type S water and accessible to fish during
34 some portion of the year. The extent of off channel habitat associated with defined
35 channels is the outer edge of inundation at the mean high water line for stream
36 connected ponds, impoundments, and stream associated wetlands.
- 37 (d) Waters used by fish. The department has prepared water type maps showing the
38 location of Type F Waters. All department concurred Type F and N Water breaks
39 shown on the water type map are official. Where fish use has not been determined:
- 40 (i) Waters having any of the following characteristics are presumed to have fish
41 use:
- 42 (A) Stream segments having a defined channel of two feet or greater within the
43 bankfull width in Western Washington; or three feet or greater in width in
44 Eastern Washington; and having a gradient of sixteen percent or less;
- 45 (B) Stream segments having a defined channel of two feet or greater within the
46 bankfull width in Western Washington; or three feet or greater within the
47 bankfull width in Eastern Washington, and having a gradient greater than
48 sixteen percent and less than or equal to twenty percent, and having greater

- 1 than fifty acres in contributing basin size in Western Washington or greater
2 than one hundred seventy five acres contributing basin size in Eastern
3 Washington, based on hydrographic boundaries;
- 4 (C) Ponds or impoundments having a surface area of less than one acre at
5 seasonal low water and having an outlet to a fish stream;
- 6 (D) Ponds of impoundments having a surface area of 0.5 acre or greater at
7 seasonal low water.
- 8 (ii) The department shall waive or modify the characteristics in (i) of this subsection
9 where:
- 10 (A) Waters have confirmed, long term, naturally occurring water quality
11 parameters incapable of supporting fish;
- 12 (B) Snowmelt streams with short flow cycles that do not support successful
13 life history phases of fish. These streams typically have no flow in the
14 winter months and discontinue flow by June 1; or
- 15 (C) Sufficient information about a geomorphic region is available to support
16 a departure from the characteristics in (i) of this subsection, as
17 determined in consultation with the department of fish and wildlife,
18 department of ecology, affected tribes and interested parties.
- 19 (e) Waters, ~~which are~~ diverted for domestic use by more than ~~10-ten~~ residential or camping
20 units or by a public accommodation facility licensed to serve more than ~~10-ten~~ persons,
21 where ~~such the department determines the~~ diversion is ~~determined by the department to~~
22 ~~be~~ a valid appropriation of water ~~and the only practical water source for such users.~~
23 ~~Such-These~~ waters shall be considered ~~to be~~ Type F Water upstream from the point of
24 ~~such~~ diversion for ~~1,500~~fifteen hundred feet or until the drainage area is reduced by ~~50~~
25 ~~fifty~~ percent, whichever is less;
- 26 (bf) Waters, ~~which are~~ diverted for use by a federal, state, tribal or private fish
27 ~~hatcheries~~hatchery. ~~Such-These~~ waters shall be considered Type F Water for fifteen
28 hundred feet upstream from the point of diversion ~~for 1,500 feet~~, including tributaries if
29 highly significant for protection of downstream water quality. The department may
30 allow additional harvest beyond the requirements of Type F Water ~~designation~~
31 ~~provided~~classification ~~if~~ the department determines after a landowner-requested ~~on-~~
32 ~~site~~interdisciplinary team assessment ~~by the department of fish and wildlife, department~~
33 ~~of ecology, the affected tribes and interested parties~~ that:
- 34 (i) The management practices proposed by the landowner will adequately protect
35 water quality for the fish hatchery; and
- 36 (ii) ~~Such-The~~ additional harvest within the riparian management zone meets the
37 requirements of the water type ~~designation~~classification that would apply in the
38 absence of the hatchery;
- 39 (eg) Waters, ~~which are~~ within a federal, state, local governemental entity, or private
40 campground having more than ~~10-ten~~ camping units:— ~~Provided, That the water shall~~
41 ~~not be considered to~~These are waters that enter a campground ~~until it reaches~~at the
42 boundary of the park lands available for public use and ~~comes come~~ within ~~100~~one
43 hundred feet of a camping unit, trail or other park improvement;
- 44 (d) ~~Riverine ponds, wall-based channels, and other channel features that are used by fish for~~
45 ~~off channel habitat. These areas are critical to the maintenance of optimum survival of~~
46 ~~fish. This habitat shall be identified based on the following criteria:~~
- 47 (i) ~~The site must be connected to a fish habitat stream and accessible during some~~
48 ~~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) 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” mean 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 Bankfull width and gradient~~” for defined channels 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~~ See board manual section ~~2322~~).

(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 Verification of fish habitat and the break between Type F and Type N Water.

To assist applicants in determining the water type classification, the department 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 mapping tool and instructions for viewing water type maps is available on the department’s website.

For the purposes of forest practices, landowners are required to verify the water type break between Type F and N Waters where fish use has not previously been determined. Department concurred breaks between Type F and N Waters shown on the water type map are official and can be used by the landowner. All other mapped stream breaks, and the establishment of the Type F and N Water break

1 on streams not shown on the map, need to have the Type F and N Water break established through the
2 application of the default physical characteristics, per WAC 222-16-030(2)(d)(i); or, through the
3 application of the fish habitat assessment method (FHAM) described in (1) of this section.

4
5 The application of FHAM is intended to establish the line of demarcation between fish and non-fish
6 habitat waters. No application of default physical characteristics or FHAM to determine the Type F
7 and N Water break is allowed within the anadromous fish floor (AFF), unless a landowner requests an
8 interdisciplinary team, as defined in WAC 222-16-010. The AFF demarks the point downstream of
9 which anadromous fish use is always presumed and upstream of which the default physical
10 characteristics or FHAM may be applied to establish the Type F and N Water break.

11
12 *Option A*

13 Waters within the anadromous fish floor. These are all waters connected to saltwater which are below
14 the combined upstream most documented or presumed anadromous fish use point included in the most
15 current available anadromous fish data, and the upstream associated waters occurring below either a
16 sustained stream gradient of seven percent or a permanent natural barrier, whichever comes first.
17 Publicly available anadromous fish data is available through SWIFD, StreamNet, or a WDFW
18 approved alternative resource; and where:

19
20 A permanent natural barrier to anadromy is defined as:

21 (a) Non-vertical barrier:

- 22 · Channels < 5 feet bankfull width: sustained gradient $\geq 20\%$ for ≥ 100 feet (30 meters) without
23 resting areas.
- 24 · Channels 5–10 feet in bankfull width: sustained gradient $\geq 20\%$ for ≥ 250 feet (76 meters)
25 without resting areas.
- 26 · Channels > 10 feet in bankfull width: sustained gradient $\geq 20\%$ for \geq
27 525 feet (160 meters) without resting pool.

28 (b) Vertical Barrier (permanent natural features):

- 29 · Channels < 5 feet in bankfull width: near vertical drop ≥ 5 feet in height (1.5 meters)
- 30 · Channels 5 – 10 feet bankfull width: near vertical drop ≥ 8 feet in height (2.5 meters)
- 31 · Channels > 10 feet bankfull width: near vertical drop ≥ 12.1 feet in height (3.7 meters)

32
33 OR

34
35 *Option B*

36 Waters within the anadromous fish floor. These are all waters connected to saltwater that are included
37 in publicly available GIS datasets of known and presumed anadromous fish use, and include associated
38 tributaries lacking a five-percent gradient increase or permanent natural obstacle at the junction with
39 saltwater or the main stem stream to the next upstream PHB as described in (3) of this section. Publicly
40 available GIS anadromous fish datasets are available through SWIFD or StreamNet; and where:

41
42 A permanent natural obstacle is:

- 43 · A vertical obstacle with a height equal to or greater than three feet; or
- 44 · A non-vertical step which is equal to or greater than twenty percent gradient and the elevation
45 increase is equal to or greater than the upstream bankfull width.

46
47 ***(1) Fish Habitat Assessment Methodology (FHAM).** The FHAM is a series of steps used to

1 delineate the upper extent of fish habitat coincident with the regulatory water type break between
 2 Type F and Type N Waters. Proposals to change the department water type map must include
 3 documentation of the use of the FHAM on a form designated by the department. FHAM shall be
 4 applied in waters situated upstream from the anadromous fish floor or known fish use. Board
 5 manual section 23 provides additional technical guidance for conducting the FHAM.

6
 7 The FHAM requires the identification of geomorphic features meeting the definition of a
 8 potential habitat break (PHB) as described in (3) of this section. The steps to conduct FHAM are:
 9

Step 1	Locate the upstream extent of the AFF or other upstream most point of known fish use, whichever is furthest upstream. 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/or affected Indian tribes to assist in determining areas of known fish use.
Step 2	Locate the first PHB situated upstream of the point in Step 1. See the PHB criteria in (2) of this section.
Step 3	Begin the fish habitat assessment directly upstream of the PHB identified in Step 2. If a fish is 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;
Step 4	When fish are not observed in the stream segment directly above a PHB, continue protocol surveying of all available habitats for ¼ mile upstream of the PHB. If no fish are observed, 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. Document this location as the proposed habitat break.

10
 11 *Option A*

12 *(2) **Potential Habitat Breaks (PHB)**. For purposes of the FHAM, the criteria for a PHB include any
 13 of the following:

14 (a) Western Washington

- 15 (i) Stream segments having a gradient increase equal to or greater than five percent. The
 16 minimum distance for determining the gradient increase is measured over twenty-times
 17 the bankfull width both downstream and upstream from the change in width; or
- 18 (ii) Stream segments having a bankfull width equal to or less than two feet. The minimum
 19 distance for determining a decrease in bankfull width is measured over twenty-times the
 20 average bankfull width both downstream and upstream from the change in width; or
- 21 (iii) A permanent natural obstacle having a vertical obstacle height equal to or greater than the
 22 bankfull width, but not less than three feet.

23 *OR*

24 *Option B*

25 *(2) **Potential Habitat Breaks (PHB)**. For purposes of the FHAM, the criteria for a PHB include any
 26 of the following:

- 1 (a) Stream segments having a gradient increase equal to or greater than ten percent. The minimum
2 distance for determining the change in gradient is measured over twenty-times the average
3 bankfull width.
- 4 (b) Stream segments having a bankfull width equal to or less than two feet. The minimum
5 distance for determining a decrease in bankfull width is measured over twenty-times the
6 bankfull width.
- 7 (c) A permanent natural obstacle having:
 - 8 (i) a vertical obstacle height equal to or greater than the bankfull width, but not less than
9 three feet; or
 - 10 (ii) a non-vertical step equal to or greater than twenty percent gradient if the elevation
11 increase is equal to or greater than the upstream bankfull width.

12 *OR*

13 *Option C*

14 ***(2) Potential Habitat Breaks (PHB).** For purposes of the FHAM, the criteria for a PHB include any
15 of the following:

- 16 (a) Stream segments having a gradient increase equal to or greater than five percent.
- 17 (b) Downstream to upstream bankfull width decrease at the tributary junction equal to or greater
18 than twenty percent. The minimum distance for determining a decrease in bankfull width is
19 measured over twenty-times the bankfull width.
- 20 (c) Permanent natural obstacle having:
 - 21 (i) A vertical obstacle height equal to or greater than three feet; or
 - 22 (ii) A non-vertical step equal to or greater than twenty percent gradient and the elevation
23 increase is equal to or greater than the upstream bankfull width.

24
25 ***(3) For purposes of this section:**

- 26 (a) **“Permanent Natural Obstacle”** means a natural, non-deformable obstacle that completely
27 blocks upstream fish movement. “Permanent natural obstacles” include vertical drops, steep
28 cascades, bedrock sheets and bedrock chutes.
- 29 (b) **“Potential Habitat Break”** means a permanent, distinct, and measurable change to in-
30 stream physical characteristics. PHBs are typically associated with underlying geomorphic
31 conditions and may consist of natural obstacles that physically limits fish access to upstream
32 reaches or a distinct measurable change in channel, bankfull width or a combination of the
33 two.