




March 26, 2009

MEMORANDUM

TO: Forest Practices Board

FROM: Marc Engel, Acting Assistant Division Manager   
Forest Practices Division

SUBJECT: Fixed Width Riparian Rule Proposal

On February 11, the Board directed staff to commence two processes related to the fixed width riparian rule proposal:

- The first was to initiate a 30-day review for the Department of Fish and Wildlife and the counties (and by practice the tribes) pursuant to RCW 76.09.040(2). The Board received two comment letters from this process, one from the Department of Fish and Wildlife and one from the Northwest Indian Fisheries Commission.
- The second was to offer the opportunity for CMER and Forests and Fish Policy to comment on the rule proposal within the same 30-day review timeframe. We received two comment letters from this process, one from the Department of Ecology and one from the Conservation Caucus. In addition, representatives of all Forests and Fish caucuses provided input during a workshop we held on March 12, 2009, see attached summary of comments in the March 23, 2009 memorandum from the Forests and Fish Policy co-chairs.

The following general themes emerge from the body of comments offered during this review.

- Some caucuses are concerned that the fixed width approach should only be available to small forest landowners to alleviate the disproportionate costs and complexities to apply the current rules, and/or because of their relatively infrequent harvest schedules;
- There is question about the level of affect of narrower widths on large woody debris and shade as compared to the current rules; and,
- Some caucuses asserted that a fixed width rule proposal must be developed through the adaptive management process.

Recommendation

Staff recommends the Board initiate the adaptive management process to develop a fixed width riparian proposal.

The Board can direct staff to prepare an adaptive management proposal packet containing the fixed width riparian proposal and answers to the questions listed in the *Proposal Initiation* guidelines on page M22-7 in Board Manual Section 22, *Guidelines for Adaptive Management*



*Program.* This proposal can be delivered to the Adaptive Management Administrator upon completion by staff or presented to the Board for review at the May meeting prior to delivery to the Adaptive Management Administrator. Completion of this packet assures that the proposal identifies:

1. The affected forest practices rule, guidance, or DNR product;
2. The urgency based on scientific uncertainty and resource risk;
3. Any outstanding TFW, FFR, or Forests and Fish Policy agreements supporting the proposal;
4. How the results of the proposal could address Adaptive Management Program key questions and resource objectives or other rule, guidance, or DNR product; and
5. Available literature, data and other information supporting the proposal.

Upon receipt of the proposal packet the Administrator will review the proposal according to the procedures outlined on pages M22-7 through M22-9 and make a recommendation to Forests and Fish Policy to initiate proposal development through one of two tracks: science or policy.

ME/

Attachment

**Forest Practices Board**  
**March 2009**  
**Fixed Width Option for Riparian Zones**

**WAC 222-16-010 General definitions.**

...

"RMZ core zone" means:

(1) **For Western Washington**, the buffer of a Type S or F Water, measured horizontally from the outer edge of the bankfull width or the outer edge of the channel migration zone, whichever is greater. For timber harvest units following either inner zone conifer harvest options 1 or 2, or the hardwood conversion option the core zone is fifty feet in width. For timber harvest units following the fixed width option, the core zone is determined based on site class. (See WAC 222-30-021.)

(2) **For Eastern Washington**, the thirty foot buffer of a Type S or F Water, measured horizontally from the outer edge of the bankfull width or the outer edge of the channel migration zone, whichever is greater. (See WAC 222-30-022.)

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**WAC 222-30-021 \*Western Washington riparian management zones.**

These rules apply to all typed waters on forest land in Western Washington, except as provided in WAC 222-30-023. RMZs are measured horizontally from the outer edge of the bankfull width or channel migration zone, whichever is greater, and extend to the limits as described in this section. See ~~the~~ board manual section 7 for riparian design and layout guidelines.

\*~~(1) Western Washington RMZs for Type S and F Waters. have three zones: The core zone is nearest to the water, the inner zone is the middle zone, and the outer zone is furthest from the water. (See definitions in WAC 222-16-010.) RMZ dimensions vary depending on the site class of the land, the management harvest option, and the bankfull width of the stream. See tables for management options 1 and 2 below. Landowners may choose between four riparian management zone buffer options for these waters: Fixed width, conifer harvest options 1 and 2, and hardwood conversion.~~

None of the limitations on harvest in each of the three zones listed below will preclude or limit the construction and maintenance of roads for the purpose of crossing streams in WAC 222-24-030 and 222-24-050, or the creation and use of yarding corridors in WAC 222-30-060(1).

The shade requirements in WAC 222-30-040 must be met regardless of harvest opportunities provided in the inner zone RMZ rules. See ~~the~~ board manual section 1.

The department will report to the board one year after subsection (a) becomes effective and annually thereafter.

(a) Fixed width option. The landowner may choose for small timber harvest units less than or equal to twenty acres in size, to have one zone: The core zone. The width of the core zone varies depending on the site class of the land. (See definitions in WAC 222-16-010.) The width of the core zone is determined by site class as shown in the "Fixed Width Option" table below. The maximum length of the timber harvest unit adjacent to the stream for this option is one thousand feet. The distance between harvests units must be equal to the harvest unit with the greater stream length, or three hundred feet, whichever is greater.

**Fixed Width Option**  
**for Small Harvest Units Less Than 20 Acres**

<u>Site Class</u>	<u>Fixed Width Core Zone</u> <u>(measured from outer edge of bankfull</u> <u>width or outer edge of CMZ of water)</u>
<u>I</u>	<u>130'</u>
<u>II</u>	<u>110'</u>
<u>III</u>	<u>90'</u>
<u>IV</u>	<u>80'</u>
<u>V</u>	<u>80'</u>

**(b) Conifer harvest options.** Timber harvest units have three riparian management zones: The core zone is nearest to the water, the inner zone is the middle zone, and the outer zone is furthest from the water. (See definitions in WAC 222-16-010.) The dimensions of the RMZ vary depending on the site class of the land, the management harvest option, and the bankfull width of the stream. See tables for management options 1 and 2 below.

**(i) Core zones.** No timber harvest or construction is allowed in the core zone except operations related to forest roads as detailed in subsection (1) of this section. Any trees cut for or damaged by yarding corridors in the core zone must be left on the site. Any trees cut as a result of road construction to cross a stream may be removed from the site, unless used as part of a large woody debris placement strategy or as needed to reach stand requirements.

**(bii) Inner zones.** Forest practices in the inner zone must be conducted in such a way as to meet or exceed stand requirements to achieve the goal in WAC 222-30-010(2). The width of the inner zone is determined by site class, bankfull width, and management option. Timber harvest in this zone must be consistent with the stand requirements in order to reach the desired future condition targets.

**"Stand requirement"** means a number of trees per acre, the basal area and the proportion of conifer in the combined inner zone and adjacent core zone so that the growth of the trees would meet desired future conditions. The following table defines basal area targets when the stand is 140 years old.

<b>Site Class</b>	<b>Desired future condition target basal area per acre (at 140 years)</b>
I	285 sq. ft.
II	275 sq. ft.
III	258 sq. ft.
IV	224 sq. ft.
V	190 sq. ft.

Growth modeling is necessary to calculate whether a particular stand meets stand requirement and is on a trajectory towards these desired future condition basal area target. The appropriate growth model will be based on stand characteristics and will include at a minimum, the following components: The number of trees by diameter class, the percent

1 | of conifer and hardwood, and the age of the stand. See ~~the~~ board manual section 7.

2 | **(iA) Hardwood conversion in the inner zone.** When the existing stands in the combined  
3 | core and inner zone do not meet stand requirements, no harvest is permitted in the inner  
4 | zone, except in connection with hardwood conversion.

5 | **(AI)** The landowner may elect to convert hardwood-dominated stands in the inner zone  
6 | to conifer-dominated stands. Harvesting and replanting shall be in accordance with  
7 | the following limits:

8 | **(Iaa)** Conversion activities in the **inner zone** of any harvest unit are only allowed  
9 | where all of the following are present:

- 10 | • Existing stands in the combined core and inner zone do not meet stand  
11 | requirements (WAC 222-30-021 (1)(b)(ii));
- 12 | • There are fewer than 57 conifer trees per acre 8 inches or larger dbh in the  
13 | conversion area;
- 14 | • There are fewer than 100 conifer trees per acre larger than 4 inches dbh in  
15 | the conversion area;
- 16 | • There is evidence (such as conifer stumps, historical photos, or a conifer  
17 | understory) that the conversion area can be successfully reforested with  
18 | conifer and support the development of conifer stands;
- 19 | • The landowner owns 500 feet upstream and 500 feet downstream of the  
20 | harvest unit;
- 21 | • The core and inner zones contain no stream adjacent parallel roads;
- 22 | • Riparian areas contiguous to the proposed harvest unit are owned by the  
23 | landowner proposing to conduct the conversion activities, and meet shade  
24 | requirements of WAC 222-30-040 or have a 75-foot buffer with trees at  
25 | least 40 feet tall on both sides of the stream for 500 feet upstream and 500  
26 | feet downstream of the proposed harvest unit (or the length of the stream,  
27 | if less);
- 28 | • If the landowner has previously converted hardwood-dominated stands,  
29 | then post-harvest treatments must have been performed to the satisfaction  
30 | of the department.

31 | **(Hbb)** In addition to the conditions set forth above, permitted conversion  
32 | activities in the **inner zone** of any harvest unit are limited by the following:

- 33 | • Each continuous conversion area is not more than 500 feet in length; two  
34 | conversion areas will be considered "continuous" unless the no-harvest  
35 | area separating the two conversion areas is at least half the length of the  
36 | larger of the two conversion areas.
  - 37 | ♦ Type S and F (Type 1, 2, or 3) Water: Up to 50% of the inner zone  
38 | area of the harvest unit on one side of the stream may be converted  
39 | provided that:
  - 40 | ♦ The landowner owns the opposite side of the stream and the  
41 | landowner's riparian area on the opposite bank meets the shade  
42 | requirements of WAC 222-30-040 or has a 75-foot buffer of trees at  
43 | least 40 feet tall or:
- 44 | • The landowner does not own land on the opposite side of the stream but  
45 | the riparian area on the opposite bank meets the shade requirements of  
46 | WAC 222-30-040 or has a 75-foot buffer of trees at least 40 feet tall.
- 47 | • Not more than 25% of the inner zone of the harvest unit on both sides of a

1 Type S or F Water may be converted if the landowner owns both sides.

2 | (~~H~~cc) Where conversion is allowed in the **inner zone**, trees within the  
3 conversion area may be harvested except that:

- 4 • Conifer trees larger than 20 inches dbh shall not be harvested;
- 5 • Not more than 10% of the conifer stems greater than 8 inches dbh,  
6 exclusive of the conifer noted above, within the conversion area may be  
7 harvested; and
- 8 • The landowner must exercise reasonable care in the conduct of harvest  
9 activities to minimize damage to all residual conifer trees within the  
10 conversion area including conifer trees less than 8 inches dbh.

11 | (~~F~~dd) Following harvest in conversion areas, the landowner must:

- 12 • Reforest the conversion area with **conifer** tree species suitable to the site  
13 in accordance with the requirements of WAC 222-34-010; and
- 14 • Conduct post-harvest treatment of the site until the conifer trees necessary  
15 to meet acceptable stocking levels in WAC 222-34-010(2) have crowns  
16 above the brush or until the conversion area contains a minimum of 150  
17 conifer trees greater than 8 inches dbh per acre.
- 18 • Notify the department in writing within three years of the approval of the  
19 forest practices application for hardwood conversion, if the hardwood  
20 conversion has been completed.

21 | (~~V~~ee) **Tracking hardwood conversion.** The purpose of tracking hardwood  
22 conversion is to determine if hardwood conversion is resulting in adequate  
23 enhancement of riparian functions toward the desired future condition while  
24 minimizing the short term impacts on functions. The department will use  
25 existing or updated data bases developed in cooperation with the Washington  
26 Hardwoods Commission to identify watershed administrative units (WAUs)  
27 with a high percentage of hardwood-dominated riparian areas and, thus have  
28 the potential for excessive hardwood conversion under these rules. The  
29 department will track the rate of conversion of hardwoods in the riparian zone:  
30 (1) Through the application process on an annual basis; and (2) at a WAU  
31 scale on a biennial basis as per WAC 222-30-120 through the adaptive  
32 management process which will develop thresholds of impact for hardwood  
33 conversion at the watershed scale.

34 | (~~#~~B) **Harvest options.**

35 | (~~A~~I) No inner zone management. When the existing stands in the combined core and  
36 inner zone do not meet stand requirements, no harvest is permitted in the inner  
37 zone. When no harvest is permitted in the inner zone or the landowner chooses not  
38 to enter the inner zone, the width of core, inner and outer zones are as provided in  
39 the following table:  
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**No inner zone management RMZ widths for Western Washington**

Site Class	RMZ width	Core zone width (measured from outer edge of bankfull width or outer edge of CMZ of water)	Inner zone width (measured from outer edge of core zone)		Outer zone width (measured from outer edge of inner zone)	
			stream width ≤10'	stream width >10'	stream width ≤10'	stream width >10'
I	200'	50'	83'	100'	67'	50'
II	170'	50'	63'	78'	57'	42'
III	140'	50'	43'	55'	47'	35'
IV	110'	50'	23'	33'	37'	27'
V	90'	50'	10'	18'	30'	22'

(BII) Inner zone management. If trees can be harvested and removed from the inner zone because of surplus basal area consistent with the stand requirement, the harvest and removal of the trees must be undertaken consistent with one of two options:

(Iaa) **Option 1. Thinning from below.** The objective of thinning is to distribute stand requirement trees in such a way as to shorten the time required to meet large wood, fish habitat and water quality needs. This is achieved by increasing the potential for leave trees to grow larger than they otherwise would without thinning. Thinning harvest under option 1 must comply with the following:

- Residual trees left in the combined core and inner zones must meet stand requirements necessary to be on a trajectory to desired future condition. See board manual section 7 for guidelines.
- Thinning must be from below, meaning the smallest dbh trees are selected for harvest first, then progressing to successively larger diameters.
- Thinning cannot decrease the proportion of conifer in the stand.
- Shade retention to meet the shade rule must be confirmed by the landowner for any harvest inside of 75 feet from the outer edge of bankfull width or outer edge of CMZ, whichever is greater.
- The number of residual conifer trees per acre in the inner zone will equal or exceed 57.

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**Option 1. Thinning from below.**

Site class	RMZ width	Core zone width (measured from outer edge of bankfull width or outer edge of CMZ of water)	Inner zone width (measured from outer edge of core zone)		Outer zone width (measured from outer edge of inner zone)	
			stream width ≤10'	stream width >10'	stream width ≤10'	stream width >10'
I	200'	50'	83'	100'	67'	50'
II	170'	50'	63'	78'	57'	42'
III	140'	50'	43'	55'	47'	35'
IV	110'	50'	23'	33'	37'	27'
V	90'	50'	10'	18'	30'	22'

**(Hbb) Option 2. Leaving trees closest to the water.** Management option 2 applies only to riparian management zones for site class I, II, and III on streams that are less than or equal to 10 feet wide and RMZs in site class I and II for streams greater than 10 feet wide. Harvest must comply with the following:

- Harvest is not permitted within 30 feet of the core zone for streams less than or equal to 10 feet wide and harvest is not permitted within 50 feet of the core zone for streams greater than 10 feet wide;
- Residual leave trees in the combined core and inner zone must meet stand requirements necessary to be on a trajectory to desired future condition. See board manual section 7 for calculating stand requirements;
- A minimum of 20 conifers per acre, with a minimum 12-inch dbh, will be retained in any portion of the inner zone where harvest occurs. These riparian leave trees will not be counted or considered towards meeting applicable stand requirements nor can the number be reduced below 20 for any reason.
- Trees are selected for harvest starting from the outer most portion of the inner zone first then progressively closer to the stream.
- If (II) of this subsection results in surplus basal area per the stand requirement, the landowner may take credit for the surplus by harvesting additional riparian leave trees required to be left in the adjacent outer zone on a basal area-for-basal area basis. The number of leave trees in the outer zone can be reduced only to a minimum of 10 trees per acre.



**Option 2. Leaving trees closest to water.**

Site class	RMZ width	Core zone width  (measured from outer edge of bankfull width or outer edge of CMZ of water)	Inner zone width				Outer zone width  (measured from outer edge of inner zone)	
			stream width ≤10'	stream width ≤10'	stream width >10'	stream width >10'	stream width ≤10'	stream width >10'
				minimum floor distance		minimum floor distance		
			(measured from outer edge of core zone)	(measured from outer edge of core zone)	(measured from outer edge of core zone)	(measured from outer edge of core zone)		
I	200'	50'	84'	30'	84'	50'	66'	66'
II	170'	50'	64'	30'	70'	50'	56'	50'
III	140'	50'	44'	30'	**	**	46'	**

\*\*Option 2 for site class III on streams >10' is not permitted because of the minimum floor (100') constraint.

**(iiiC) Where the basal area components of the stand requirement cannot be met** within the sum of the areas in the inner and core zone due to the presence of a stream-adjacent parallel road in the inner or core zone, a determination must be made of the approximate basal area that would have been present in the inner and core zones if the road was not occupying space in the core or inner zone and the shortfall in the basal area component of the stand requirement. See definition of "stream-adjacent parallel road" in WAC 222-16-010.

**(AI)** Trees containing basal area equal to the amount determined in (iii) of this subsection will be left elsewhere in the inner or outer zone, or if the zones contain insufficient riparian leave trees, substitute riparian leave trees will be left within the RMZ width of other Type S or F Waters in the same unit or along Type Np or Ns Waters in the same unit in addition to all other RMZ requirements on those same Type S, F, Np or Ns Waters.

**(BII)** When the stream-adjacent road basal area calculated in (iii) of this subsection results in an excess in basal area (above stand requirement) then the landowner may receive credit for such excess which can be applied on a basal area-by-basal area basis against the landowner's obligation to leave trees in the outer zone of the RMZ of such stream or other waters within the same unit, provided that the number of trees per acre in the outer zone is not reduced to less than 10 trees per acre.

(~~EIII~~) When the basal area requirement cannot be met, as explained in (iii) of this subsection, the shortfall may be reduced through the implementation of an acceptable large woody debris placement plan. See board manual section 26 for guidelines.

(~~iv~~D) If a harvest operation includes both yarding and harvest activities within the RMZ, all calculations of basal area for stand requirements will be determined as if the yarding corridors were constructed prior to any other harvest activities. If trees cut or damaged by yarding are taken from excess basal area, these trees may be removed from the inner zone. Trees cut or damaged by yarding in a unit which does not meet the basal area target of the stand requirements cannot be removed from the inner zone. Any trees cut or damaged by yarding in the core zone may not be removed.

(~~eiii~~) **Outer zones.** Timber harvest in the outer zone must leave 20 riparian leave trees per acre after harvest. "**Outer zone riparian leave trees**" are trees that must be left after harvest in the outer zone in Western Washington. Riparian leave trees must be left uncut throughout all future harvests:

**Outer zone riparian leave tree requirements**

Application	Leave tree spacing	Tree species	Minimum dbh required
Outer zone	Dispersed	Conifer	12" dbh or greater
Outer zone	Clumped	Conifer	12" dbh or greater
Protection of sensitive Features	Clumped	Trees representative of the overstory including both hardwood and conifer	8" dbh or greater

The 20 riparian leave trees to be left can be reduced in number under the circumstances delineated in (~~e~~)(~~iv~~)(~~iii~~)(D) of this subsection. The riparian leave trees must be left on the landscape according to one of the following two strategies. A third strategy is available to landowners who agree to a LWD placement plan.

(~~i~~A) **Dispersal strategy.** Riparian leave trees, which means conifer species with a diameter measured at breast height (dbh) of 12 inches or greater, must be left dispersed approximately evenly throughout the outer zone. If riparian leave trees of 12" dbh or greater are not available, then the next largest conifers must be left. If conifers are not present, riparian leave trees must be left according to the clumping strategy in subsection (~~ii~~B) below.

(~~ii~~B) **Clumping strategy.** Riparian leave trees must be left clumped in the following way:

(A) Clump trees in or around one or more of the following **sensitive features** to the extent available within the outer zone. When clumping around sensitive features, riparian leave trees must be 8 inches dbh or greater and representative of the overstory canopy trees in or around the sensitive feature and may include both hardwood and conifer species. Sensitive features are:

(~~Iaa~~) Seeps and springs;

(~~Ibb~~) Forested wetlands;

(~~Icc~~) Topographic locations (and orientation) from which leave trees currently on the site will be delivered to the water;

(~~Ivdd~~) Areas where riparian leave trees may provide windthrow protection;

(~~Vee~~) Small unstable, or potentially unstable, slopes not of sufficient area to be detected by other site evaluations. See WAC 222-16-050 (1)(d).

1 | ~~(VHff)~~ Archaeological or historical sites registered with the Washington state  
2 | department of archaeology and historic preservation. See WAC 222-16-050  
3 | (1)(g); or

4 | ~~(VHgg)~~ Sites containing evidence of Native American cairns, graves or  
5 | glyptic records. See WAC 222-16-050 (1)(f).

6 | ~~(BII)~~ If sensitive features are not present, then clumps must be well distributed  
7 | throughout the outer zone and the leave trees must be of conifer species with a dbh  
8 | of 12 inches or greater. When placing clumps, the applicant will consider  
9 | operational and biological concerns. Tree counts must be satisfied regardless of the  
10 | presence of stream-adjacent parallel roads in the outer zone.

11 | ~~(#C)~~ **Large woody debris in-channel placement strategy.** A landowner may design a  
12 | LWD placement plan in cooperation with the department of fish and wildlife. The plan  
13 | must be consistent with guidelines in the board manual section 26. The landowner may  
14 | reduce the number of trees required to be left in the outer zone to the extent provided in  
15 | the approved LWD placement plan. Reduction of trees in the outer zone must not go  
16 | below a minimum of 10 trees per acre. If this strategy is chosen, a complete forest  
17 | practices application must include a copy of the WDFW approved hydraulics project  
18 | approval (HPA) permit.

19 | ~~(#D)~~ **Twenty riparian leave trees must be left after harvest** with the exception of the  
20 | following:

21 | ~~(AI)~~ If a landowner agrees to implement a placement strategy, see (iii) of this  
22 | subsection.

23 | ~~(BII)~~ If trees are left in an associated channel migration zone, the landowner may  
24 | reduce the number of trees required to be left according to the following:

25 | ~~(Iaa)~~ Offsets will be measured on a basal area-for-basal area basis.

26 | ~~(Hbb)~~ Conifer in a CMZ equal to or greater than 6" dbh will offset conifer in  
27 | the outer zone at a one-to-one ratio.

28 | ~~(Hcc)~~ Hardwood in a CMZ equal to or greater than 10" dbh will offset  
29 | hardwood in the outer zone at a one-to-one ratio.

30 | ~~(IVdd)~~ Hardwood in a CMZ equal to or greater than 10" dbh will offset conifer in  
31 | the outer zone at a three-to-one ratio.

32 | **\* (2) Western Washington protection for Type Np and Ns Waters.**

33 | (a) An **equipment limitation zone** is a 30-foot wide zone measured horizontally from the  
34 | outer edge of the bankfull width of a Type Np or Ns Water where equipment use and other  
35 | forest practices that are specifically limited by these rules. It applies to all perennial and  
36 | seasonal streams.

37 | (i) On-site mitigation is required if any of the following activities exposes the soil on more  
38 | than 10% of the surface area of the zone:

39 | (A) Ground based equipment;

40 | (B) Skid trails;

41 | (C) Stream crossings (other than existing roads); or

42 | (D) Cabled logs that are partially suspended.

43 | (ii) Mitigation must be designed to replace the equivalent of lost functions especially  
44 | prevention of sediment delivery. Examples include water bars, grass seeding, mulching,  
45 | etc.

46 | (iii) Nothing in this subsection (2) reduces or eliminates the department's authority to  
47 | prevent actual or potential material damage to public resources under WAC 222-46-030  
48 | or 222-46-040 or any related authority to condition forest practices notifications or

1 applications.

2 (b) **Sensitive site and RMZs protection along Type Np Waters.** Forest practices must be  
3 conducted to protect Type Np RMZs and sensitive sites as detailed below:

4 (i) A 50-foot, no-harvest buffer, measured horizontally from the outer edge of bankfull  
5 width, will be established along each side of the Type Np Water as follows:  
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7 **Required no-harvest, 50-foot buffers on Type Np Waters.**

<b>Length of Type Np Water from the confluence of Type S or F Water</b>	<b>Length of 50' buffer required on Type Np Water (starting at the confluence of the Type Np and connecting water)</b>
Greater than 1000'	500'
Greater than 300' but less than 1000'	Distance of the greater of 300' or 50% of the entire length of the Type Np Water
Less than or equal to 300'	The entire length of Type Np Water

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- 9 (ii) No timber harvest is permitted in an area within 50 feet of the outer perimeter of a  
10 soil zone perennially saturated from a headwall seep.
- 11 (iii) No timber harvest is permitted in an area within 50 feet of the outer perimeter of a  
12 soil zone perennially saturated from a side-slope seep.
- 13 (iv) No timber harvest is permitted within a 56-foot radius buffer patch centered on the  
14 point of intersection of two or more Type Np Waters.
- 15 (v) No timber harvest is permitted within a 56-foot radius buffer patch centered on a  
16 headwater spring or, in the absence of a headwater spring, on a point at the upper  
17 most extent of a Type Np Water as defined in WAC 222-16-030(3) and 222-16-031.
- 18 (vi) No timber harvest is permitted within an alluvial fan.
- 19 (vii) At least 50% of a Type Np Waters' length must be protected by buffers on both sides  
20 of the stream (2-sided buffers). Buffered segments must be a minimum of 100 feet in  
21 length. If an operating area is located more than 500 feet upstream from the  
22 confluence of a Type S or F Water and the Type Np Water is more than 1,000 feet in  
23 length, then buffer the Type Np Water according to the following table. If the  
24 percentage is not met by protecting sensitive sites listed in (b)(i) through (vii) of this  
25 subsection, then additional buffers are required on the Type Np Water to meet the  
26 requirements listed in the table.  
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28 **Minimum percent of length of Type Np Waters to be buffered when more than 500 feet**  
29 **upstream from the confluence of a Type S or F Water**

<b>Total length of a Type Np Water upstream from the confluence of a Type S or F Water</b>	<b>Percent of length of Type Np Water that must be protected with a 50 foot no harvest buffer more than 500 feet upstream from the confluence of a Type S or F Water</b>
1000 feet or less	refer to table in this subsection (i) above
1001 - 1300 feet	19%
1301 - 1600 feet	27%

1601 - 2000 feet	33%
2001 - 2500 feet	38%
2501 - 3500 feet	42%
3501 - 5000 feet	44%
Greater than 5000 feet	45%

- 1  
2 The landowner must select the necessary priority areas for additional 2-sided buffers according to  
3 the following priorities:  
4 (A) Low gradient areas;  
5 (B) Perennial water reaches of nonsedimentary rock with gradients greater than 20% in  
6 the tailed frog habitat range;  
7 (C) Hyporheic and ground water influence zones; and  
8 (D) Areas downstream from other buffered areas.  
9 Except for the construction and maintenance of road crossings and the creation and  
10 use of yarding corridors, no timber harvest will be allowed in the designated  
11 priority areas. Landowners must leave additional acres equal to the number of  
12 acres (including partial acres) occupied by an existing stream-adjacent parallel road  
13 within a designated priority area buffer.
- 14 (c) None of the limitations on harvest in or around Type Np Water RMZs or sensitive sites  
15 listed in (b) of this subsection will preclude or limit:  
16 (i) The construction and maintenance of roads for the purpose of crossing streams in WAC  
17 222-24-030 and 222-24-050.  
18 (ii) The creation and use of yarding corridors in WAC 222-30-060(1).  
19 To the extent reasonably practical, the operation will both avoid creating yarding  
20 corridors or road crossings through Type Np Water RMZ or sensitive sites and  
21 associated buffers, and avoid management activities which would result in soil  
22 compaction, the loss of protective vegetation or sedimentation in perennially moist  
23 areas.  
24 Where yarding corridors or road crossings through Type Np Water RMZs or sensitive  
25 sites and their buffers cannot reasonably be avoided, the buffer area must be expanded  
26 to protect the sensitive site by an area equivalent to the disturbed area or by providing  
27 comparable functions through other management initiated efforts.  
28 Landowners must leave additional acres equal to the number of acres (including partial  
29 acres) occupied by an existing stream-adjacent parallel road within a Type Np Water  
30 RMZs or sensitive site buffer.

31  
32



State of Washington  
Department of Fish and Wildlife



Mailing Address: 600 Capitol Way N, Olympia WA 98501-1091, (360) 902-2200, TDD (360) 902-2207  
Main Office Location: Natural Resources Building, 1111 Washington Street SE, Olympia WA

March 23, 2009

Department of Natural Resources  
Patricia Anderson, Forest Practices Board Rules Coordinator  
Post Office Box 47012  
Olympia, Washington 98504-7012

**SUBJECT: Fixed-Width Option for Riparian Zones; 30-Day Comments**

Dear Ms. Anderson:

The Washington Department of Fish and Wildlife (WDFW) has reviewed the rule proposal relative to the fixed-width riparian zone protection option. The rule proposal provides an option for landowners who harvest units smaller than or equal to 20 acres to harvest closer to the stream than is allowed under other riparian management options in the rule.

The department is supportive of examining ways to help small forest landowners remain in forestry. We have heard repeatedly that the current riparian rules are too complex and costly for small landowners to implement. We are in favor of a simplified approach that could effectively eliminate the need for small forest landowners to pay for assistance to correctly implement the rules.

WDFW previously participated in discussions with the small forest landowner community regarding a possible fixed-width riparian buffer strategy. The goal of these discussions was to determine if we could come to agreement on a proposal that could be vetted with the larger Forests and Fish community and then forwarded to the Forest Practices Board. Those discussions were constrained to a very short window of time, and produced proposals and counter-proposals, the last of which is captured in the current rule proposal. WDFW thought the this proposal, while having slightly narrower buffer widths on some site classes than what we were advocating for, was close enough to initiate the rule making process.

We recognize the proposal may or may not be modified during the rule making process relative to the widths of the buffers, some other type of constraint on harvest unit size, and/or other constraints such as length of stream affected, constraints on adjacent vegetation, confining the proposal to small forest landowners, etc.

Since the last Board meeting, WDFW conducted a brief initial assessment of the rule proposal by comparing the current and proposed buffer widths. WDFW's LWD assessment resulted in estimating that the rule proposal would provide less large woody debris than the levels projected to be provided by the current rules. WDFW is concerned with what currently appears to be a decrease in available LWD for Site Classes II and III (especially for large streams), because approximately 80% of the riparian zones in Western Washington are Site Class II and III.

While the estimated reduction in LWD potential is relatively small, the 20-acre harvest unit size limitation would allow large, industrial forest landowners to utilize this rule option, thereby highlighting the potential for cumulative effects. Small forest landowners, while representing a significant amount of the total private forestland on the Westside of the state, harvest much less frequently through time and space than large industrial forest landowners. Therefore, prior to a CR-102 we believe an environmental analysis should be conducted that assesses the effects of limiting the availability of the rule proposal to small forest landowners. This type of analysis could prove informative relative to the potential effects of any fixed-width rule proposal.

WDFW supports developing and participating in the implementation monitoring element of the rule proposal, should it move forward.

Finally, WDFW is not supportive of a rule change that would result in an unfavorable HCP amendment, such as one that would exclude landowners or activities from having Endangered Species Act assurances. WDFW recommends Board staff work with the U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA Fisheries) to understand whether any fixed-width rule proposal would likely trigger an analysis under the National Environmental Policy Act.

Thank you very much for the opportunity to provide input to the rule proposal.

Sincerely,

A handwritten signature in blue ink, appearing to read "David Whipple".

David Whipple  
Forest Policy Coordinator

TO:  
Forest Practices Board  
c/o Patricia Anderson  
DNR Forest Practices Division  
1111 Washington Street SE  
Olympia, WA 98504-7012

FROM: Nancy Sturhan, Forest Practices Coordinator, Northwest Indian Fisheries Commission

RE: Comments on proposed rule language for a fixed width stream buffer as presented at the Forest Practices Board meeting on February 11, 2009.

Thank you for the opportunity to comment on the proposed rule language on fixed-width riparian buffers brought forward at the February Board meeting. The following are some technical comments on the proposed fixed-width riparian buffer strategy. These comments generally represent the thoughts of the NWIFC tribes' technical staffs. The tribes reserve the right to comment individually.

Several tribes participated in the March 12, 2009, fixed width workshop. We provided comments at that time. I would like to further state that the tribes have concerns with the buffers proposed by the State and small landowners, and given time may propose an alternate fixed-width riparian buffer strategy. At this time, tribes are engaged in many other CMER and Policy pursuits, and were not aware that there was an effort afoot to propose a fixed-width buffer. As tribes were not involved in developing the fixed-width strategy, and did not anticipate that a new riparian strategy was forthcoming, we are not prepared at this time to put forth an alternate proposal.

The primary concerns of the tribes with the fixed-width proposal at this time are:

- that this fixed-width alternative is available to large landowners as well as small
- that no scientific evaluation of the potential effects has been done, based on current literature and CMER research and monitoring
- that protection of shade and large woody debris recruitment will become less than that available under the current FP HCP rules.

The tribes will attempt to work within the Forest Practices Board rule-making process as the fixed width proposal moves forward.

Thank you for accepting my comments.

-Nancy Sturhan, Forest Practices Coordinator  
Northwest Indian Fisheries Commission



## **ANDERSON, PATRICIA (DNR)**

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**From:** Bernath, Stephen (ECY)  
**Sent:** Monday, March 23, 2009 3:02 PM  
**To:** DNR RE FP BOARD  
**Cc:** Laurie, Tom (ECY); Hicks, Mark (ECY); Susewind, Kelly (ECY)  
**Subject:** Comments on 30 day review of fixed width proposal

Honorable Peter Goldmark, Chair  
Forest Practices Board  
c/o Forest Practices Board Rules Coordinator  
Department of Natural Resources  
Forest Practices Division  
PO Box 47012  
Olympia, WA 98504-7012  
Fax: (360) 902-1428  
Email: [forest.practicesboard@dnr.wa.gov](mailto:forest.practicesboard@dnr.wa.gov)

**SUBJECT:** Comments on 30 day review of fixed width proposal

Dear Commissioner Goldmark and Forest Practices Board Members:

The Department of Ecology has been supportive of a simple approach to riparian protection for small forest landowners for some time and has been on record with supporting such a proposal for over two years with the Forest Practices Board (Board).

Early in this legislative session, a bill was introduced suggesting a small forest landowner strategy, however this proposal was not as protective as rules currently either in place or being considered before the Board. Ecology along with the state caucus worked on an alternative proposal to be presented to the Board that would have been adequate in protection and pre-viewed this strategy with the small forest landowner caucus. This proposal suggested a simple 113 foot no-cut buffer for site class I, II and III soils and 83 foot no-cut buffer on site class IV and V soils.

The small forest landowners counter offered with the proposal that is before the Board. The state caucus agreed that the proposal was good enough to begin rule making, but no environmental or economic analysis had been done. Ecology along with the rest of the state caucus assumed that the proposal could be perfected through the rule making process to assure that it is equal in protection as well as simpler and less expensive to implement.

Ecology believes it is important that small forest landowners are provided with an option that is easy and less expensive to implement, but just as protective as the DFC rules being considered, so that the rule change does not trigger an HCP amendment. Such a rule option for small forest landowners could also provide additional relief to the disproportional impact that occurs with this landowner group from scale of operations and lack of expertise available to take full advantage of the model-based riparian rules.

Ecology recommends to the Board that the environmental effects of this proposal is examined to provide the Board with information about whether this proposal is equal in protection and if not what needs to be changed. This should be done in addition to preparing a cost benefit analysis and small business economic impact statement prior to the Board authorizing a CR102. In addition, it is suggested that Board staff consult with the federal fish agencies to be assured that any proposal that goes to the CR102 stage of rule making does not trigger an HCP amendment.

Please contact me if you have any questions regarding this recommendation.

Respectfully submitted,

Stephen Bernath  
Senior Policy Analyst & IT Manager  
Water Quality Program  
Department of Ecology  
PO Box 47600  
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# FORESTS AND FISH CONSERVATION CAUCUS

c/o Washington Forest Law Center  
(Coordinating Organization)  
615 Second Avenue, Ste 360  
Seattle, WA 98104  
(206) 223-4088

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March 23, 2009

Forest Practices Board  
c/o Patricia Anderson, Rules Coordinator  
Washington State DNR  
111 Washington Street SE  
P.O. Box 47012  
Olympia, WA 98504-7012

Re: **Fixed-Width Riparian Buffer rule proposal**

Dear Board Members:

The Conservation Caucus submits these comments on the State's 11-page rule proposal entitled "Fixed Width Riparian Management Zone for Western Washington," dated February 11, 2009 and distributed by DNR staff at the Forest Practices Board meeting on the same day. It was not on the written agenda for that meeting.

The Conservation Caucus objects on several grounds to the State's proposal. To date, the processing of this Fixed-Width Buffer proposal has not complied with the Adaptive Management process for rule changes (WAC 222-12-045, Board Manual Chapter 22, etc.). Under RCW 76.09.370(6), the Board can adopt changes to these rules only if they are consistent with recommendations resulting from the scientifically based Adaptive Management process. The State's current proposal did not result from that process. Rather, it resulted from closed-door negotiations between State agencies and small forest landowners during the last few days before the February 11, 2009 Board meeting.

The authors of the State's proposal have still not provided a written explanation of how they calculated the buffer-width numbers that are in the proposal. They need to do that, before CMER is asked whether the proposal is consistent with the best available science. The proposal must be reviewed by CMER before the Board takes action on it.

The State agencies who drafted the 11-page rule proposal conducted an all-day workshop on March 12, 2009, which the State agencies acknowledged was not an Adaptive Management process. The slides shown by the State at its March 12 workshop included a statement that the State used a "weighted average of outer edge of inner zone width," but the State has not identified what it sampled to get the numbers it averaged. The State also said orally that the small forest landowners "rounded the numbers down."

**Miguel Perez-Gibson, Policy Representative** ▪ **Chris Mendoza, CMER Representative**

Audubon Washington ▪ Conservation Northwest ▪ The Mountaineers ▪ Olympic Forest Coalition ▪ Pacific Rivers Council  
Sierra Club ▪ Washington Environmental Council ▪ Washington Forest Law Center ▪ Wild Fish Conservancy

If and when the fixed-width rule proposal complies with the Adaptive Management process for rule changes, it should also be revised so that it is not applicable to the timber industry's large landowners. The fixed-width rule proposal should be limited to small forest landowners only, defined as harvesting less than 2 million board-feet per year. Larger landowners should continue to follow the existing Forests & Fish riparian buffer rules (with any amendments from the DFC rulemaking).

We also note that CMER has not yet conducted any Effectiveness Monitoring of Type F waters in Western Washington.

The Conservation Caucus has asked that DNR staff make better use of the Board's webpages on the Board's "Current Rulemaking." Unfortunately, this has not yet occurred. As of March 23, 2009, the only document posted on the webpage for this Fixed-Width Buffer rulemaking is the 1-page CR-101 issued in August 2008. The State's 11-page February 11, 2009 rule proposal is still not posted there, nor are the agenda or any materials from the March 12, 2009 workshop.

At the February 11, 2009 Board meeting, DNR staff also circulated a memorandum on "2009 Rule Making Schedule" that includes a timeline for "DFC" and a separate timeline for "DFC-Fixed Width" proposing that the Board issue a 30-day notice in November 2008, issue a CR-102 (EC, SEPA) in February 2009 (apparently that proposed timing was abandoned), a CR-103 in May 2009, and an estimated effective date of September 2009 for the new rule.

#### **Preliminary analysis by Chris Mendoza**

Below is my assessment of the proposed Fixed-Width Buffer widths, based on a general comparison of their riparian prescriptions with the standard FP HCP Type F prescriptions, and The DFC Validation Study results on Mean (average) Overstory Tree Height (MOTH). Recall that HCP buffer widths by Site Class are a function of Site Potential Tree Height (SPTH). Other factors to consider are the rate of harvest (20 acre clearcut limit) of Type F streams by "small" forest landowners (SFLO), and the proportion of Forests & Fish lands in Site Class II and III on SFLO forestlands in Western WA. This is not a formal assessment or analysis of SFLO data, but is based on my experience working on related research and monitoring projects as CMER Co-Chair, as well as the DFC Validation Study results outside of the rule making process to change basal area/acre targets to 325.

The comparison to the DFC Validation Study results is a first attempt to use other attributes of the DFC Validation Study data outside of basal area/acre (325) on which the Board is about to take action (in the CR-102 process for DFC). As I have previously informed the Policy Committee and the Board, the DFC Validation Study is data rich, and it hosts an array of riparian stand attributes (*e.g.*, stand age, height, tree diameter, composition, etc.) that could be used to inform the rule-making process. Moreover, the DFC Validation Study report makes recommendations for considering alternative metrics to DFC other than basal area per acre. To date Policy has ignored those recommendations, but if Forests & Fish stakeholders attempt to re-negotiate new Type F stream buffers, according to Adaptive Management rules (WAC 222-12-045) they ought to consider data sources that have already been independently peer-

reviewed under CMER, and other non-CMER peer reviewed research, that have been accepted and approved by Policy and the Board.

**State-Proposed Type F buffers vs. F&F HCP Type F buffers.**

Most SFLOs do not “manage” the inner zone under F&F rules (they have to measure and exceed the basal area/acre requirement) therefore; the buffers they leave are for all intents and purposes already “no entry” buffers under current rules. The concept of no entry was initially opposed by SFLOs and Industry who prefer to manage (selectively harvest) their buffers.

It is important to note that most of the SFLO ownership in Western WA is located on Site Class II and Site Class III small streams (< 10 ft. wide) in the Puget lowland, southwest WA, Olympic, and NW Regions. SFLOs essentially own some of the best tree-growing ground in the Pacific NW on mostly small (< 10ft. wide) Type F waters. They also own some ( very little) Site Class I, IV, and V ground, but that is probably < 10% of their total ownership. This information could be obtained from their newly developed database. It may be an exercise worth pursuing.

**Site Class I**

The State **proposes 130 ft.** buffers on Type F waters for bank full widths (bfw) both >10ft. < regardless of Site Class designation. They have essentially eliminated stream size as a buffer width determinant. The buffer widths for Site Class I Type F waters < 10 ft. wide and > 10ft. wide under the **F&F HCP are 133 ft and 150 ft.**, respectively.

**Site Class II**

The State **proposes 110 ft.** buffers on Type F waters for bank full widths (bfw) both >10ft. < regardless of Site Class designation. They have essentially eliminated stream size as a buffer width determinant. The buffer widths for Site Class II Type F waters < 10 ft. wide and > 10ft. wide under the **F&F HCP are 113 ft and 128 ft.**, respectively.

**Site Class III**

The State **proposes 90 ft.** buffers on Type F waters for bank full widths (bfw) both >10ft. < regardless of Site Class designation. They have essentially eliminated stream size as a buffer width determinant. The buffer widths for Site Class III Type F waters < 10 ft. wide and > 10ft. wide under the **F&F HCP are 93 ft and 105 ft.**, respectively.

**Site Class IV**

The State **proposes 80 ft.** buffers on Type F waters for bank full widths (bfw) both >10ft. < regardless of Site Class designation. They have essentially eliminated stream size as a buffer width determinant. The buffer widths for Site Class IV Type F waters < 10 ft. wide and > 10ft. wide under the **F&F HCP are 73 ft and 83 ft.**, respectively.

**Site Class V**

The State proposes 80 ft. buffers on Type F waters for bank full widths (bfw) both >10ft. < regardless of Site Class designation. They have essentially eliminated stream size as a buffer width determinant. The buffer widths for Site Class V Type F waters < 10 ft. wide and > 10ft. wide under the F&F HCP are 60 ft and 68 ft., respectively.

**Table 1. Comparison of F&F HCP Type F Buffers to Fixed Width Type F Buffers.**

	FF width in feet	State proposal width	Difference in feet	Difference in buffer width
<b>FF Site Class I</b>				
< 10 ft. bfw	133	130	-3	-2%
> 10 ft. bfw	150	130	-20	-13%
<b>FF Site Class II</b>				
< 10 ft. bfw	113	110	-3	-3%
> 10 ft. bfw	128	110	-18	-14%
<b>FF Site Class III</b>				
< 10ft. bfw	93	90	-3	-3%
> 10ft. bfw	105	90	-15	-14%
<b>FF Site Class IV</b>				
< 10ft.bfw	73	80	+7	+9%
> 10ft.bfw	83	80	-3	-4%
<b>FF Site Class V</b>				
< 10ft.bfw	60	80	+20	+33%
> 10ft.bfw	68	80	+12	+18%

Given that the majority of SFLO Type F ownership is on Site Class II, III, small (< 10 ft. bfw) streams, there will be a slight (3%) reduction in buffer width for this Site Class/stream type. The differences are larger (14%) for streams > 10ft. wide for this Site Class/stream type, but it's assumed that harvest would occur less frequently relative to small streams (< 10 ft. wide). Also, the SFLO proposal eliminates buffer width as a function of stream width which is a critical part of the FP HCP for determining riparian functions and stream protection measures.

The same applies to Site Class I, however, that should be balanced with relatively small proportion of SFLO lands under this Site Class/stream type. I estimate that is < 10% of their ownership, but that would need to be confirmed with additional analysis. The SFLOs should know this given their new found capabilities with GIS and very likely have already gone through a similar excise. Given that SFLOs make up about 40% of the entire F&F land base, the effects of this proposal on fish buffers will be extensive over the life of the FP HCP.

The potential gain in buffer protection appears to come from Site Class IV and V streams where Type F buffers will increase, except for Site Class IV large streams which will decrease

slightly (4%). Small forest landowners own very little Site Class IV and V ground, given that their ownership is mostly located in high Site Class (II, III) lowlands, so this was not actually a “give”. If industry (which mostly owns low site IV, V ground) and/or the Smalls are allowed to choose between this proposal or the current rules, they would very likely simply default to the standard FP HCP rules so the proposed 80-foot buffers would likely never be realized.

**Table 2. Comparison of DFC Validation Study data (Mean Overstory Tree Height – MOTH) to State-Proposed Fixed-Width Type F Buffers.**

	<b>DFC MOTH</b>	<b>State proposed width</b>	<b>Difference in feet</b>	<b>Difference in buffer width</b>
<b>FF Site Class I</b>				
All size F streams	148	130	<b>18</b>	<b>-12%</b>
<b>FF Site Class II</b>				
All size F streams	161	110	<b>51</b>	<b>-32%</b>
<b>FF Site Class III</b>				
All size F streams	144	90	<b>54</b>	<b>-37%</b>
<b>FF Site Class IV</b>				
All size F streams	131	80	<b>51</b>	<b>-39%</b>
<b>FF Site Class V</b>				
All size F streams	100	80	<b>20</b>	<b>-20%</b>

The Mean (average) Overstory Tree Heights (MOTH) are taken directly from the DFC Validation Study Report for each Site Class. They do not consider stream size, like the State’s Fixed Width Buffer Proposal. What is clear under the DFC Validation Study MOTH comparison is that the Fixed Width Buffer proposal falls well short of a “site potential tree height” for an average age 120 year old forest. This becomes important when considering the rationale used under the FF HCP which uses a site potential tree height from Site Index of 100 years.

**FP HCP Final Environmental Impact Statement and Riparian Functions**

The FP HCP FEIS discusses LWD Recruitment as a function of Type F buffer width and states: *“Based on the literature review (e.g., McDade et al. 1990; FEMAT 1993; Spence et al. 1996) it was concluded that an RMZ of about one site potential tree height is needed to provide full protection of LWD recruitment by toppling, windthrow, or stream undercutting.”*

The FEIS uses a 100-year site potential tree height (SPTH) for both Eastern and Western Washington to derive the existing buffer widths under the F&F HCP by taking an average between the two. The 250-year SPTH is used by the federal agencies as part of the “minimal effects analysis” of the FEIS to compare against FFR’s 100-year SPTH under their “no jeopardy” call.

**Table 3. Site Potential Tree Height (SPTH) for Douglas-fir at 100 years and 250 years for Western and Eastern Washington. 2**

Site Class	SPTH 100 (feet)		SPTH 250 (feet)	
	Westside	Eastside	Westside	Eastside
I	200	130	247	195
II	170	110	210	170
III	140	90	174	135
IV	110	70	136	105
V	90	60	100	85

Sources: McARDLE 1949, USDA Forest Service 1984.

Recall that the CMER DFC Validation Study data was not considered in setting these buffer widths based on MOTH as the FF HCP FEIS was too far along and would have required a major redo of the federal services' analyses with implication for their no jeopardy determination.

**Shade**

The FP HCP FEIS addresses shade and water temperature (Chapter 4- page 63,64) by stating: *"A no-harvest buffer width of 0.75 site potential tree height is used as the criterion to evaluate the effectiveness of RMZs to maintain shade for streams > 5 feet in width, based on the shading curve from FEMAT (1993, p V-27)."*

Strictly dealing with shade (not LWD recruitment) the feds were asking for ¾ site potential tree height. If you take ¾ of the DFC Validation Study MOTH results you get:

**Table 4. Comparison of DFC Validation Study data (Mean Overstory Tree Height – MOTH) to State Fixed Width Type F Buffers for Shade ONLY, or 75% of MOTH.**

	DFC MOTH	MOTH (.75)	State proposed width	Difference in feet	Difference in buffer width MOTH (0.75)
<b>FF Site Class I</b>					
All size F streams	148	111	130	<b>+19</b>	<b>+17%</b>
<b>FF Site Class II</b>					
All size F streams	161	121	110	<b>-11</b>	<b>-9%</b>
<b>FF Site Class III</b>					
All size F streams	144	108	90	<b>-18</b>	<b>-17%</b>
<b>FF Site Class IV</b>					
All size F streams	131	98	80	<b>-18</b>	<b>-18%</b>
<b>FF Site Class V</b>					
All size F streams	100	75	80	<b>+5</b>	<b>+7%</b>



Based on Table 4 above the Fixed Width Buffer Proposal would not meet shade requirements using the FF HCP FEIS rationale of meeting  $\frac{3}{4}$  site potential tree height (SPTH) when comparing against the DFC Validation Study results (MOTH) for Site Class' II, III, and IV, and would meet them on Site Class' I and V. Again, this is an important distinction to make as the DFC Validation Study Results were not used in the FF HCP FEIS to derive the existing targets in rule as stated above. It should also be noted that Site Class I from the DFC Validation Study only had 3 field class sites due to an absence of unmanaged older (140 years old) stands found in western Washington.

### **Summary**

Site Class II and III is where the majority of SFLOs have ownership. If one compares the Fixed Width Buffer proposal with current Type F buffer widths in FP HCP rules the differences are negligible (3%) only for small (< 10 ft. wide) Type F fish streams in Site Classes II and III. Changing the current basal area per acre targets to 325 (pending Board approval) in some cases will result in less management within the "inner zone" of Type F waters, but the total width of the "core" and inner zone will not change.). On the other hand, for large fish streams in Site Classes II and III, the differences would be more substantial (14%), but must be weighted with a reduction in ownership and frequency of harvest. It is important to note that the proposed increase in buffer widths for Site Classes IV and V in the State's Fixed Width Proposal would not be realized because SFLOs do not have extensive ownership of low Site ground. Moreover, landowners can simply default to the existing FP HCP rules which require no-entry buffers that are narrower. In short, the proposed 80-foot buffer would rarely if ever be realized.

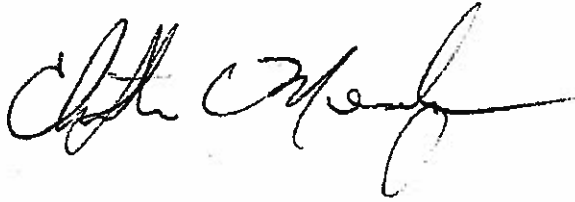
When comparing against the DFC Validation Study results (Mean Overstory Tree Height – MOTH) the Fixed Width Buffer proposal falls well short (32% and 37%) of meeting required buffer widths for long-term LWD recruitment on Site Class II, and III fish streams. This is based on the FP HCP FEIS that states that a Site Potential Tree Height (100 year) is required to meet long-term LWD recruitment. The DFC Validation Study sites for Site Class II and III averaged 120 years of age so there would be a slight difference in tree heights between those two ages.

The substantial difference between the two comparisons is largely based on the fact that the DFC Validation Study results were not used to determine current Type F buffer widths outlined in the FP HCP FEIS. The current buffer widths in rule were taken from an average SPTH (100 year Site Index) from Eastern and Western Washington of upland stands. The DFC Validation Study specifically targeted riparian stands located in Western Washington since that is where the rules are applied and also where the Fixed Width Buffer proposal with be applied. Therefore, application of this data set is appropriate.

As explained in the beginning of this letter, we have serious objections to the process used for this proposal to date. We are mindful of the needs of small forest landowners and we are willing to work to make the process move faster, so long as the scientifically based Adaptive Management process is used to develop a fixed width buffer that conservatively provides the same level of protection contemplated by the FP HCP.

Thank you for considering these comments.

Sincerely,



Christopher Mendoza  
ARC Consultants



Karl F. Forsgaard  
Washington Forest Law Center

*on behalf of*  
Forests and Fish Conservation Caucus  
Audubon Washington  
Conservation Northwest  
The Mountaineers  
Olympic Forest Coalition  
Pacific Rivers Council  
Sierra Club  
Washington Environmental Council  
Washington Forest Law Center  
Wild Fish Conservancy