

2/14/18

Washington State Forest Practice Board
P.O. Box 47012
Olympia, WA 98504-7012

Re: PHB Recommendation

Chairman Bernath and Members of the Board:

I'm Ken Miller, competently representing thousands of SFLOs that are unable to comprehend ☺ this whole PHB and FHAM debate over last decade, including most of yesterday.

Whatever the end result I hope you understand and agree the SBEIS must recognize the disproportionate impact of such complexity. Technical Assistance to actually do the stream typing for smalls should be a minimum requirement if we continue to make these processes ever more complex.

SFLOs tend to be lower in the watershed with flatter ground most likely to be disproportionately impacted by whatever you do – the same ground Jim Peters just talked about needing for salmon. Portions of our lands were likely a matrix of small stream channels and wetlands used by fish before the European settlers cleared the timber and dug drainage ditches. Some of these drainage ditches are often still used by fish, but the original fish habitat has been changed. Ever increasing regulation and complexity increases the likelihood these lands will be converted again to “highest and best use” housing developments. Other factors besides buffers affect loss of habitat.

Even if you clearly understand all this and could apply current or new prescriptions on the ground yourself we appreciate your putting yourself in our shoes during your deliberations. We presume you will have an opportunity to deal with these SFLO issues later in the rule making process - if you go there.

After just hearing the Westside Tribal comments about Salmon I want to remind folks that SFLOs supported Forest & Fish because we naively thought we were just protecting salmon and tribal fishing heritage. The disconnect, or room for compromise, is around how much protection is appropriate for our smaller harvests, streams, and living up to the F&F commitments to SFLOs.

Respectfully,

Ken Miller



2/14/18

Washington State Forest Practice Board
P.O. Box 47012
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Re: Informal Draft Template Update

Chairman Bernath and Members of the Board:

I'm Ken Miller, representing Washington Farm Forestry Association and thousands of SFLOs waiting for the AMP process to reach a conclusion on our Westside Low Impact Template Proposal so you can make any final determinations. Hans and Marc will be reporting later in the agenda so hope to keep this update simple and not steal their thunder.

We are now starting year #4 since the Board approved this proposal for review by the AMP. From a time standpoint it still appears most likely nothing will come to you for a vote until very late 2019, or more likely early 2020. ☹ The primary reason my estimate from November has been extended further is because DNR has had to restart the critical science review process – more from Hans later.

I was encouraged by our last Policy Template Sub-Committee meeting where we attempted to share our individual perceptions of the legislative intent of various RCW/WAC deference's to SFLOs in Forest and Fish. I wish more folks were forthcoming with their perceptions but I commend Mark Hicks once again for doing his homework and "sharing" in the spirit of TFW. Without knowing how folks interpret legislation it's hard to have meaningful collaboration.

We have another meeting scheduled for next week where we have several options for potential progress while we await a complete science assessment that we hope will narrow the differences on at least the 4 major site-specific prescriptions:

1. Continue to seek consensus that our proposal is "designed" to meet some or all the qualifications for a template (WAC 222-12-0403 (3))
2. Help DNR define the "Criteria" for what "qualifies as a low impact alternate plan" (WAC 222-12-0403 (5))
3. Review the elements of a couple of past failed template efforts (as discussed at last FPB meeting) in hopes of:
 - a. Finding some previously agreed/agreeable metrics that might help some minor prescriptions in the draft template so we'll be more ready for the bigger science driven decisions,
 - b. Perhaps even finding an agreeable portion of the template worth bringing to you for interim approval before the AMP process is complete on the full proposal.

I'd be happy to take questions or perhaps better to wait until Hans and Marc report later.

Ken Miller



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Re: 2018 Work Plan & Food for
Thought

Chairman Bernath and Members of the Board:

I'm Ken Miller, here to make two points this morning:

1. Rather than another long not so persuasive plea to come to my tree farm for your uncommitted October Field tour I'm just asking: Please accept my invitation to host you in October. We can provide a visual of our draft template AND this could be an opportunity to hear from other SFLOs like the chair just described for the tribes last week and also a couple years ago in this setting. SFLOs just aren't feeling the same love! ☺ I'll stick around for the Work Plan discussion if you have clarifying questions. ☺
2. Call me Crazy but here's some FOOD FOR THOUGHT: In a prior life my career was a problem solver. You are struggling with two significant "Hatfield & McCoy" type problems taking a lot of time, energy, and money we don't have:
 - a. Reinvigoration of the evaporating TFW cooperative Spirit
 - b. Stream typing in the very small upper stream reaches not likely needing full buffers

On the surface both issues have a common solution w/o all the indeterminate complex science & endless debates about seemingly so little. In my opinion, if those wanting more tree's further upstream were willing to assure landowners no net loss of trees a win-win policy solution likely could happen!

Imagine the resulting paradigm shift that could occur in the flagging TFW spirit.

The Commissioner has a sign on her desk - isn't this the kind of "Epic Shit" the Hilary expects of us?

Thanks for listening,

Ken Miller



February 14, 2018

**Forest Practices Board Testimony on PHB Recommendations
by Claudine Reynolds**

Thank you Chairman Bernath and the Board for the opportunity to share my professional perspective with you today.

For the record my name is Claudine Reynolds; I am the Manager of the Wildlife & Fisheries department at Port Blakely. As part of my job, I work with the company on all matters affecting fish and wildlife habitat and conservation. I have 17- years' experience working with fish and wildlife species and their habitats, and for the past 13 years, water-typing in the Pacific Northwest has been a core function of my team.

I acknowledge the big decision you have before you today as you determine the best path forward in regards to establishing PHB options. A lot of smart, passionate people have been working on this issue for a very long time and there has been significant thought corralled to get us where we are today. Most recently, I want to thank the science panel for their efforts to establish meaningful recommendations given the challenges they had with the data.

I want to start out by saying that over the course of my career, I have surveyed hundreds of miles of streams to determine the maximum distribution of headwater fish. One thing I have learned is that many streams do not have obstacles or barriers to clearly define the upper extents of fish use. I know that is one of the reasons we are here today but I'm mentioning this to stress that judgement calls have to be made and although clear guidance is really important, it can't nor shouldn't take the place of professional training and experience.

In regards to PHB's, I believe that if our collective interest is in classifying each stream accurately to ensure that the correct conservation measures are being applied to protect them, then we need a solution that is site-specific and scalable. We can achieve this goal by implementing a repeatable set of methods, while utilizing specific criteria designed to yield the most accurate outcome on a stream by stream basis. A ratio approach to determining the PHB would allow the physical characteristics of each stream to be assessed within the context of its size. The fourth recommendation in the science panel report, test 15 suggests a 5% change in gradient or a 20% reduction in stream size. This recommendation meets the scalable criteria with the most meaningful consideration being the gradient inflection. I say this because I think that gradient is more of an inhibitor to fish movement than stream size. Stream size is important but it is used as a proxy to characterize the true change which ^{can be} is a decrease in pool frequency and water depth. Furthermore, the exact metric to characterize the size change was not able to be extracted from the data due to the discontinuous nature of how it was reported and a more suitable stream size change may be more appropriate. All that being said, for any PHB's that are considered for rule, it will be important to follow-through with the validation and adaptive management process. In addition to adopting a scalable method of determining a PHB, I think it would be valuable to address the concern about the core anadromous zone by

Peter Goldman Comments to FPB

Feb. 14, 2018

Good morning Boardmembers and Chair Bernath. I'm PG of the WFLC working with the Conservation Caucus (CC).

I'd like to comment on a three aspects of what's before the Board today. First, as well-stated by my colleague Mary Scurlock, the CC is urging the Board to advance the Western WA tribal alternative as the alternative that best meets the "general goals and specific objectives" of scientifically identifying potential fish habitat consistent with the HCP and the definition of "fish habitat" in the rules. Second, the Board should NOT consider the W. WA tribal alternative merely as an opening offer and to start building on it from there; the W. WA Tribes and the CC have made major concessions to arrive at this compromise proposal. Third, I'd like to address our Caucus' concerns with the Board potentially advancing multiple alternatives in tandem.

First, my colleague Jamie Glasgow covered this but I would like to echo that the W. WA Tribal alternative is the best alternative for which there is a consensus of supporters. It is the only alternative that contains a 10 % "floor" and that without this "floor" the proposal to use a 5% inflection point would be biologically

- We are not requesting an emergency rule and the 2018 field water typing season will not be affected by this pending rule change.

These are Major concessions and the Board should consider them in evaluating the three proposals.

Third, we understand the Board is considering advancing 2-3 alternatives. We understand the rationale for advancing more than one alternatives today but, in doing so, we urge the Board to specifically identify the W. Washington tribal alternative as the preferred alternative because it strengthens the definition of potential “obstacles” and provides basic protections for the anadromous floor.

We understand that the APA requires the Board to consider potentially less-onerous alternatives that meet the rule’s “specific goals and objectives” (RCW 34.05.328). The Board certainly CAN consider such alternatives at the CR 102 stage (June 2018) or AT THE TIME IT DECIDES ON ADOPTION OF THE FINAL ALTERNATIVE. But that does NOT mean the Board needs to identify this “less onerous” that alternative today as one that potentially meets the “specific goals and objectives” of a credible water typing rule.

Landowner FHAM and Anadromous Overlay Alternative

Overview

The industrial forest landowners offer the following alternative for consideration and evaluation as an interim water typing solution by stakeholders and the Forest Practices Board (FPB).

- Our proposed alternative is consistent with the Fish Habitat Assessment Method and expectations of the water typing system adopted by the FPB.
- We have built upon and incorporated the Science Panel's work and recommendations.
- We have conducted and incorporated additional analysis of PHB alternatives that recognizes the FPB's need to understand accuracy and error allocation in their decision-making and analysis.
- In response to stakeholder feedback, we have included adjustments to the Fish Habitat Assessment Method (FHAM) process to address protections on streams likely to be used by anadromous fish where protocol surveys conducted within the prescribed FHAM may not capture the full extent of habitat likely to be used by those species.
- We are committed to supporting the completion of supplemental analyses, including a spatial analysis of potential PHB alternatives, to include multi-stakeholder representation and oversight to refine and more fully develop a recommendation that includes specific numeric criteria in time for use in the 2019 field season.

Framework

Our proposal recognizes two primary fish habitat zones, differentiated by known fish use and likely fish use by 1.) resident fish species, and 2.) anadromous fish species, either alone or in common with resident fish use.

An "anadromous overlay" will define the extent of core anadromous waters likely to be used by anadromous fish. The extent of the core anadromous waters will be determined using a combination of information describing known anadromous fish use, and likely anadromous fish use based on a gradient floor, the presence of permanent natural barriers to anadromous fish movement, and stream size considerations. Specific criteria and data to identify the core anadromous zone will be developed in cooperation with the multi-stakeholder Fish Habitat Technical Group. Maps illustrating the extent of streams presumed to be anadromous fish habitat are provided in Appendix 1. (Note that the extent of anadromous fish habitat available on-line from StreamNet (<https://www.streamnet.org>) was used for these watershed maps, which may be subject to revision if new or better information is available).

Regardless of how they are identified, the core anadromous streams will be presumed to be Type F water and will generally not be sampled or re-classified by protocol survey - any exceptions would occur through an ID team process. **Tributary streams connected to the core anadromous overlay streams will also be presumed to be anadromous fish habitat, unless a gradient PHB and/or obstacle PHB are present at the tributary stream junction with the adjacent core anadromous stream.** In other words, a size-based Potential Habitat break (PHB) alone will not be used as a PHB where no fish are found

upstream of a tributary stream junction adjacent to the anadromous core water. This adjustment to the FHAM will have the result of incorporating low gradient and accessible tributary streams likely to be used by anadromous fish into the Type F stream network, even if no fish are detected during a protocol survey. Type F water classification in these streams will be extended upstream to the next PHB identified (assuming no upstream fish use) following the prescribed FHAM process.

Until the validation study is completed, application of the FHAM in resident fish waters above the core anadromous overlay zone will follow the prescribed FHAM process using PHB definitions that provide the highest possible accuracy when assessed against concurred-with Water Type Modification Form data. (Note: The “Percent Captured” metric used by the Science Panel is not a measure of accuracy. Alternative methods of analysis, including a spatial analysis, will be necessary to characterize the accuracy and error allocation of PHB alternatives.)

Based on a landowner analysis of data of more than 1500 concurred-with WTMF surveys in western Washington, PHB alternative criteria that provide the highest accuracy and equitable allocation of error (based on surveyor/PHB agreement) are described in Test 15 of Table 4 in the Science Panels’ January report and in the recommendation of the July Science Panel report (Table 1). The recommended obstacle definition in the new report appears to perform slightly better than the July recommendation. Supporting data and details of our analysis will be provided to stakeholders and the FPB. We also recognize that other alternatives may need to be evaluated. If the FPB selects multiple alternatives for further analysis, we simply ask that one or more alternative bolded in Table 1 be included in the pool of candidate PHB alternatives undergoing further evaluation.

Gradient PHB	Size PHB	"Obstacle" PHB	Science Panel Alternative	Surveyor and PHB Agreement to Stop or Continue	Surveyor Stop Where PHB Would Indicate Extend Type F Water	Surveyor Extended F Water where PHB Would Indicate Stop	Percent of EOH Captured
5% Change	Stream Junct. Ratio .7	3 ft vert. OR >20% slope, Elev. > BFW	July Recom. w/New Obst. Def.	92%	4%	4%	83%
5% Change	Stream Junct. Ratio .7	>20% slope, Elevation > BFW	July Recommendation	91%	5%	4%	79%
5% Change	Stream Junct. Ratio .8	3 ft vert. OR >20% slope, Elev. > BFW	Jan. Test 15 Recommendation	90%	4%	5%	81%
15% Thresh.	3 ft Threshold	3 ft vert. OR >20% slope, Elev. > BFW	Jan. Test 5 Recommendation	86%	5%	9%	94%
10% Thresh.	3ft Threshold	3 ft vert. OR >20% slope, Elev. > BFW		83%	2%	14%	97%
10% Thresh.	3ft Threshold	>20% slope, Elevation > BFW		83%	3%	14%	96%
10% Thresh.	2 ft Threshold	3 ft vert. OR >20% slope, Elev. > BFW	Jan. Test 4 recommendation	80%	9%	11%	89%
10% Thresh.	3 ft Threshold	>20% slope, Elevation > BFW		80%	9%	11%	87%
15% Thresh.	2 ft Threshold	3 ft vert. OR >20% slope, Elev. > BFW	Jan. Test 2 Recommendation	80%	15%	5%	80%
15% Thresh.	3 ft Threshold	>20% slope, Elevation > BFW		79%	17%	5%	78%
	5 ft Threshold			75%	11%	15%	80%
15% Thresh.	2 ft Threshold			74%	21%	5%	70%
5% Change				74%	24%	2%	52%
	3 ft Threshold			68%	26%	6%	56%
20% Thresh.	2 ft Threshold			67%	30%	3%	56%
10% Thresh.				66%	24%	10%	71%
	2 ft Threshold			51%	48%	1%	28%
		3 ft vert. OR >20% slope, Elev. > BFW		38%	62%	0%	22%
		>20% slope, Elevation > BFW		36%	64%	0%	17%
20% Thresh. AND 2 ft Thresh. (Westside Defaults)			Westside Default Criteria	33%	67%	0%	9%

Table 1. Accuracy and error estimates for Science Panel recommendations and a range of potential PHB alternatives.

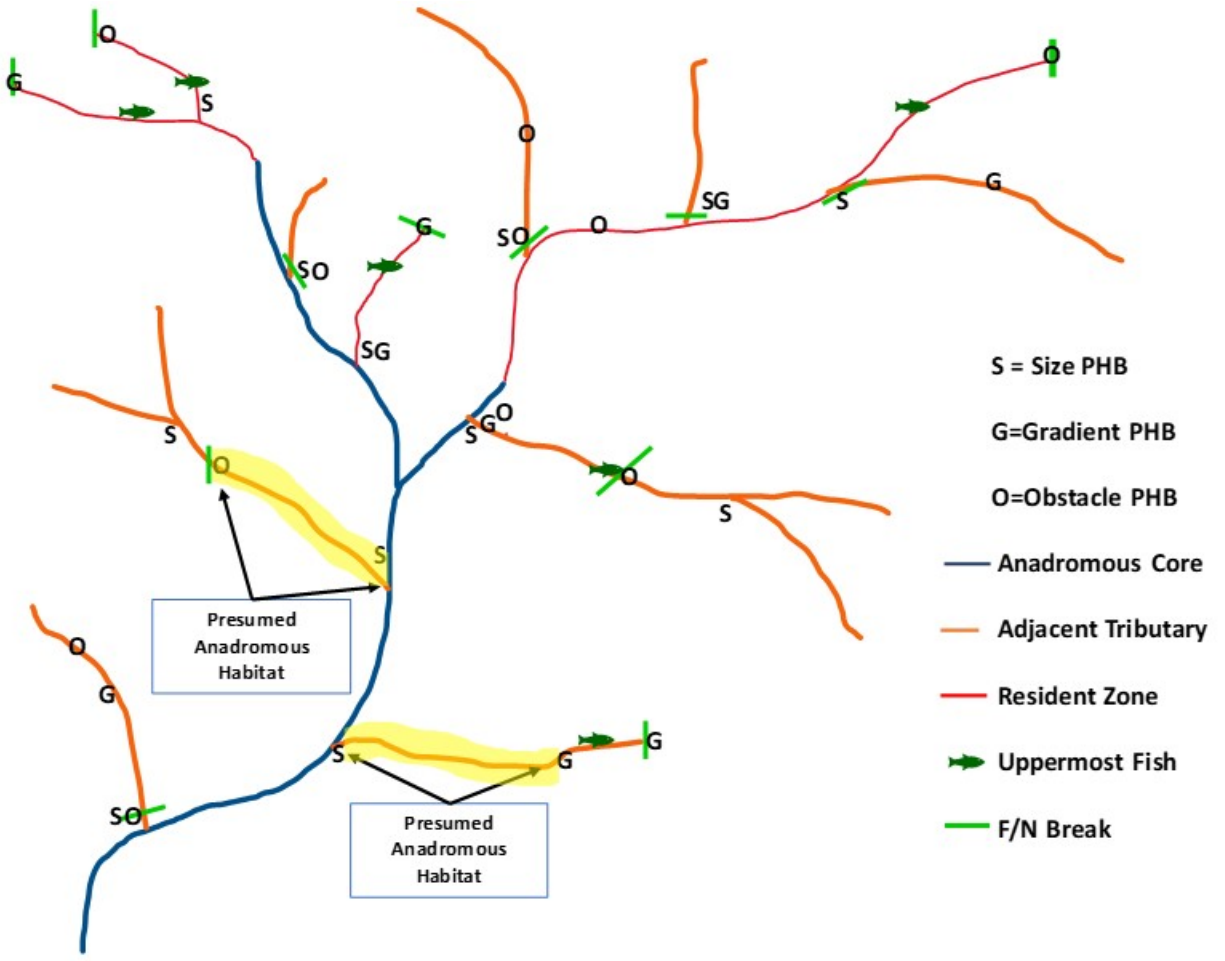
For eastern Washington, we recommend that a similar supplemental analysis of PHB alternative accuracy be conducted to include an evaluation using the CMER variability data. The most accurate solution, including an evaluation against the extent of observed temporal variability in fish movement, can support the development of PHB definitions representing changes in size, changes in gradient, or

the presence of barriers instead of thresholds. The use of threshold criteria rather than changes in stream characteristics to define PHBs is inconsistent with the intent of the FHAM. Therefore, we do not support either of the recommended eastern WA alternatives. Whether an anadromous overlay or similar approach is necessary or supported by stakeholders in eastern WA remains to be determined, we are open to having that conversation.

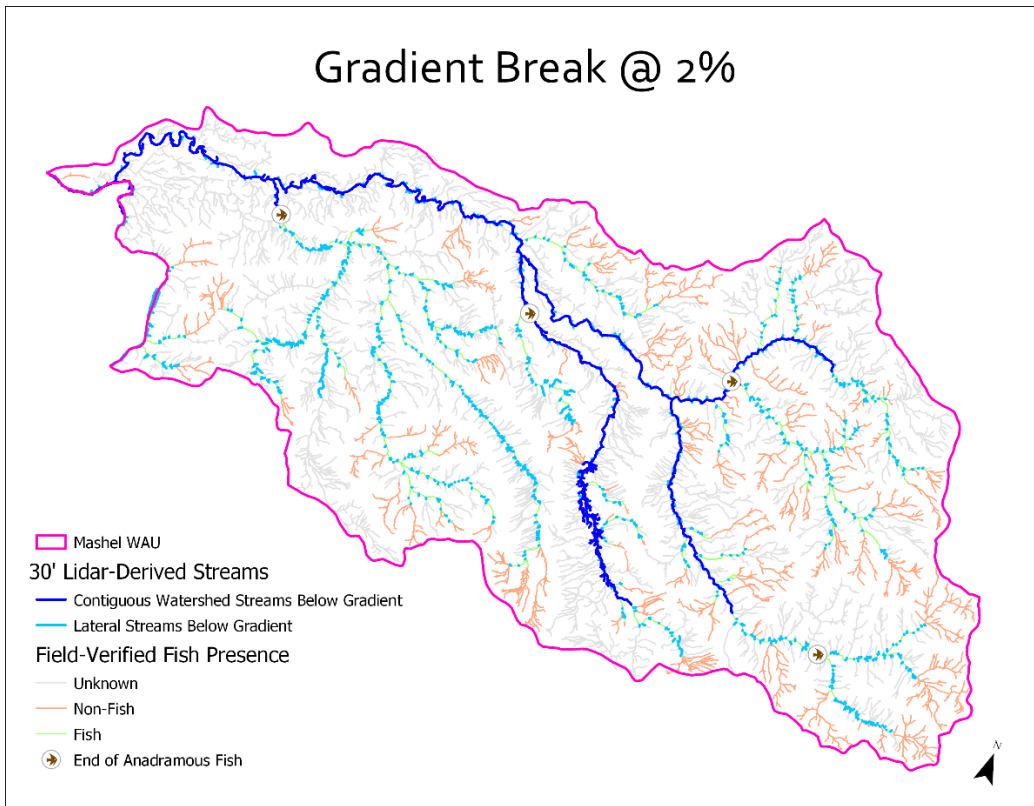
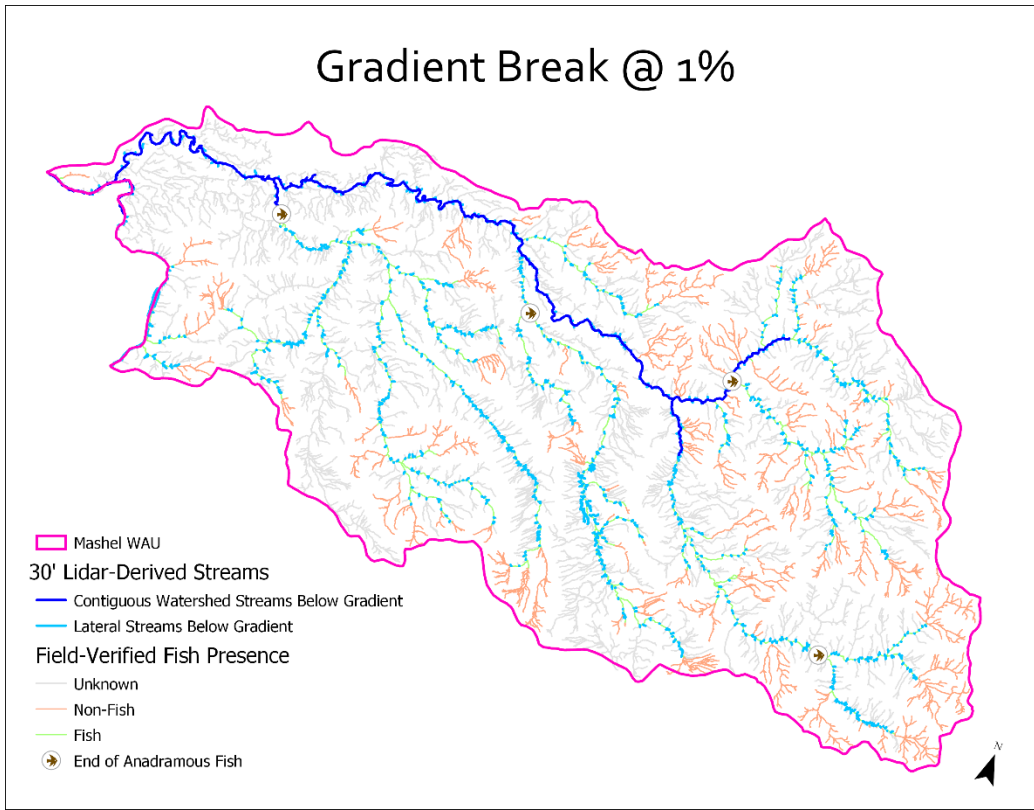
This proposal is not intended to replace or preclude a more thorough analysis and refinement of specific criteria or new alternatives as new and better science becomes available. We support the prompt implementation of a validation study, which should include an evaluation of the anadromous zone protections afforded by our proposal and other proposals that may be identified as potential alternatives by the FPB.

Illustration of the Concept

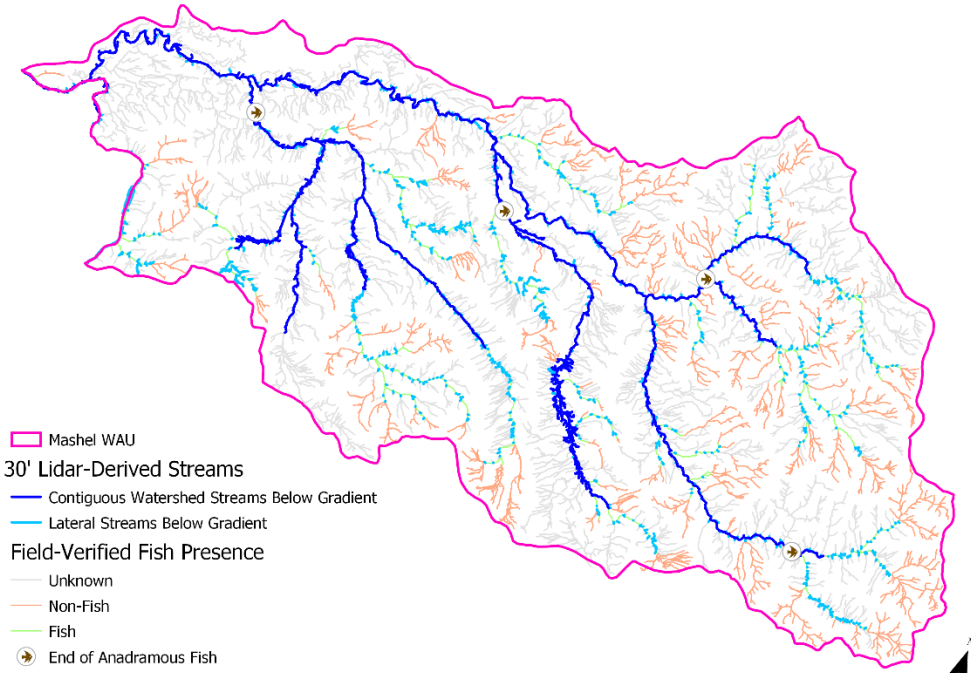
The figure below is intended to illustrate how the proposed anadromous overlay and size-based PHB adjustment would incorporate additional tributary habitat likely to be used by anadromous fish into the Type F stream network. All F/N breaks shown on the map presume that no fish were found upstream from the F/N break following completion of a protocol survey. Further spatial analysis and evaluation will be necessary to understand more completely how fish protection and landowner operational goals are met under this or other alternatives.



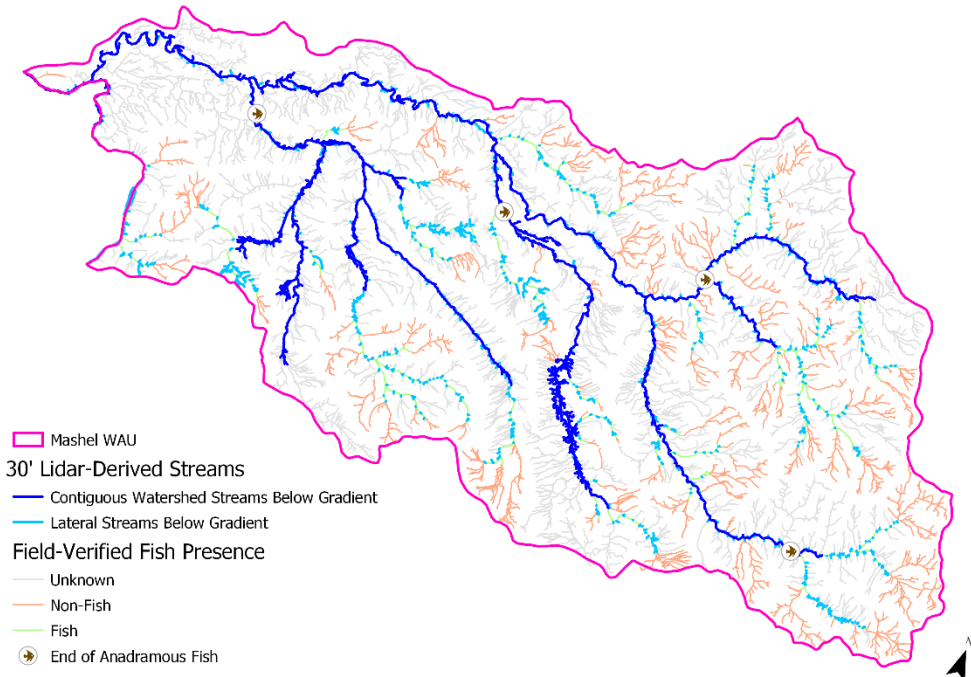
Appendix 1. Watershed scale maps for a range of gradient floor values:



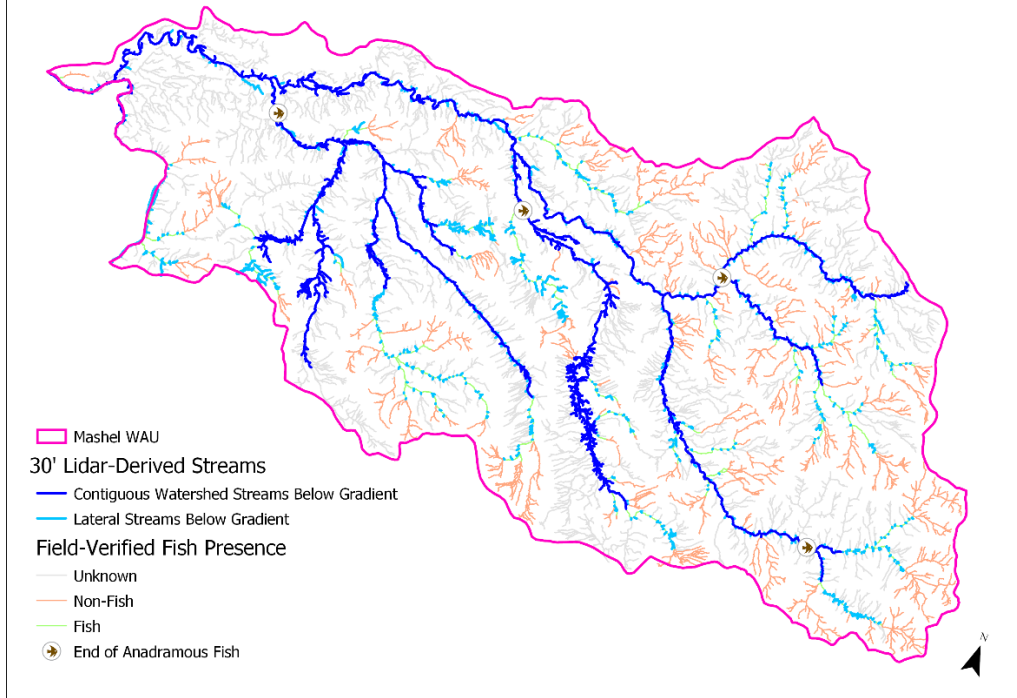
Gradient Break @ 3%



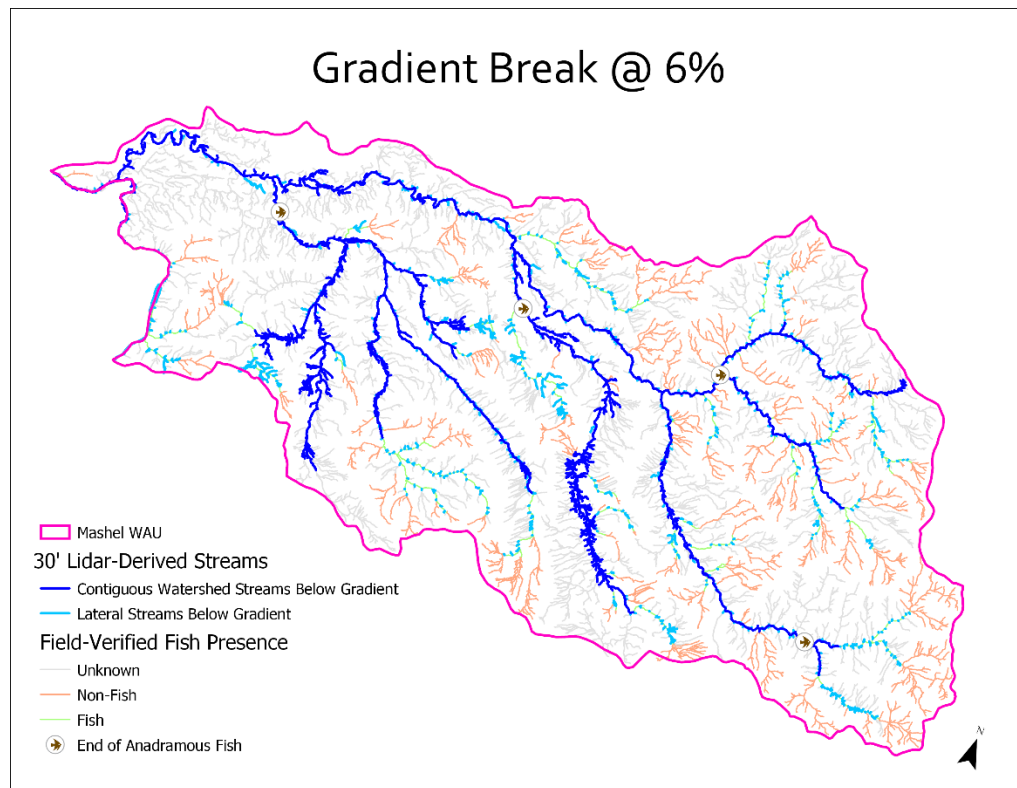
Gradient Break @ 4%



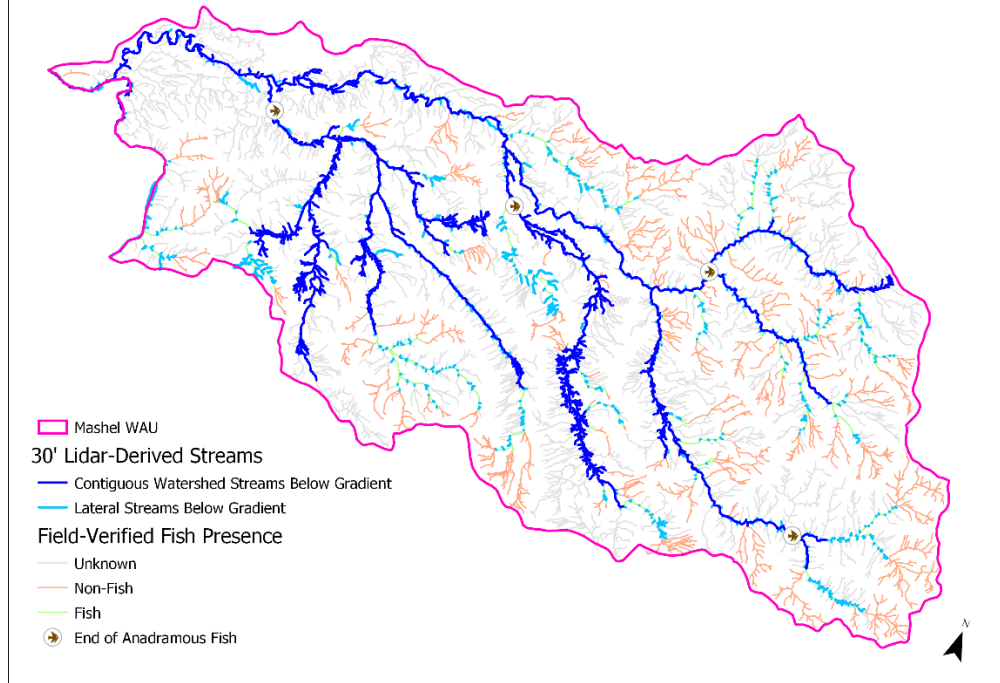
Gradient Break @ 5%



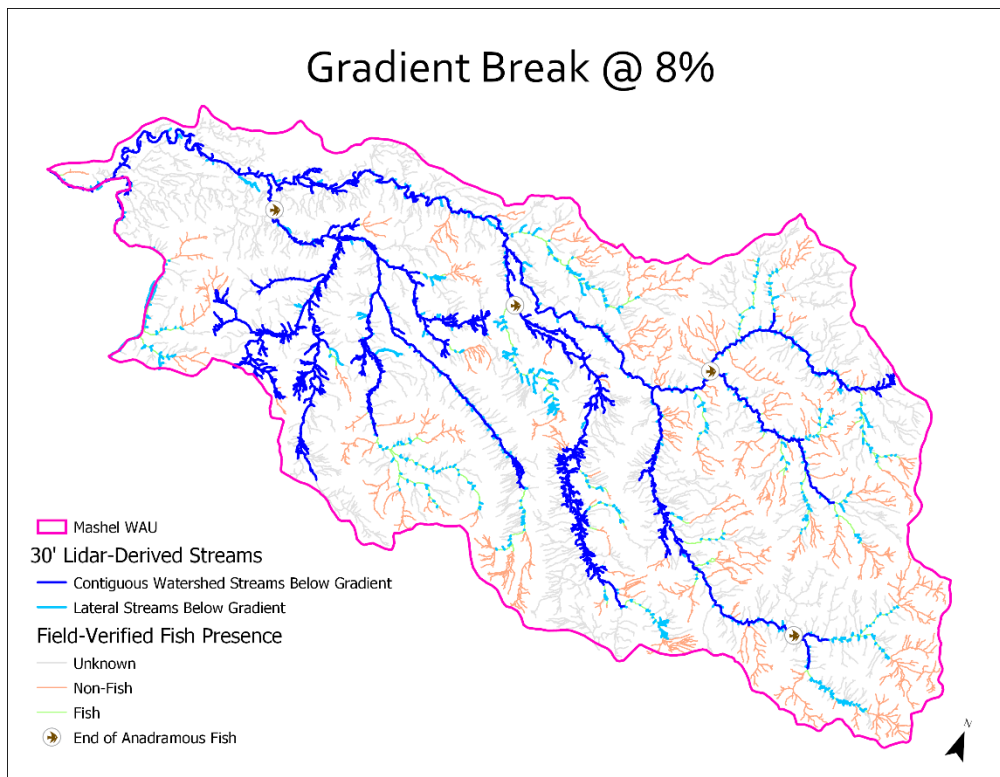
Gradient Break @ 6%



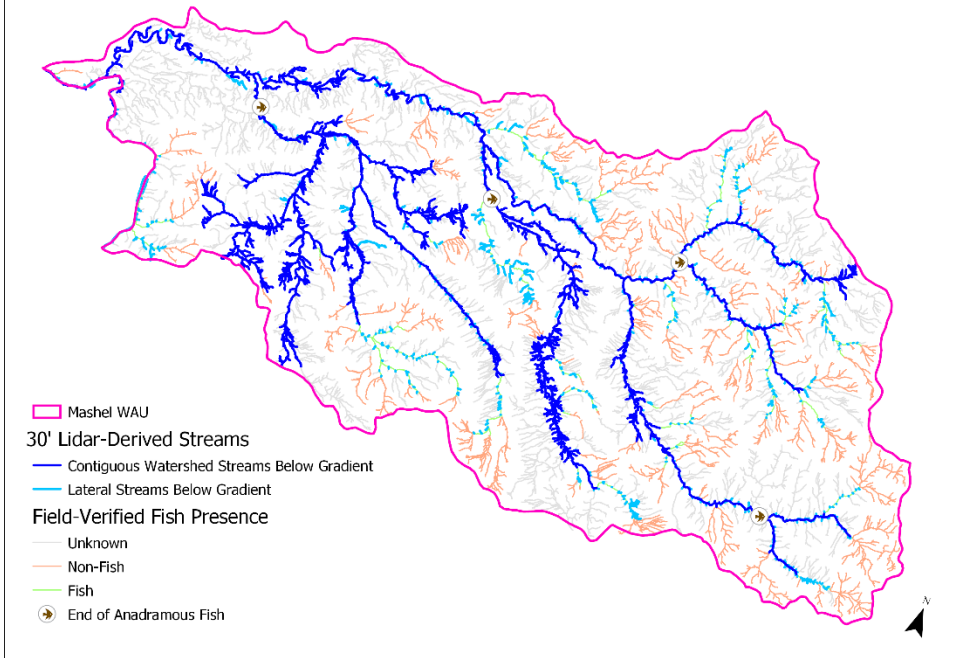
Gradient Break @ 7%



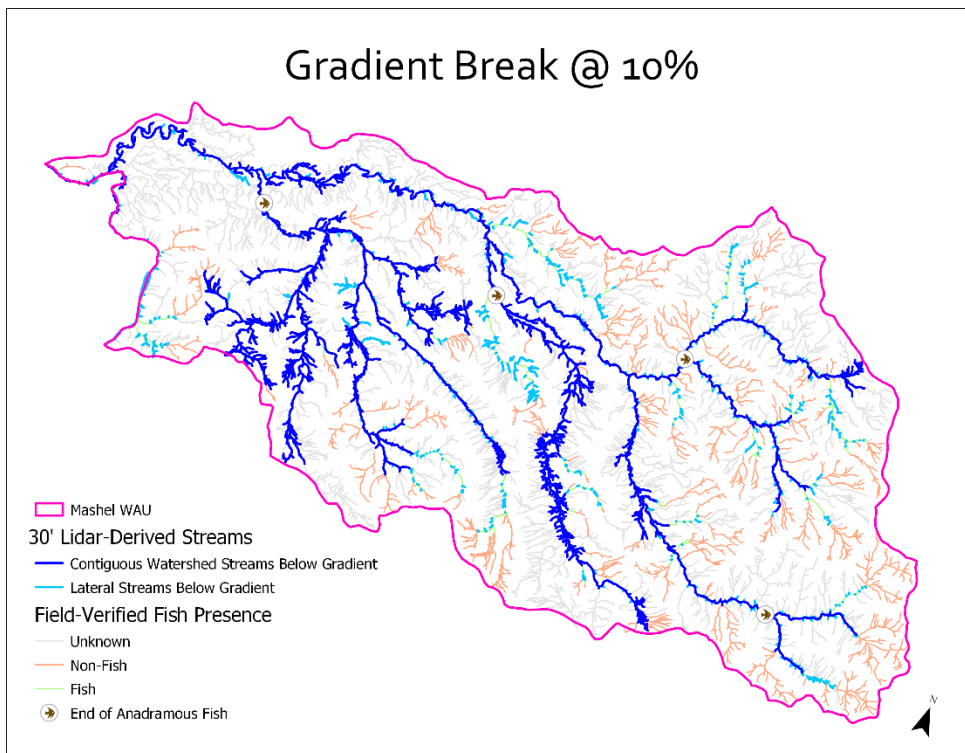
Gradient Break @ 8%



Gradient Break @ 9%



Gradient Break @ 10%



BEFORE THE WASHINGTON FOREST PRACTICES BOARD

Statement of Mary Scurlock

Forests and Fish Conservation Caucus

14 February 2018

My name is Mary Scurlock and I have represented the Conservation Caucus at TFW Policy for over five years now. I have become intimately familiar with both the strengths -- and the limits -- of collaboration and consensus in policymaking. The stream-typing package you are duty-bound to complete is the result of protracted negotiation and dispute resolution within the adaptive management program. But the issue before the Board today -- the identification of Potential Habitat Break criteria -- is solely your responsibility to resolve.

The time for equivocation is over: it's decision time.

1. The Conservation Caucus urges the Board to complete the stream-typing package today by accepting the Westside Tribal proposal as the single rule concept it will forward to formal rule and guidance development. We are not supporting this proposal as one alternative among others -- but as the chosen alternative. Forwarding multiple alternatives would amount to an abdication of the Board's duty by kicking the can down the road, needlessly burdening staff with analysis of multiple proposals and vastly increasing the risk of delay in final rule adoption.

And what the public will see is lack of leadership and institutional dysfunction.

The Westside Tribal proposal builds on alternatives tested by the Science Panel, but makes important improvements that will reduce electrofishing under the Fish Habitat Assessment Method by ensuring that electrofishing protocols are not used in areas that should be deemed fish-bearing and that obstacle definitions are strong enough to achieve the Board's objectives. I refer you to the comments of expert Jamie Glasgow on the technical basis for the proposal.

In supporting this alternative, we want to recognize and express our appreciation for the Tribes' leadership in crafting and forwarding the proposal and for their esteemed status as co-managers of these important aquatic resources.

As you heard from Mr. Glasgow, this proposal represents substantial compromise on our part and other stakeholders who are supporting it. This compromise integrates many landowner concerns and accept substantially more electrofishing than my caucus would prefer. If it were to be accepted as but one alternative among others, the risk that it will be subject to further weakening increases.

2. The fish covered under this HCP deserve regulatory certainty. The HCP covers over 85 fish stocks. This Board has already found that the current system does not provide them with a consistent, repeatable, enforceable stream typing system that meet the plan’s objectives for identification of fish habitat. We know that the F/N breaks are not being consistently located or consistently documented, which should come as no surprise because there is no requirement for this. The days of fish noses and Lenny Memos and fish-plus-whatever-the-practitioner-of-the-day-feels-like-providing must end today.

3. A critical component of the tribal proposal is the 10% floor designed to protect known fish-bearing, likely anadromous streams. Without this floor the proposal to use a 5% inflection point would not be biologically adequate. Dr. Roni of the expert panel confirmed during questioning yesterday that concerns about the adequacy of the 5% up/down metric without a such a floor are legitimate. The comments of other panel members validated 10% as a reasonable floor to use, subject to further information from a validation study. The landowner alternative fails to explicitly and specifically establish such a floor and should not be accepted for this reason alone.

4. The obstacle definitions are reasonable improvements to the ones proposed by the Panel that comport with the literature and expert judgment. I defer to the tribal, conservation, WDFW and other technical experts on whose experience and opinion the barrier criteria are based.

5. The landowner proposal would take us backwards by deferring Board decisions to further subsequent analysis.

In addition to the insufficiency of the stream width ratio and the obstacle criteria, the landowner proposal would have the Board direct further analysis to develop the specific criteria for identifying the “anadromous overlay” and would re-activate the Fish Habitat Technical Group to help do it. This is a step backwards: the Board cannot keep delaying decisions chasing more perfect information.

The public process has plenty of room for more information and analysis to be provided – but it should not be explicitly tied to the PHB alternative selected today.

Thank you for your consideration.

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Forests and Fish Conservation Caucus

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As you heard from Mr. Glasgow, this proposal represents substantial compromise on our part and other stakeholders who are supporting it. This compromise integrates many landowner concerns and accept substantially more electrofishing than my caucus would prefer. If it were to be accepted as but one alternative among others, the risk that it will be subject to further weakening increases.

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consistent, repeatable, enforceable stream typing system that meet the plan's objectives for identification of fish habitat. We know that the F/N breaks are not being consistently located or consistently documented, which should come as no surprise because there is no requirement for this. The days of fish noses and Lenny Memos and fish-plus-whatever-the-practitioner-of-the-day-feels-like-providing must end today.

3. A critical component of the tribal proposal is the 10% floor designed to protect known fish-bearing, likely anadromous streams. Without this floor the proposal to use a 5% inflection point would not be biologically adequate. Dr. Roni of the expert panel confirmed during questioning yesterday that concerns about the adequacy of the 5% up/down metric without a such a floor are legitimate. The comments of other panel members validated 10% as a reasonable floor to use, subject to further information from a validation study. The landowner alternative fails to explicitly and specifically establish such a floor and should not be accepted for this reason alone.

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In addition to the insufficiency of the stream width ratio and the obstacle criteria, the landowner proposal would have the Board direct further analysis to develop the specific criteria for identifying the "anadromous overlay" and would re-activate the Fish Habitat Technical Group to help do it. This is a step backwards: the Board cannot keep delaying decisions chasing more perfect information.

The public process has plenty of room for more information and analysis to be provided – but it should not be explicitly tied to the PHB alternative selected today.

Thank you for your consideration.

Terwilleger Speaking Points for Forest Practices Board Meeting (2-14-2018) Washington Forest Protection Association

- Introduction/Thanks/ Happy Valentine's Day
- WFPA supports the Board's identification of several alternatives to be assessed for cost, benefit and accuracy considerations: Administrative Procedures Act required analyses and whether the Water Typing system meets the FFR/HCP objectives.
- WFPA recommends that Alternative 15 be tested in the analysis for both Eastern and Western Washington: 5% gradient change; .8 (or .7) size change; obstacle recommendation (Vertical: 3 ft; Non-vertical; Obstacle gradient over 20% and change in elevation over obstacle distance greater than the upstream bankfull channel width.

We also support the evaluation of andromous zone that could be tested at various gradient floors.

- Fish Habitat Technical Group as technical experts should oversee the analysis.
- WFPA believes this proposal is consistent with the Fish Habitat Assessment Methodology and expectations of the water typing system adopted by the Board.
- Analysis necessary to understand how options meet the FFR/HCP objectives for the water typing system are clear: highly accurate; balance remaining risk allocation:

"Failure to correctly identify fish-bearing waters will occur and is assumed to lessen over time. It is assumed that any methods used to map or delineate such waters will have an approximately equal probability of identifying waters as fish-bearing where fish do not actually occur or the reverse, identifying waters as non-fish-bearing where fish actually do occur. It is further assumed that such

- Fish habitat is described in general terms by the 010 definition (“used by fish, *LIKELY* to be used by fish), but there is a lot more detail that must be part of this conversations (accuracy, balance, understanding how change will meet public resource protection/economic viability goals).
- WFPA has also conducted and incorporated additional analysis of PHB alternatives that recognizes the Board’s need to understand accuracy and error allocation in their decision-making and analysis.
- Fish Habitat Assessment Methodology clarification and this new permanent rule is a framework to provide consistency and reproducibility for protocol field surveys, it is not a framework for renegotiating the core elements of the FFR and HCP.
- We are committed to supporting the completion of supplemental analyses, including a spatial analysis of potential PHB alternatives, to include multi-stakeholder representation and oversight to refine and more fully develop a recommendation that includes specific numeric criteria in time for use in the 2019 field season. (Including: foresters, water typing experts, scientists, economist, company officials and policy staff.)
- WFPA looks forward to continued work with the Board on these critical water typing issues.



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February 13, 2017

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Forest.practicesboard@dnr.wa.gov

Re: Comments on Potential Habitat Break Progress and Next Steps for Water Typing

Dear Forest Practices Board Members:

Washington Forest Protection Association is a forestry trade association representing large and small forest landowners and managers of nearly 4 million acres of productive working, including timberland located in the coastal and inland regions of the state. Our members support rural and urban communities through the sustainable growth and harvest of timber and other forest products for U. S. and international markets. For more information about WFPA, please visit our website at www.wfpa.org. We appreciate the opportunity to comment on recent progress related to water typing.

Developing a new permanent water typing rule is a key priority for the Forest Practices Board (Board). Differing interpretations of “fish habitat” and the intent of the term “fish use” exist due to often conflicting regulatory language. As you know, forest practices rules define “fish habitat” as “habitat, that 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.”¹ Surveyors have long employed a process to estimate the upper extent of habitat “likely to be used by fish” when proposing F/N breaks. This process relies on an evaluation of the physical characteristics of stream channels at, or near, the surveyed upstream extent of fish use. The subjective nature of these decisions can result in disagreement over the full extent of habitat likely to be used by fish. A system is required that assesses the location of current or previously known fish use, and then incorporates local information at and upstream from that location in determining habitat likely to be used by fish.

¹ See WAC 222-16-010.

Reproducible and easily identified stream characteristics that demonstrate a reliable association with the likelihood of upstream fish use following completion of a single visit survey can then be used to develop science-based guidance for field practitioners. The recommendations must also incorporate Best Available Science to meet the performance targets and expectations established by the Board, the Forest and Fish Report (FFR), the Forest Practices Habitat Conservation Plan (FPHCP), the Timber Fish and Wildlife (TFW) Agreement, and TFW Policy

The Board has previously adopted a Fish Habitat Assessment Methodology (FHAM) which anticipates a field-based habitat assessment with reliance on field-verified or previously known upstream extent of fish use as a starting point, with habitat breaks at changes in stream channel characteristics identified at or above the upstream extent of documented fish for use as candidate locations for the upstream extent of fish habitat, or Type F waters. Potential habitat breaks (PNB) may occur at potential permanent natural barriers, and/or at changes in stream size, gradient, or both, associated with a decreased likelihood of upstream fish use.

After an initial report in August 2017, the Board directed further work by technical/scientific experts to provide options for the development of PHBs which is before you today. WFPA strongly supported the PHB recommendations in the August 2017 report. While the current report includes a good review of the appropriate literature, WFPA has several concerns about the data and analysis.

Requirements for FFR Rule or Board Manual Changes

Changes in forest practices rules or board manuals must meet numerous legal and policy standards. A fundamental goal of the Timber Fish and Wildlife Agreement¹ is to maintain equity in the tradeoffs that occur between public and private resources. This concept is incorporated in the four goals of the FFR²:

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

Changes must also comply with the water typing objectives in the FFR (highly accurate, minimize error and balance remaining error/reduce systematic bias)³. As stated in the National Marine Fisheries Service Biological Opinion:

¹“The values of public and private resources are very real. Precise quantification of those values is quite variable however. When tradeoffs occur between public and private resources, it is logical to seek ways to maintain equity.” TFW Agreement (1987).

²Final Forests and Fish Habitat Conservation Plan, Appendix B – Forests and Fish Report, December 2005, p. B-1.

³As stated in the FFR, “the risks between resource protection and timber harvest as determined by a model with a statistical accuracy of +/- 5% will be revised so that the line demarcating fish and non-fish habitat waters will be more

“Failure to correctly identify fish-bearing waters will occur and is assumed to lessen over time. It is assumed that any methods used to map or delineate such waters will have an approximately equal probability of identifying waters as fish-bearing where fish do not actually occur or the reverse, identifying waters as non-fish-bearing where fish actually do occur. It is further assumed that such errors will be relatively small and largely offset at the landscape scale. This assumption is based upon the fact that this concept of equal error probabilities was inherent to the FPHCP. (emphasis added).”¹

Washington State Law Also Requires Assessment of Science, Costs and Benefits

The Forest Practices Act requires science in the development of new rules or board manuals.² In addition, the Administrative Procedures Act requires development of a cost benefit analysis, a determination that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives, and a finding that the rule achieves the general goals and specific objectives of the relevant statute.³ The Regulatory Fairness Act requires the development of a small business economic impact statement.⁴ The State Environmental Policy Act requires evaluation of the environmental impact.⁵ Following the science-based process for new rules is critical because it allows the Board to evaluate the benefits and costs of the action. Noncompliance with these provisions will result in arbitrary and capricious agency actions. Unfortunately, WFPA has several concerns about the quality of the data utilized in the current report, the analysis performed, and the stakeholder process as outlined below.

Data and Analytical Concerns

For the July 2017 report, landowners provided approximately 1700 lines of data. The landowner data set was more representative of all streams, including terminal & laterals while new data are heavy towards the terminal points. The Science Panel considered the landowner data set to be the best data available and did not use any other data in first report. Concerns around data led to board motions to QA/QC it with WFPA, augment for areas that were not or underrepresented. Instead of augmenting the landowner data set, the Science Panel replaced it. While the landowner data set was not as dispersed, the quality of the new data does not meet the same standard. Standards for data collection were relaxed because few Water Type Modification Forms included complete information.

DNR created a database of approximately 570 points. Except for points where end of fish was coincident with the F/N break, end of fish data was not included in the report. The data set is incomplete and lacks downstream measurements for a significant number of points; making analysis

drawn so as to be equally likely to be over and under inclusive.” Forests and Fish Report, February 22, 1999, p. 18-19.

¹ National Marine Fisheries Service Biological Opinion, June 5, 2006, p. 180.

² See RCW 76.09.370.

³ See RCW 34.05.328.

⁴ See RCW 19.85.040.

⁵ See 43.21C RCW.

of change/ratio difficult with new data set. While the current report claims that the new data set is random, there is no analysis in the report to that effect. In the data collection process, data points were non-useable. The criteria for data exclusion was not included in the report. This non-useable data has not been made available after repeated written and verbal requests. A poll of individuals collating the data concluded that there was no confidence in the new data set.

Science Panel members reported to technical stakeholders that laterals were not included in the analysis; for some landowners, lateral junctions typically make up more than 50% of water typing breaks. The report also indicates it has much higher data input error rate than the landowner data set. Finally, “percent captured” is a simple summary statistic, not an analysis or a measure of accuracy in the context of the FFR water typing objectives. In fact, the report itself notes that while it may be tempting to select the best performing set of criteria (criteria that captures the most EFH points), it may lead to misclassification.

Threshold Recommendation Concerns

The new threshold recommendations are a substantial departure from the adopted Fish Habitat Assessment Methodology (FHAM). The FHAM assumed electro-fishing where the stream character changes; several of the new recommendations set thresholds for size and gradient. Further, the use of the thresholds may ignore significant changes in habitat (11% to 19% change), while incorrectly identifying non-significant change (9%-11%). Concern from many technical stakeholders that thresholds do not create reproducible points on the ground. There has also been an extreme lack of clarity or consistency in how thresholds would be implemented.

Management of Process and Communication with Stakeholders:

Significant stakeholder comments on the December draft were not incorporated or addressed. During the process, there were few meetings with technical stakeholders and the Science Group. Individual meetings with technical stakeholders with AMPA and/or subset of Science Group resulted in inconsistent and conflicting messaging.

WFPA Recommendation for Next Steps

In light of our concerns about the current report, WFPA offers the following for consideration as the next step in developing a new water typing rule. We propose that the Board direct an assessment of:

- Accuracy and directional error distances for PHB alternatives listed below and any additional PHB alternatives identified by a multi-stakeholder group to be evaluated against known upper extent of fish use and concurred WTMF EOH points.
- Floor-based and other alternatives for determining the extent of anadromous fish habitat for connected tributaries adjacent to anadromous habitat;
- PHB evaluations in Eastern Washington should include assessments incorporating CMER Eastern Washington study results and databases.

The assessment will include a spatial analysis of alternatives and be designed to support the more

analysis of public resource benefits, economic impacts and alternatives required under the Administrative Procedures Act and compare levels of accuracy and error allocation. The assessment will also support the Water Typing Objectives identified by the Board in August 2015 and included in the Forests and Fish Report and Forest Practices Habitat Conservation Plan: use of the existing information, develop a method for addressing streams not on the hydro layer, make methods as accurate as possible, balance error, minimize electrofishing, improve map over time, develop methods to locate the stream break points on the ground, and ensure the methods address small forest landowners.

PHB Alternative #1: For Both Eastern and Western Washington. For Western Washington, measures below would apply above an “anadromous overlay” described below.

- PHB #1: Change of 5% gradient (both Eastern and Western Washington)
- PHB #2: .7 or .8 ft upstream/downstream ratio (both Eastern and Western Washington)
- Fish Passage Obstacle (both Eastern and Western Washington):
 - *Vertical*: 3 ft non-deformable step
 - *Non-vertical*: Obstacle gradient over 20% and change in elevation over obstacle distance greater than the upstream bankfull channel width.
- For Western Washington, the Board would further direct the development of an “anadromous overlay” to define the extent of core anadromous waters likely to be used by anadromous fish in Western Washington. The extent of the core anadromous waters will be determined using a combination of information describing known anadromous fish use, and likely anadromous fish use based on a gradient floor, the presence of permanent natural barriers to anadromous fish movement, and stream size considerations. Specific criteria and data to identify the core anadromous zone will be developed in cooperation with the multi-stakeholder Fish Habitat Technical Group and will include a range of gradients to be tested between 2-10%. Examples of this type of spatial analysis are provided in Appendix 1.

Other Alternatives would be evaluated as requested and agreed to by the Board

WFPA believes this proposal is consistent with the FHAM and expectations of the water typing system adopted by the Board. The proposal builds upon and incorporates the Science Panel’s work and recommendations. WFPA has also conducted and incorporated additional analysis of PHB alternatives that recognizes the Board’s need to understand accuracy and error allocation in their decision-making and analysis. In response to stakeholder feedback, we have included adjustments to the FHAM process to address protections on streams likely to be used by anadromous fish where protocol surveys conducted within the prescribed FHAM may not capture the full extent of habitat likely to be used by those species. We are committed to supporting the completion of supplemental analyses, including a spatial analysis of potential PHB alternatives, to include multi-stakeholder representation and oversight to refine and more fully develop a recommendation that includes specific numeric criteria in time for use in the 2019 field season. We support the Board’s identification of several alternatives to be assessed more

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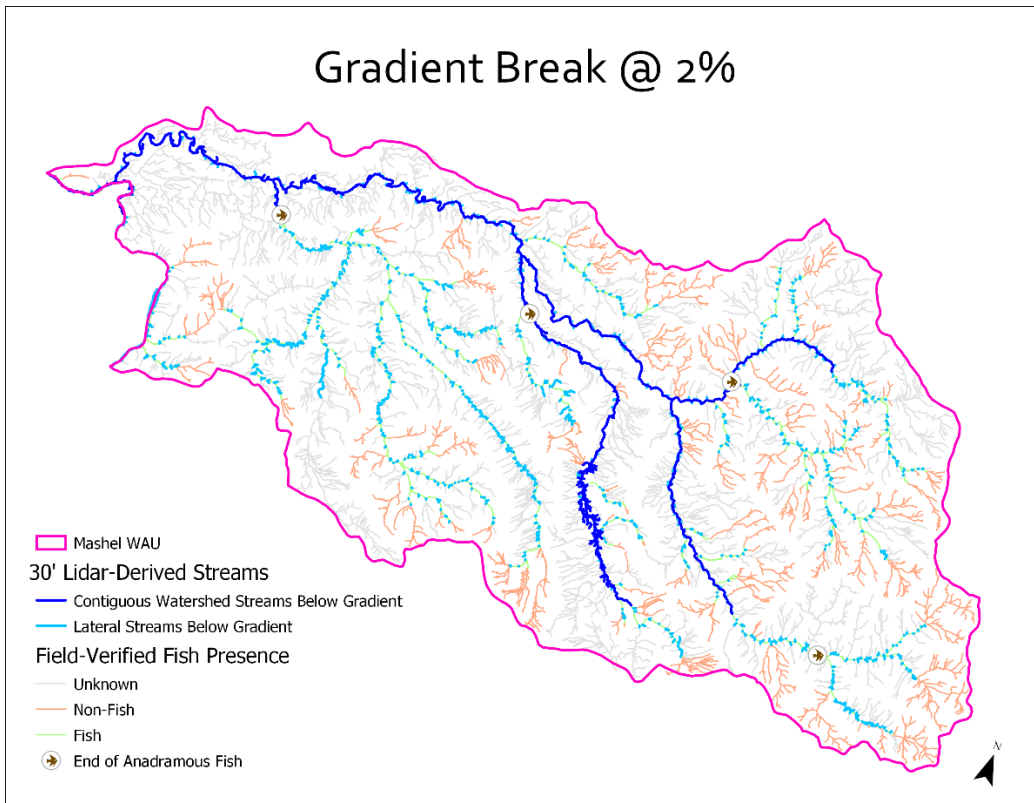
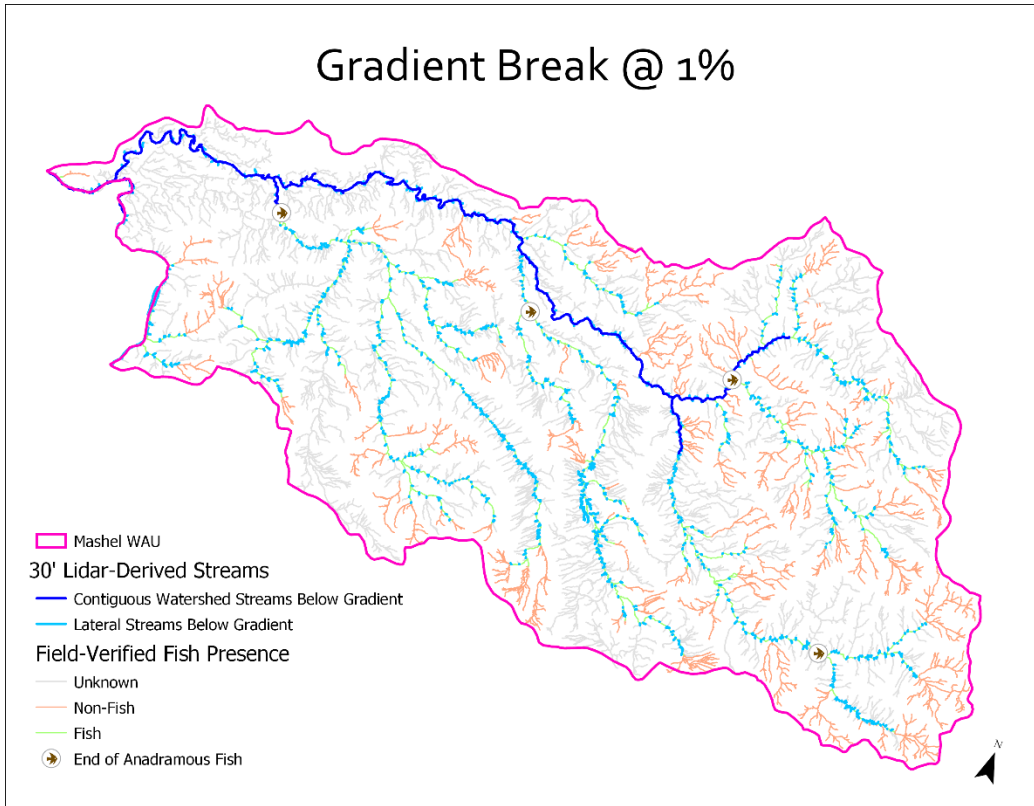
for cost, benefit and accuracy considerations. WFPA looks forward to continued work with the Board on critical water typing issues. Please don't hesitate to contact us with questions.

Sincerely,

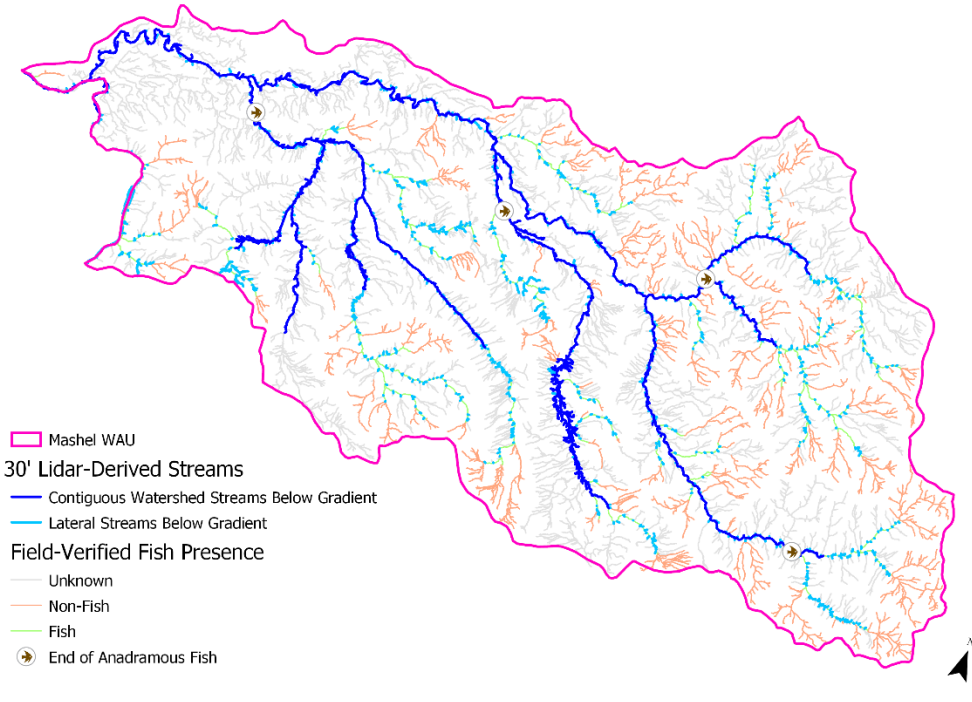
A handwritten signature in blue ink, appearing to read 'K. Terwilleger', with a long horizontal flourish extending to the right.

Karen Terwilleger
Senior Director of Forest and Environmental Policy

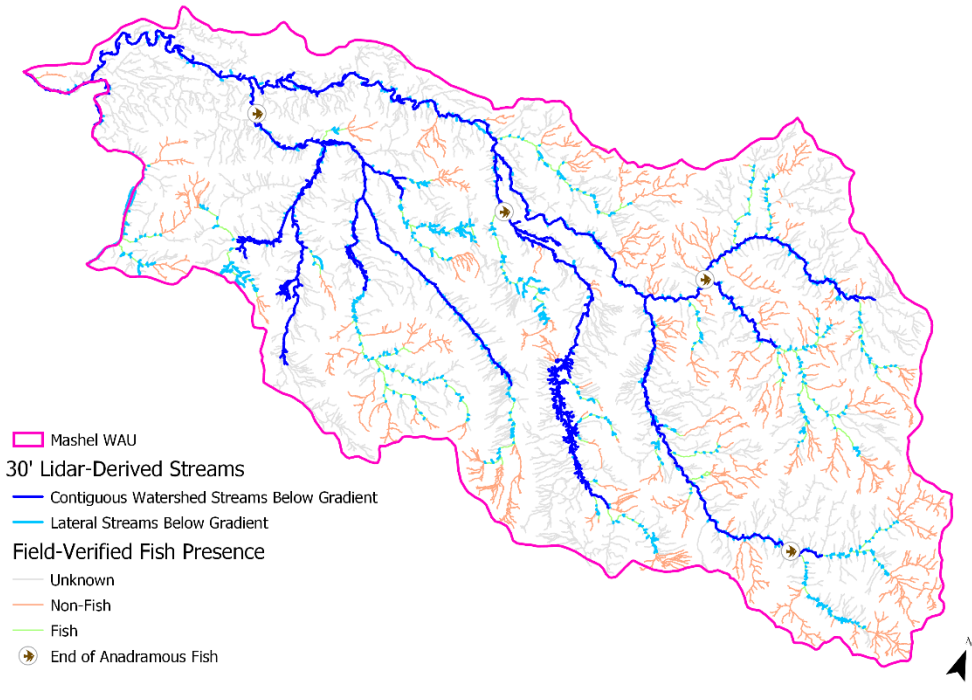
**Appendix 1. Watershed scale maps for a range of gradient floor values:
 Created by Luke Rogers, Rural Technology Initiative, University of Washington; 2018**



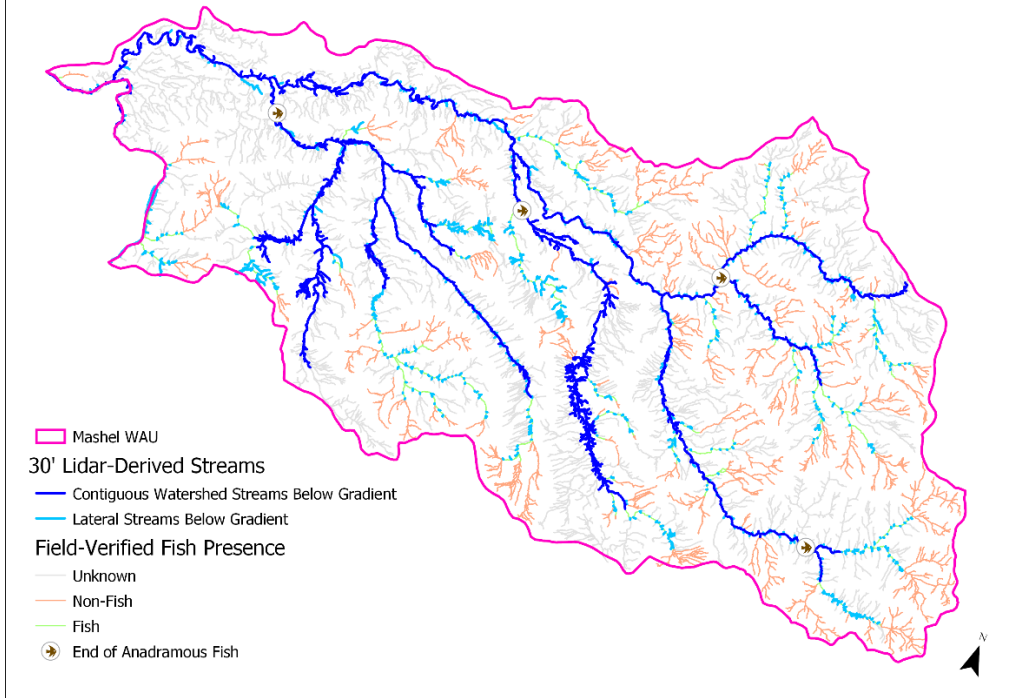
Gradient Break @ 3%



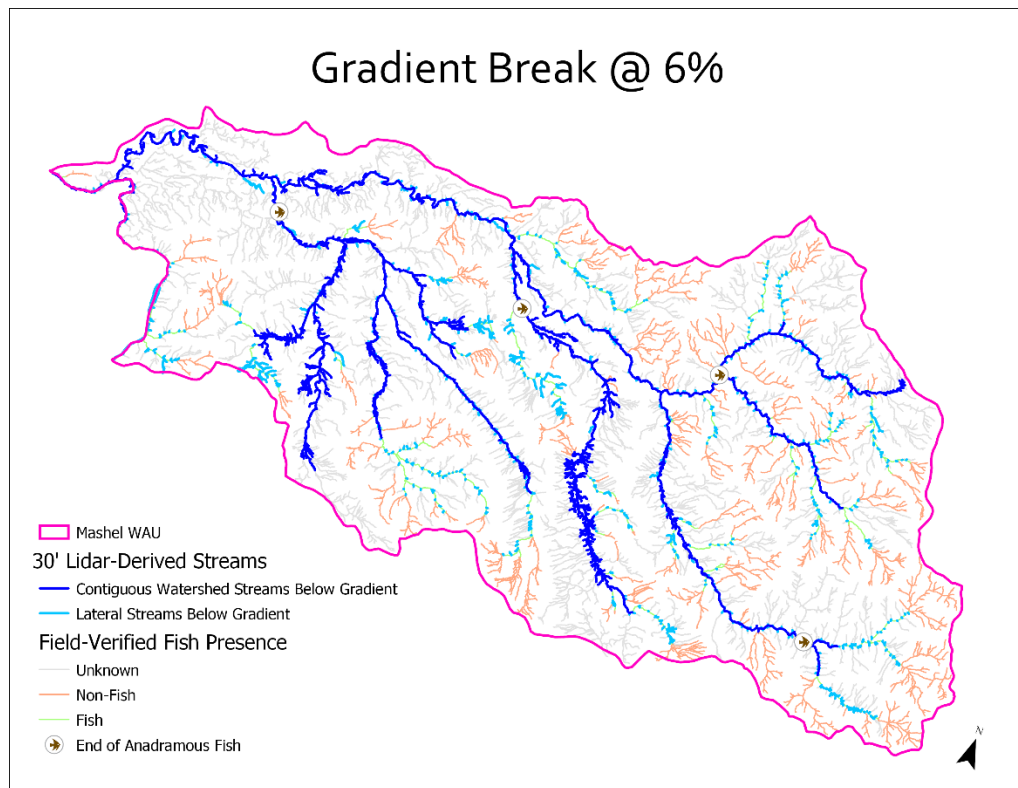
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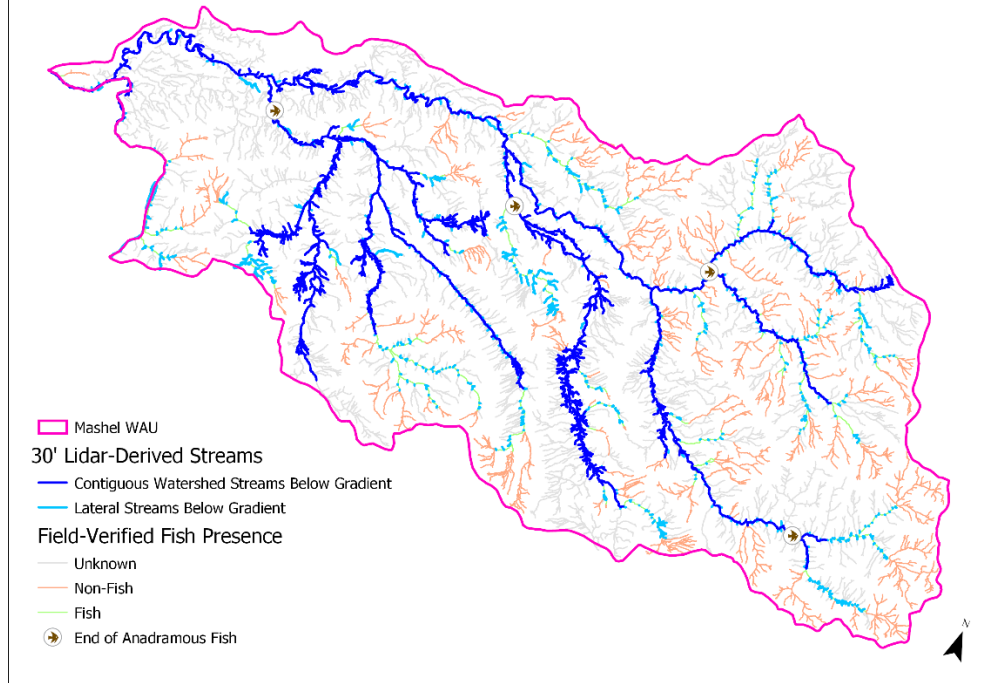
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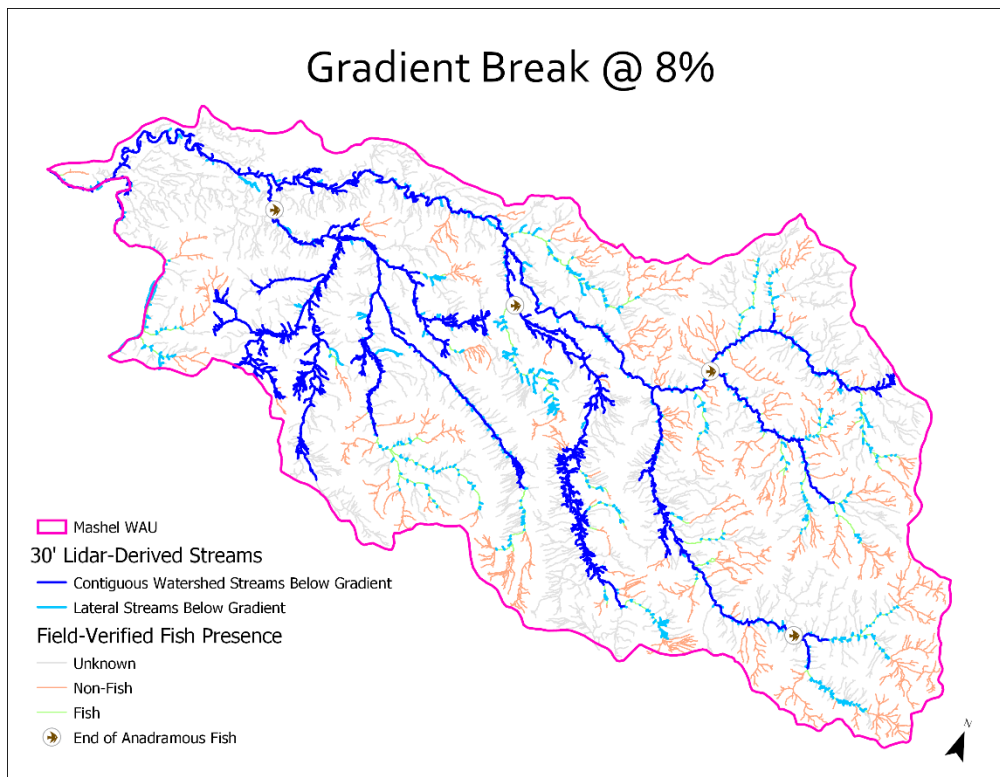
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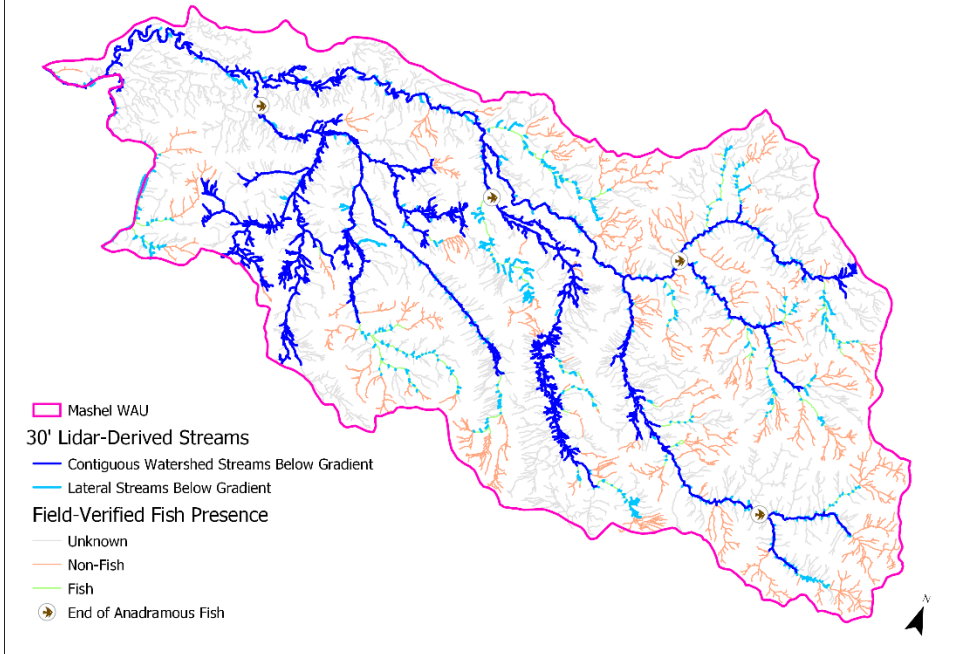
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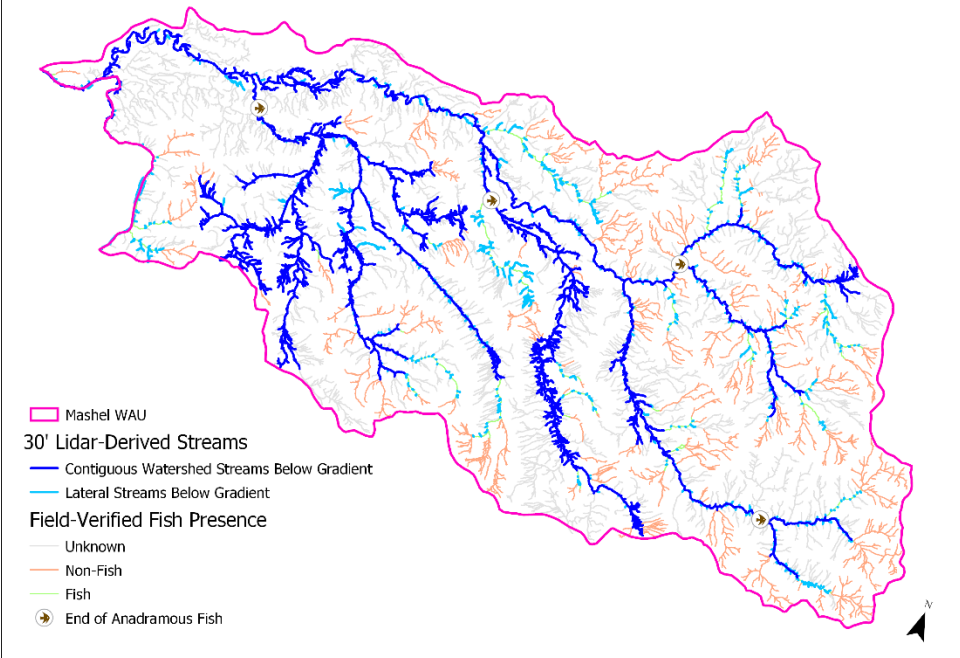
Gradient Break @ 8%



Gradient Break @ 9%



Gradient Break @ 10%



Terwilleger Speaking Points for Forest Practices Board Meeting (2-14-2018) Washington Forest Protection Association

- Introduction/Thanks/ Happy Valentine's Day
- WFPA supports the Board's identification of several alternatives to be assessed for cost, benefit and accuracy considerations: Administrative Procedures Act required analyses and whether the Water Typing system meets the FFR/HCP objectives.
- WFPA recommends that Alternative 15 be tested in the analysis for both Eastern and Western Washington: 5% gradient change; .8 (or .7) size change; obstacle recommendation (Vertical: 3 ft; Non-vertical; Obstacle gradient over 20% and change in elevation over obstacle distance greater than the upstream bankfull channel width.

We also support the evaluation of andromous zone that could be tested at various gradient floors.

- Fish Habitat Technical Group as technical experts should oversee the analysis.
- WFPA believes this proposal is consistent with the Fish Habitat Assessment Methodology and expectations of the water typing system adopted by the Board.
- Analysis necessary to understand how options meet the FFR/HCP objectives for the water typing system are clear: highly accurate; balance remaining risk allocation:

“Failure to correctly identify fish-bearing waters will occur and is assumed to lessen over time. It is assumed that any methods used to map or delineate such waters will have an approximately equal probability of identifying waters as fish-bearing where fish do not actually occur or the reverse, identifying waters as non-fish-bearing where fish actually do occur. It is further assumed that such

errors will be relatively small and largely offset at the landscape scale. This assumption is based upon the fact that this concept of equal error probabilities was inherent to the FPHCP. (emphasis added).”¹

- The Administrative Procedure Act Assessment includes: cost, benefits, impact to small businesses, and “after considering alternative versions of the rule” and these analyses “that the rule being adopted is the least burdensome alternative”
- The proposal builds upon and incorporates the Science Panel’s work and recommendations. Testing alternatives is necessary given the information provided in the latest Science Team Report.
 - CMER data in Eastern Washington was not used in analysis (alternatives should be tested against that information).
 - Weakness in the new data set: only F/N Break EOF points collected; significant lack of downstream EOH measures in the data set.
 - While new data set is more geographically dispersed it is not as representative of stream types (under-representation of laterals which may comprise up to half of surveys).
 - The data collection standard for the new data set was considerably relaxed. Although it has been reported that the new data set was randomly selected, the unused/un-useable data has not been released nor the criteria used for selecting which data was deemed usable. WFPA and others have repeatedly requested in writing and verbally that the Science Panel/AMPA/DNR release this information...to date, the requests have not been granted. Therefore, we can’t evaluate whether the new data set is truly random.

¹National Marine Fisheries Service Biological Opinion, June 5, 2006, p. 180.

- Fish habitat is described in general terms by the 010 definition (“used by fish, **LIKELY** to be used by fish), but there is a lot more detail that must be part of this conversations (accuracy, balance, understanding how change will meet public resource protection/economic viability goals).
- WFPA has also conducted and incorporated additional analysis of PHB alternatives that recognizes the Board’s need to understand accuracy and error allocation in their decision-making and analysis.
- Fish Habitat Assessment Methodology clarification and this new permanent rule is a framework to provide consistency and reproducibility for protocol field surveys, it is not a framework for renegotiating the core elements of the FFR and HCP.
- We are committed to supporting the completion of supplemental analyses, including a spatial analysis of potential PHB alternatives, to include multi-stakeholder representation and oversight to refine and more fully develop a recommendation that includes specific numeric criteria in time for use in the 2019 field season. (Including: foresters, water typing experts, scientists, economist, company officials and policy staff.)
- WFPA looks forward to continued work with the Board on these critical water typing issues.

Forest Practices Board Meeting, Feb 10, 2018

Thank you to the Board and Chair Bernath for taking my testimony today. My name is Arianne Jaco and I work for Washington Environmental Council in the Evergreen Forest Program.

WEC recognizes the long and arduous process that has led this Board and all the stakeholders involved in addressing stream typing through the Adaptive Management Program to this point. We congratulate you on the work you have accomplished so far, and for your continued attention to a complex issue that has remained unresolved for far too long.

~~I will leave the technical issues to my expert colleagues who have done time in the trenches for the Forests and Fish Conservation Caucus.~~

My messages to you today are high-level:

1. WEC and the Conservation Caucus is pleased to recommend that the Board adopt the Westside Tribes' Potential Habitat Break Proposal. This proposal builds on alternatives tested by the Science Panel, but makes important improvements that will ensure electrofishing protocols are not used in areas that should be deemed to be fish-bearing and that obstacle definitions are strong enough to achieve the Board's objectives. In supporting this alternative, we recognize the Tribes' leadership in crafting their proposal, their profound connections to this state's freshwater resources and their status as co-managers of the resource. We urge you forward the tribal proposal to formal rulemaking today.

2. The Westside Tribes' proposal represents substantial stakeholder collaboration and compromise, and should not be perceived as a negotiating position for the Conservation Caucus. We believe this proposal strikes an appropriate balance of competing stakeholder concerns, but it is not as conservative as my Caucus would prefer. This proposal integrates landowners' concerns about relying on physical stream habitat characteristics with the Board's mandate to minimize electrofishing surveys and reliance on fish presence/absence determinations. We are, however, open to clarification or additions to the proposal that provide further assurances that likely fish habitat will not be needlessly subjected to electrofishing surveys.

~~**3. A critical component of this proposal is the 10% floor designed to protect known fish-bearing, likely anadromous streams.** Without this floor the proposal to use a 5% inflection point or "400" would not be biologically adequate. We are not willing to support proposals that do not explicitly and specifically establish such a floor.~~

4. The obstacle definitions are reasonable improvements to the ones proposed by the Panel that comport with expert judgment.

5. We strongly urge you to forward as few alternatives as possible for rule analysis, preferably only one.