WASHINGTON FOREST PROTECTION ASSOCIATION
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February 13, 2017

Washington Forest Practices Board
1111 Washington St SE
PO Box 47012
Olympia, WA 98504-7012
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 Agreement[1] is to maintain equity in the tradeoffs that occur between public and private resources. This concept is incorporated in the four goals of the FFR[2]:

- 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.

Chances 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).

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

[3] As 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

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> "*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

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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.

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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 not 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 that 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.

<u>WFPA Recommendation for Next Steps</u>

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

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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 with 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

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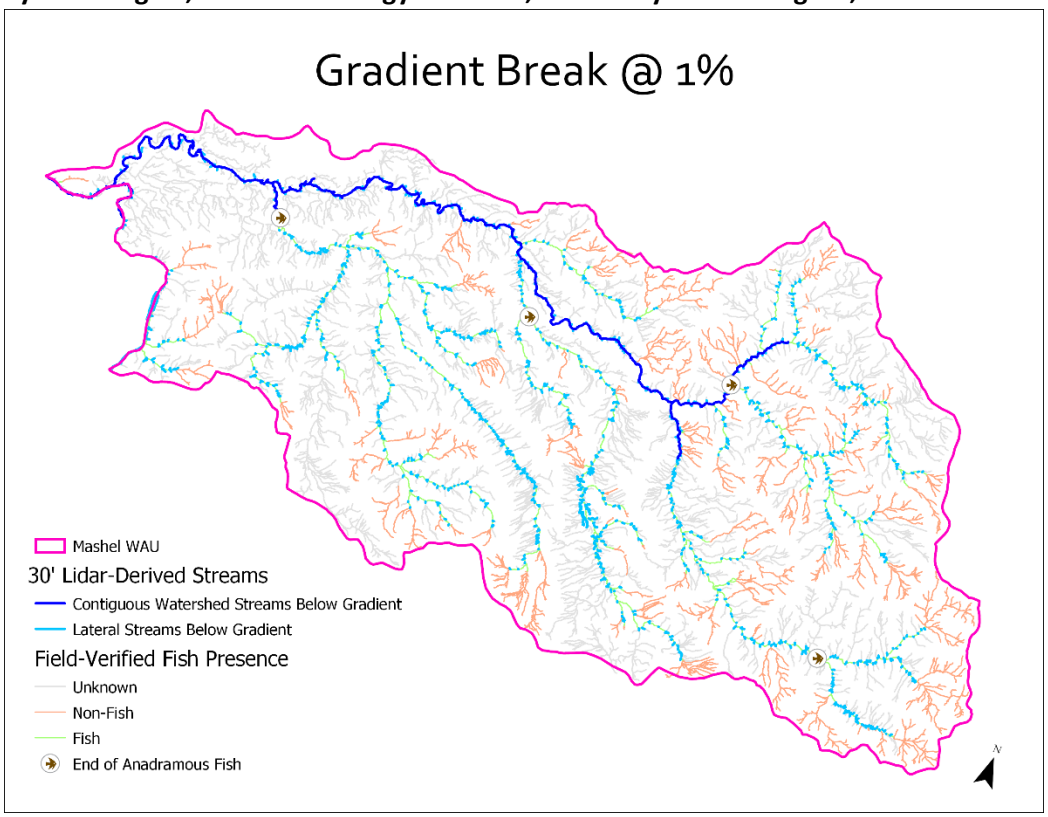
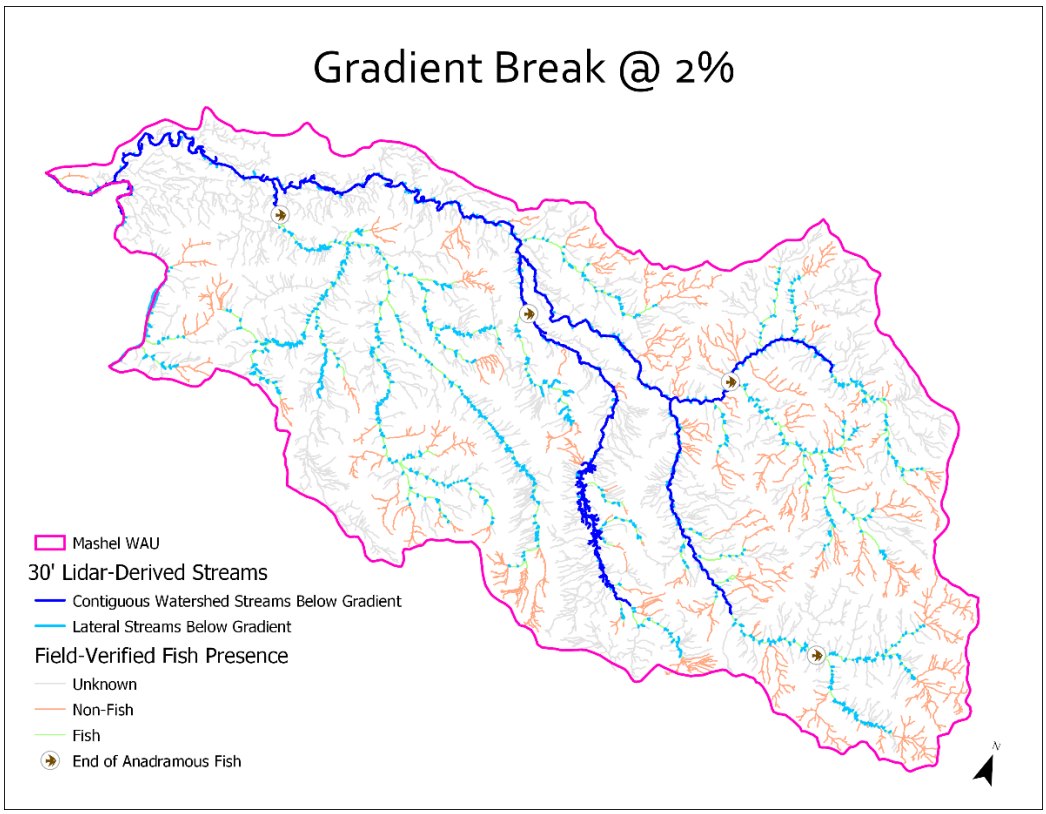
for cost, benefit and accuracy considerations. WFPA looks forward to continued work with the Board on critical water typing issues. Please don't hesitate to contact us with questions.

Sincerely,

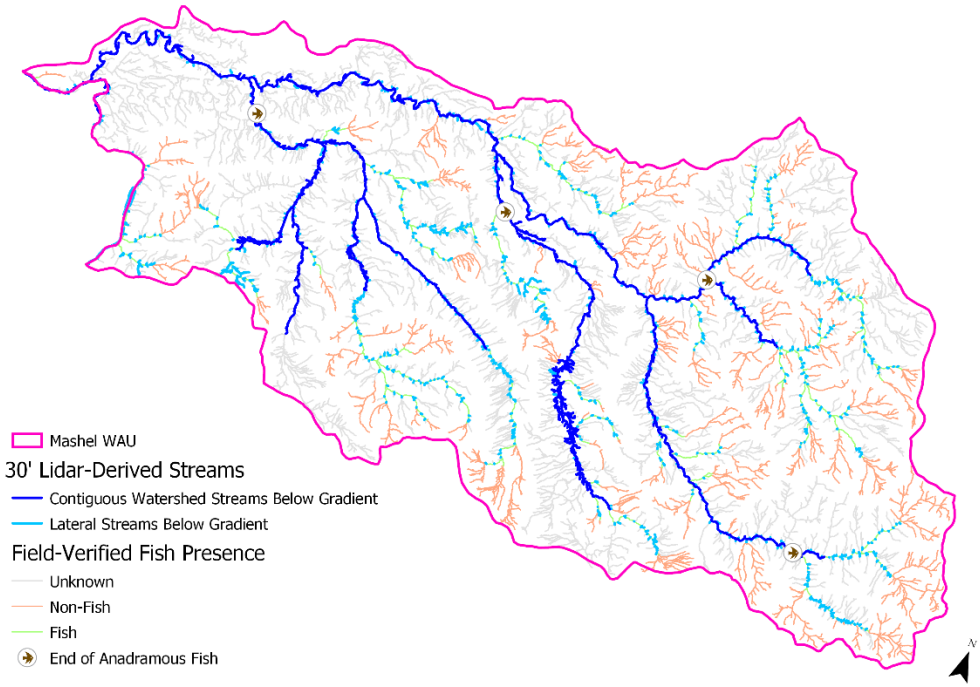
Karen Terwilleger
Senior Director of Forest and Environmental Policy

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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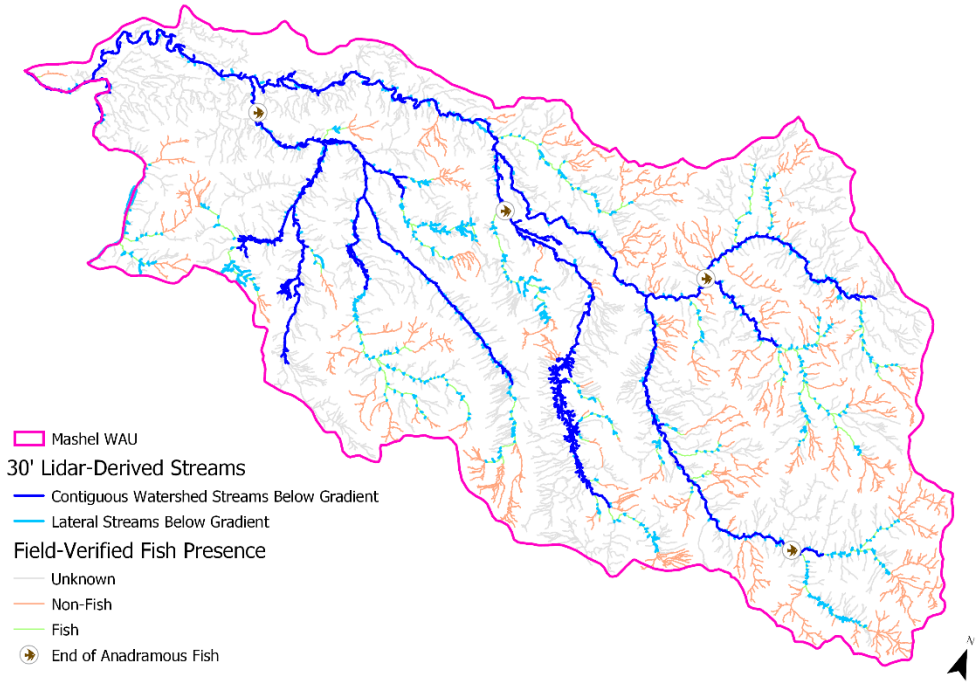
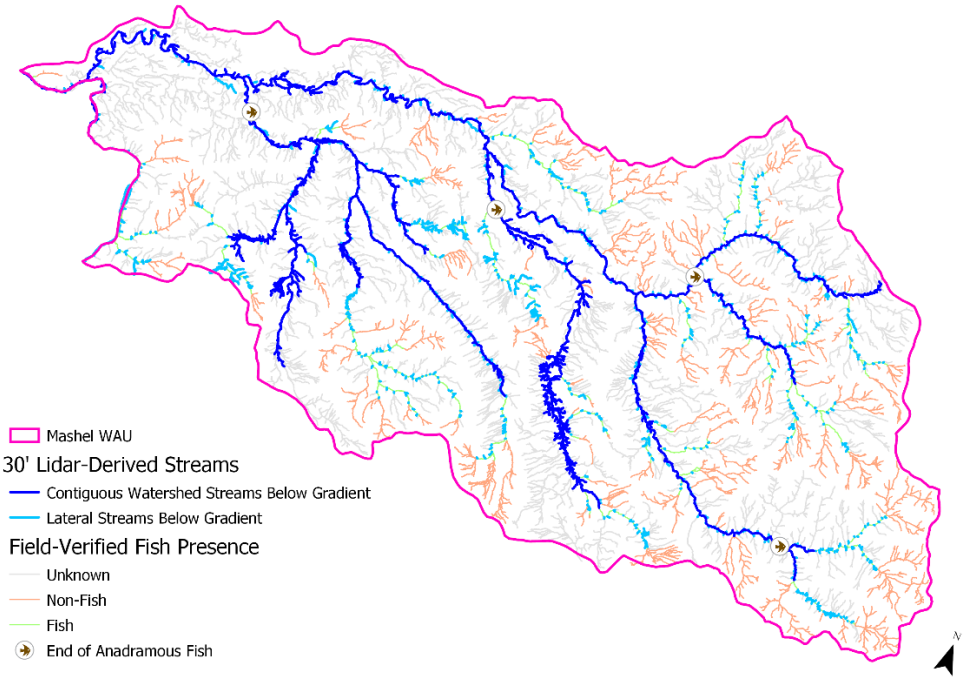


Gradient Break @ 5%



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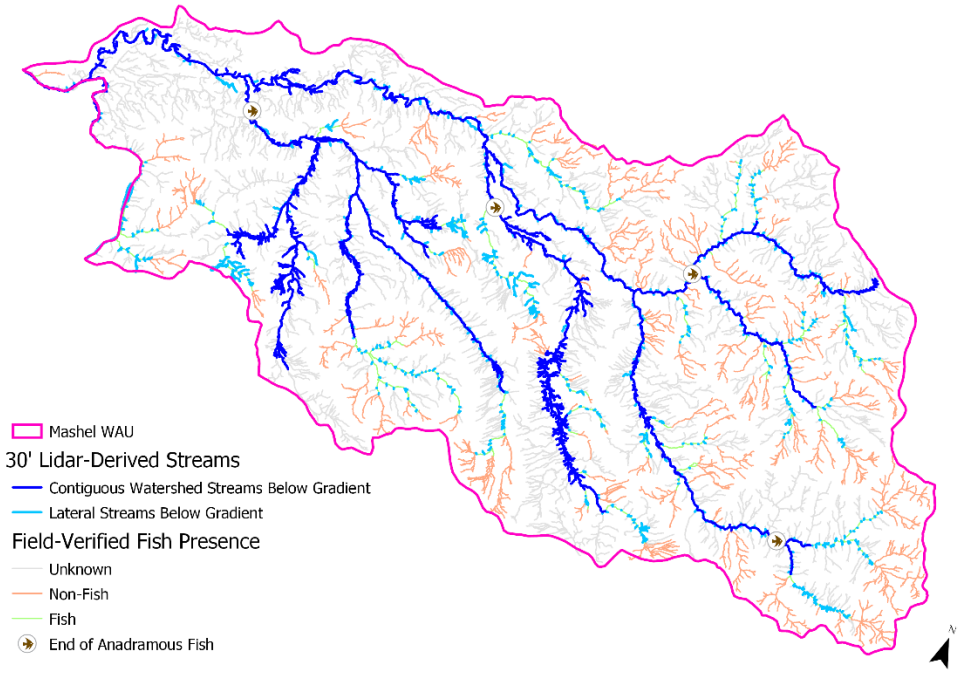
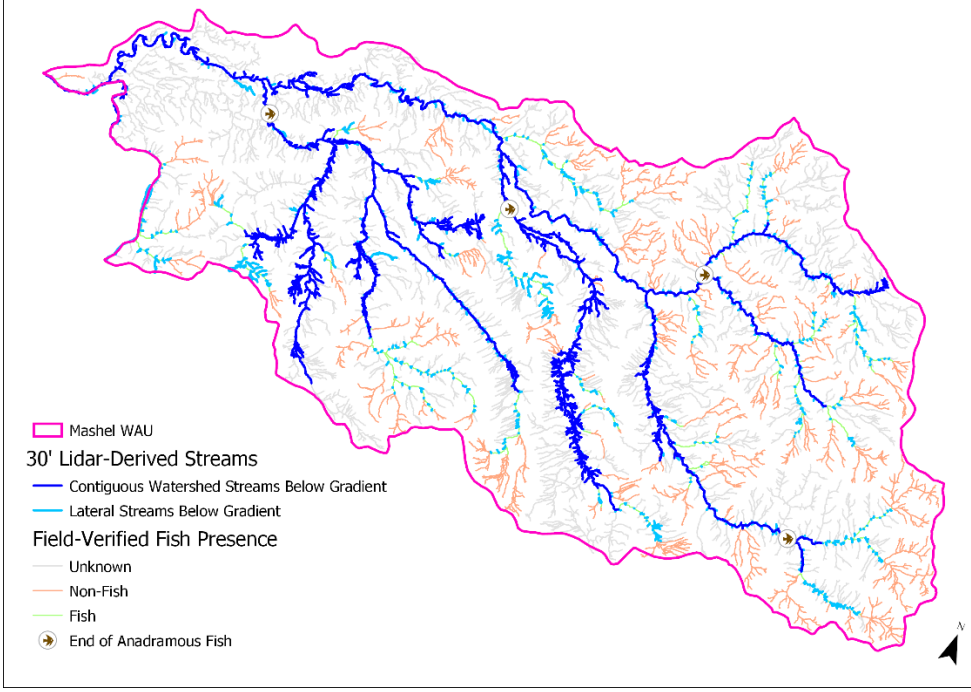


Gradient Break @ 7%



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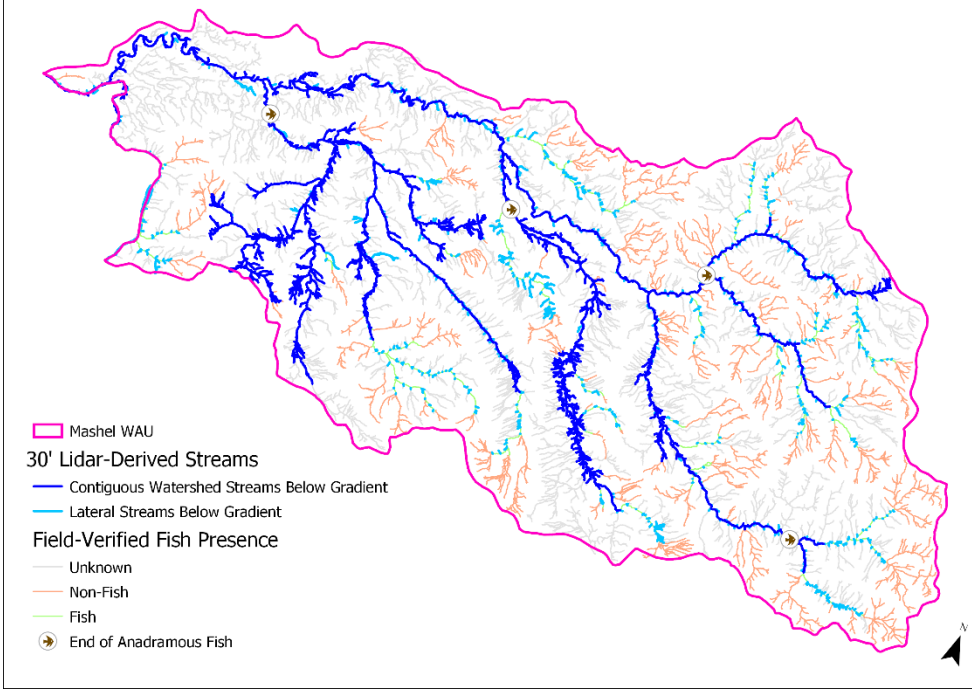

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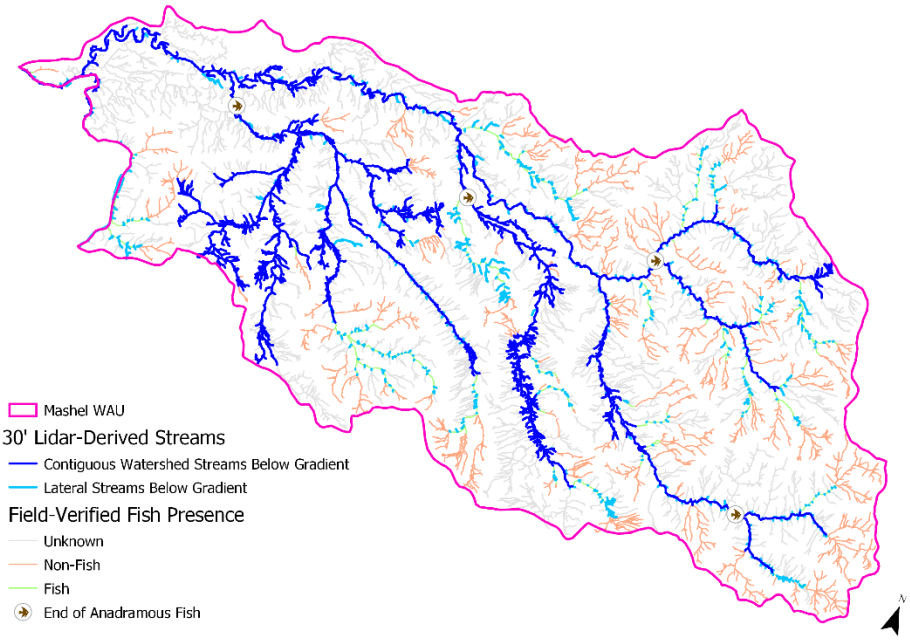
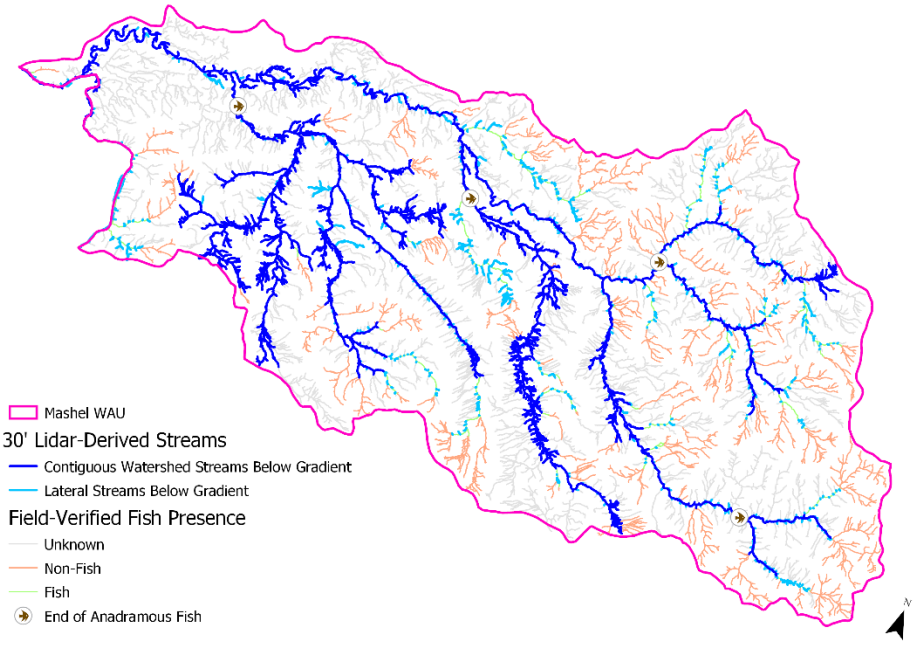
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