1	FOREST PRACTICES BOARD
2	Special Board Meeting – February 13, 2018
3	Natural Resources Building, Room 172, Olympia, WA
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5	Members Present
6	Stephen Bernath, Chair, Department of Natural Resources
7	Bob Guenther, General Public Member/Small Forest Landowner
8	Brent Davies, General Public Member
9	Carmen Smith, General Public Member/Independent Logging Contractor
10	Dave Herrera, General Public Member
11	Heather Ballash, Designee for Director, Department of Commerce
12	Jeff Davis, Designee for Director, Department of Fish and Wildlife
13	Lisa Janicki, Elected County Official
14	Noel Willet, Timber Products Union Representative
15	Patrick Capper, Designee for Director, Department of Agriculture (9 a.m. – 12 p.m.)
16	Paula Swedeen, General Public Member
17	Tom Laurie, Designee for Director, Department of Ecology
18	Tom Nelson, General Public Member
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20	Staff
21	Joe Shramek, Forest Practices Division Manager
22	Marc Engel, Forest Practices Assistant Division Manager
23	Patricia Anderson, Rules Coordinator
24	Phil Ferester, Senior Counsel
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26	WELCOME AND INTRODUCTIONS
27	Chair Stephen Bernath called the Forest Practices Board (Board) meeting to order at 9:00 a.m.
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29	Bernath stated the first day of the meeting would be a workshop to hear from the Science Panel
30	regarding their potential habitat break recommendations. The Board would then hear how the
31	scientific panel followed the Board's directions from the August 2017 meeting. Any action by the
32	Board would occur at tomorrow's meeting
33	DOTENTE A MADE AT DELLA DECOMMENDA TRONCEDOM TIME
34	POTENTIAL HABITAT BREAK RECOMMENDATION FROM THE
35	SCIENCE/TECHNICAL EXPERTS
36	Hans Berge, Adaptive Management Program Administrator (AMPA), and Phil Roni, Science
37	Panel member, presented a summary of the panel's work, analyses and development process for
38	the final recommendation criteria to determine potential habitat barriers (PHB). The presentation
39 40	outlined the panel's recommendations resulting from the analysis of additional water type
40 41	modification form (WTMF) data gathered from several Washington State ecoregions. Berge
41 42	reiterated that a PHB is not necessarily the Type F/N break, but rather the first point of potential
42 43	unfavorable habitat and the starting point for a protocol survey.
43 44	Renge discussed the Roard's previous motions directing the panel's work the subsequent delay of
44 45 46	Berge discussed the Board's previous motions directing the panel's work, the subsequent delay of the first PHB criteria recommendations in August 2017, the process the panel took to gather and analyze additional data from eastern Washington, and the focus to provide revised

recommendations in February 2018. He explained the process used to collect additional data for informing appropriate PHB criteria, the proposed QA/QC process and the stakeholder involvement as the panel progressed in analyzing the new data. He mentioned the Board's direction to complete a validation study and the Board's request to involve stakeholder's participation for PHB data analysis and evaluation. He said the validation study design is set to be completed and presented to the Board at their May 2018 meeting.

Phil Roni shared the process the panel used to establish revised PHB recommendations. The panel considered three sources of information: professional opinion, WTMF data from Washington ecoregions, and a literature review of fish habitat and fish movement. He said they attempted to establish PHB criteria based on parameters which could be repeated and implemented effectively in the field.

 Roni said the panel agreed that gradient, stream width and obstacles proved to be the best indicators for arriving at PHBs. He discussed how they gathered a random sample of WTMF data from across level 4 ecoregions and the process used to glean WTMF information and appropriate measurements to inform the criteria. Their goal was to get 50 to 75 Type F/N break points from each ecoregion. He discussed how the water typing data points were not captured in the same way and how not all of the water type data points were useful in their evaluation.

Board Member Paula Swedeen asked what caused the panel to disregard certain water typing data during the review of WTMFs.

Roni replied that some of the water typing data points were not legible, some WTMFs found fish without conducting a protocol survey and some lacked the actual stream measurements the group needed.

Roni briefly discussed the different ecoregions and the lack of water typing data in some ecoregions. He said the group ran out of time to evaluate the Puget Sound lowland and coastal ecoregions. He said the panel's random sample taken from the July 2017 industrial landowner-submitted water typing data looked similar to the random sample of WTMF data gathered by the panel for western Washington during the second analysis. Roni said that as a result, the panel was comfortable in taking a random sample from the landowner's July 2017 water typing data set to fill in for the western Washington ecoregions where they did not have adequate water typing data. He discussed how the analysis to determine the variances within different ecoregions resulted in a separate eastern and western Washington criteria. The panels' data analysis provided a percentage probability the PHBs identified by the panel would concur with approved WTMF Type F/N break points. Roni explained that the second round of analysis tested the same 15 PHB criteria sets as was analyzed in the first analysis and the report submitted to the Board highlights the top four performing PHB criteria.

Bernath asked Roni to explain what they mean by an upstream gradient threshold, a gradient ratio up or down stream, and the definition of a barrier and an obstacle. He said it is important to be clear on the terminology used by the panel.

Roni asked if the Board Chair wanted him to do that now.

Bernath said whenever they believed it best to do so.

Board Member Tom Nelson wanted to know why the panel did not merely supplement the landowners' July 2017 submitted water typing data used in the first analysis, and stated that he believed the Board voted in August 2017 to go with the PHB recommendations without establishing a gradient threshold under which all waters would be considered to have fish. He additionally asked how the panel came up with presenting the idea of a gradient threshold evaluation.

Roni explained that the panel had always considered a gradient threshold evaluation. He explained how the gradient threshold concept would be applied when a change in gradient (up/down) is found within a stream. He explained the tests used by the panel for analysis were conducted in this way. He said the panel's conclusion incorporated thresholds, gradient differences up/down within a stream and a gradient ratio up/down within a stream.

Nelson said he understood what thresholds are but said some Board members were impressed with the original PHB analysis reported to the Board in August 2017. He stated he assumed the panel would simply augment the original water typing data set, but not include additional threshold criteria. He questioned the decision by the panel to include additional threshold measurements.

Berge explained that the 15 PHB tests were included in the original recommendations and in the second analysis the panel did the exact same tests.

Roni said the only thing which perhaps changed was that the panel did not call the test metrics 'thresholds' in the original evaluation.

Nelson asked if the panel used the same test template or evaluation process for the second analysis.

 Roni said the panel used the same template to analyze PHB criteria for the western Washington industrial landowner data as they did for the additional data sets from other ecoregions. He said the panel also met with stakeholders to share their analysis process and gain input from the stakeholders about the process.

Nelson asked if the panel could assess the accuracy of the two studies using the same template. He wanted to ensure the original July 2017 landowner data and the original PHB analysis followed the same process as the second PHB analysis.

 Roni said the panel included the original PHB analysis conclusions in the table contained in the second report to address that point. He said the panel felt it was best to go with the second analysis because it was conducted using a random sample. He added the panels' direction for work was based on the Board's August 2017 motion.

Bernath reiterated that the panel's second analysis was directed by the Board.

Roni briefly discussed how the panel's recommendation for obstacles is the same as their recommendations provided to the Board in August 2017. He alluded to the diagram in figure 8 in the report and worked through a scenario to explain how PHBs would work within the fish habitat assessment.

Berge said it will be important to determine and explain the process for ending a protocol survey using fish habitat assessment methodology (FHAM) in the new board manual guidance. He said the current board manual process recommends sampling for fish for one quarter mile after finding the last fish. He said the panel is recommending that the revised protocol survey guidance continue after the first fish is found above a PHB for the surveyor to go to at least the next PHB.

Swedeen asked what would be the basis for changing the current practice of going a quarter mile beyond the last barrier.

Berge said to be consistent, one would want to go to the next PHB, but would not argue against continued future use of the quarter mile practice. He said the decision was not within the panel's assigned task.

Swedeen asked why the metrics where based on 'either or' and not 'both'.

Roni said their analysis of WTMF concurred-upon Water Type F/N break points showed most of the points only met one PHB parameter – either stream gradient, stream width, or an obstacle to fish. He said only a small percentage of Type F/N points met both gradient and width.

Swedeen asked for clarification. She said her understanding was the panel used both sets of criteria, but not at the same time.

Berge said her understanding was correct.

 Roni summarized by saying the panel looked at stream gradient, stream width and barriers to fish for their analysis. He discussed how use of other measures such as water quality, temperature or geomorphology was considered but is not supported in literature. He said the panels' recommendation is to select from one of the top four PHB performing criteria for western Washington and one of the top two PHB performing criteria for eastern Washington. He said recommended obstacles are the same for both sides of the state.

Roni said the panel's recommendation for tributary analysis is to start by measuring the tributary at its junction with the main stream rather than rely on the downstream width of the main stream water when the upstream may be considerably narrower. He suggested the comparison of change in bankfull width should be determined based on stream measurements of the stream length equal to 20 times the average bankfull width.

Roni discussed why the panel provided multiple PHB recommendations. He said it is common to present multiple recommendations because often they are not statistically different. The scientific panel wanted to give the Board options to consider. The PHB recommendations for the second analysis look different from the August 2017 recommendations because the panel did not at the

1 earlier time have water typing data from eastern Washington and because there were differences in 2 the landowner data. He said the reason the technical expert panel achieved consensus in its PHB 3 recommendations in August 2017 but not in the second report was because one individual on the 4 panel questioned the data for eastern Washington. He again described the challenges using 5 bankfull width ratios, emphasizing that if one used ratios for downstream width, a conclusion 6 might be that the Type F/N break would be at the tributary junction and might not capture an 7 accurate habitat break.

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Board Member Lisa Janicki asked how the group became comfortable making recommendations given various water typing data limitations.

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Roni said by talking to practitioners who have performed thousands of water typing surveys they confirmed these three criteria are consistent with what they have found in the field. He added that the data points discussed were WTMF concurred Type F/N break points.

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Janicki brought up the one concurred WTMF Type F/N break point available from the Blue Mountains in southeast Washington. She asked if it is scientifically accurate to extrapolate conclusions from one ecoregion with limited data.

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Roni said that the scarcity of applicable data points would be an issue if they were making specific ecoregion recommendations. He said the validation study will evaluate the entire stream reach upstream and downstream from the PHB to confirm the applicability of the PHBs which are ultimately selected by the Board. The study will evaluate the PHBs chosen and test other potential PHB criteria as well.

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Berge said the Adaptive Management Program's goal is to determine if and when it is necessary to adjust forest practices rules. He said the results of the validation study will help the Board assess whether the selected PHBs are the correct ones.

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Nelson suggested no one could precisely find the difference from a 5-foot width with a 10% gradient or a 4-foot width with a 10% gradient on the ground. He asked if the panel used the end of fish point or the point the interdisciplinary team (ID team) concurred upon for the starting point in their evaluation.

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Roni said they had end of fish points for less than 100 WTMFs. He said it is not routinely recorded. He said it would be useful to have, but not key for determining habitat breaks.

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Nelson asked how they might assess costs if they do not have end of fish points.

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Roni said they were not asked to do a cost benefit analysis nor were they asked to evaluate PHB criteria based on end of fish data.

- 43 Berge said he understands how the end of fish data points are necessary for the cost benefit 44 analysis. He said it would have been nice to have the end of fish, but the group focused on the features that most likely limited the fish moving upstream. He said not having end of fish data is 45 not a fatal flaw in determining the necessary PHB parameters.
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Nelson, referring to the eight out of nine individuals on the scientific panel were in agreement with the recommendations, asked about the objections of the ninth person.

Bernath suggested the Board wait for that answer to when the entire panel comes before the Board. He clarified that the Board asked the panel to identify PHB points and that he heard Roni and Berge say they did not need the end of fish points for determining PHB criteria.

Board Member Brent Davies asked if a 5% increase in channel gradient alone is sufficient to impede fish movement or if the criteria was based on a 5% change from one gradient to another as outlined in test #9 from the scientific panel's report.

Roni said the group based test #9 on the gradient downstream.

Berge said the way to use this is if the stream gradient is less than 10%, one would need a 10% change in order to look above it or it would need to be 5% change if the stream gradient was 10% or greater.

Roni said the 5% change would be the PHB and the starting point for the protocol electrofishing survey.

Berge said given the data sets for the Type F/N breaks they evaluated, the 5% parameter (5% change) was a good indicator and coincident for the end of fish habitat.

Davies asked for clarification regarding obstacles and barriers.

Roni said they have always been called barriers. He said panel members acknowledged the confusion with the term and said the literature refers to obstacles.

Berge said one of the challenges in determining an obstacle is identifying enough of a change in physical stream features to explain a logical limitation for fish habitat.

 Swedeen acknowledged the Board might risk adopting a rule that allows for a false negative, stopping the end of fish habitat too low in the stream, if it approved a PHB which is not an obstacle to fish and also acknowledged that the rule should not put the end of fish habitat point too far upstream from the actual end of habitat. She suggested the validation study will help sort out the uncertainty.

Nelson stated the panel's recommendations all seek to put the numeric threshold on the end of fish. He assumed if one starts at the PHB and doesn't find fish, one would then look downstream for another PHB to begin the protocol survey.

Berge said he would assume that is correct. He said the FHAM relies on fish presence to more accurately determine where one would establish the fish habitat boundary. He said the F/N break point could go up or downstream from the PHB used to begin the FHAM.

Davies asked about the panel's analysis determination of the 3-foot vertical height regardless of a stream's width.

Roni said the 3-foot parameter is based on fish jumping performance and is substantiated in the scientific literature. He said the panel was comfortable using a 3-foot parameter since the PHBs will generally be used in headwater streams. He said non-vertical barrier parameters were scaled to stream size.

Board Member Jeff Davis asked if the panel's assessment evaluated plunge pool depths in the 3-foot PHB recommendation.

Roni said several studies done on trout evaluated their jumping performance without a plunge pool. He didn't want the panel to suggest specific recommendations for measuring plunge pools since the areas surveyed are generally headwater streams.

PUBLIC COMMENT ON POTENTIAL HABITAT BREAK RECOMMENDATIONS

Ken Miller, Washington Farm Forestry Association (WFFA), read Steve Barnowe-Meyer's written testimony. The letter said WFFA viewed the science panel's December 8, 2017 report as a substandard data collection and analytical process, resulting in flawed recommendations submitted to the Board. The letter alluded to several questions Washington Forest Protection Association (WFPA) had related to the report: why did the report replace the original industrial landowner data, rather than supplement the previously used data; why was the Compliance Monitoring and Evaluation Research Committee (CMER) Cole study not used for eastern Washington in the analysis; and why was the data standards relaxed by not including other relevant data? The letter suggested the new data was inferior to the landowner data. WFPA believed the report lacked clarity for how the PHB recommendations would be implemented. In summary, the letter said WFFA supports WFPA's PHB recommendations and reminded the Board to adhere to the cost benefit analysis requirement in the Administrative Procedures Act (APA).

 Dr. Elaine Oneil, WFFA, shared her concerns regarding the science panel's PHB report. She mentioned the discrepancy with the measurement units used in the report versus the measurement units used in literature and the terms wetted width versus channel width. She said thresholds are not a model and questioned if any statistical analysis was performed. Given the reasons she mentioned, she said the panel's report is not ready for the Board to make a decision and suggested the panel would have arrived at different conclusion had they had more time.

 Michael Johnson, Hancock Forest Management, said the decisions for establishing stream typing should be based on sound science from as wide a geographical area as possible. He said the Cole study could provide important additional information to establish these recommendations. He is concerned the panel's PHB recommendations might have over protective resource implications due to the limited available science. He asked the Board to consider the financial impacts these decisions will generate.

John Gold, Sierra Pacific Industries, commented on the next steps ahead. They support a water typing system which is based on the tenants in the Forests and Fish Report and that the system be highly accurate for delineating water types. Sierra Pacific did not bias the data they submitted to

be used in the science panel's original evaluation. He suggested the Board ask why various data points were not deemed appropriate in the panel's original analysis. He said the last fish is a measurable place on the landscape. He said the differences in regulatory regions, ecoregions and the decisions made for habitat locations over the years should be considered in how the report is interpreted.

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Kendra Smith, Washington State Association of Counties, said the data in the report falls short of producing confident decisions for the selection of any one PHB alternative. She asked the Board to consider a suite of PHB alternatives, consider the costs associated with the rule and the benefits to the resources for making the best informed decision.

 John Ehrenreich, WFPA, reminded the Board of their obligation to follow the APA which requires the Board to set goals and objectives for measuring costs and benefits during rule making. He provided a summary on different ways to measure the social benefits and social costs and suggested that the social benefits need to out measure the social costs. He said costs will be relatively easy to measure, while benefits may prove difficult to measure. He suggested the Board calculate the costs based on both the status quo (as the rule is written) and how it is being implemented on the ground.

 Jim Peters, Northwest Indian Fisheries Commission, representing western Washington Tribes, said the western Washington tribes will not be able to support the science panel's PHB options. He believes the recommendations do not support low gradient stream systems, especially since salmon populations are still in decline.

Debbie Kay, Suquamish Tribe, said she was concerned that the PHB recommendations do not address the Puget Sound lowland streams. She said these are dynamic waters and electrofishing can miss fish presence if fish are not in the stream reach at the time of the survey. She asked the Board to consider Puget Sound lowland areas in their final recommendation for a water typing process.

Chris Mendoza, Conservation Caucus, said he did not want the disagreements around PHB options to overshadow the important agreements made related to the FHAM. He said the new system moves away from end of fish toward using the first fish found as the basis for reducing electrofishing. He said it is important to begin the survey at a point of known fish. He said the end of the survey is based on Board Manual Section 13, which directs surveyors go one quarter mile to ensure practitioners go far enough. He said protocol surveys are linked to how the Board defines a PHB.

Ray Entz, Kalispel Tribe and representing Upper Columbia of United Tribes, acknowledged the Board's tough choice ahead and encouraged the Board to follow the science in the scientific report.

Jason Walter, Weyerhaeuser Company, said he was encouraged with the Board's acceptance of the FHAM. He reiterated the role PHBs have within the context of the FHAM, especially how PHBs will be used with high probability to predict a significant change in habitat. He said the science panel's PHB recommendations differed from the original intent of the FHAM, which may

misrepresent an actual habitat break and move the Type N/F break upstream beyond what is necessary to provide fish protection. He said his concerns with the scientific report were included in his written testimony. He concluded by stating that any water typing system adopted should not only be implementable and repeatable, but also accurate.

Jaimie Glasgow, Conservation Caucus, said he agreed with Jason Walter that PHBs are biologically important to the movement of fish. He asked the Board to seek clarification from the scientific panel regarding the fish obstacle definition in context of being a permanent, non-deformable feature within the stream. He also suggested that clarification is needed regarding the scaling of fish obstacles and suggested that an obstacle based on vertical height be scaled to stream size.

Mary Scurlock, Conservation Caucus, asked the Board to not be distracted by the legal rule making requirements mentioned earlier in the public comment. She reminded the Board that their task today is to accept the whole water typing package including all of the elements they have approved thus far. She suggested the Board to not make decisions based on the table in the report, but to use the resources and expertise of the experts involved in the process. She implored the Board not to consider a suite of PHB alternatives for the rule, but to settle on a single PHB alternative which embodies a defensible implementation to identify end of fish habitat.

Karen Terwilleger, WFPA, mentioned the requirements under the APA to address the cost and benefits for rule making and the goals under the Forests and Fish Report. She said that an adopted rule needs to be accurate and share the responsibility of remaining uncertainty. Understanding of the implications of applying this rule on the ground and the associated cost is critical for the Board to consider. She mentioned three concerns with the expert panel's report: the new data set is not as representative as the original industrial landowner data; using data where end of fish points are coincident with end of habitat point would restrict the amount of information available for analysis; and downstream measurements of gradient or size are missing for many end of habitat measures. She suggested that the new data set is incomplete. She alluded to WFPA's recommendations (page 4 of their letter), which asks for a spatial analysis to be completed regarding an anadromous floor.

Peter Goldman, Washington Forest Law Center (WFLC), asked the Board not to get bogged down by the complexity of this issue. The goal and objective of this rule is to make the process more accurate, which is to better reflect potential habitat from actual habitat. The Board should focus on the goal to improve upon a site-specific board manual application in the field. He reiterated that the goal is to improve on the ad hoc process being implemented today.

BOARD QUESTIONS OF SCIENCE PANEL

Bernath mentioned that the following session is to provide time for the Board to ask pertinent questions of the panel in order to better understand how the panel arrived at PHB recommendations. The panel participants include: Hans Berge, Pete Bisson, Brian Fransen, Jeff Kershner, Joe Maroney, Phil Roni, Kai Ross, Ray Timm and Patrick Trotter.

Davis acknowledged the need to accurately ascertain the risks to fish and the economic impacts.

He asked how close the PHB alternatives come to determining fish habitat compared to how the process is conducted today.

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Roni said that without testing all the alternatives, they would not be able to know that answer. He assumes the difference is not very much, perhaps a few hundred meters or less, but that is speculation without testing them. He added they did not have the data to test them.

Brain Fransen concurred that the primary data they used for the report is inadequate to answer the question of accuracy and error allocation. Time constraints eliminated their ability to assess that issue. The information needed to inform the change in current practices is an important issue in his opinion.

Board Member Bob Guenther asked how many field seasons are needed to conduct a validation study.

Roni said multiple seasons are needed to address seasonality. Approximately 3 to 5 years would be adequate to inform on fish distribution. The study needs to be stratified across the different ecoregions.

Pete Bisson added that fish distribution factors are weather dependent. He said flexibility should be built into the study design to capture various weather patterns form one extreme to the other.

Bernath asked about the process and time for conducting the validation study. Roni said they are still in the planning phase and is not ready to external review. Berge said that it will entail a stakeholder review, an independent science peer review step, and then back to the Board prior to May.

Swedeen asked why the data did not reflect low gradient systems and asked panel members what they felt would be appropriate measures for capturing habitat in the anadromous zone.

Patrick Trotter said that the anadromous zone is defined in the literature for Washington. He added that older WTMF data showed Coho salmon do not generally go past the points contained in the report.

Roni added that most all salmonids are found below the 10% gradient threshold.

Swedeen acknowledged the concern by several groups that juvenile salmon can be found in 2-foot wide streams below a 10% gradient within the anadromous zone resulting in use of electrofishing protocol surveys where it should not be warranted.

Bisson suggested the value of adding a variety of flow regimes or all season conditions to the validation study because some low gradient streams below a 2-foot criteria would indicate suitable temporary Coho habitat.

Roni said the current default physicals are 2-feet, so one does not currently have to look. The panel is proposing to evaluate 2-foot streams in their validation study. He said it may lead to more electrofishing, but it would lead to checking those small streams to see if they actually contained fish.

Davies asked how much electrofishing the panel envisioned in each alternative.

Roni did not think the panel could answer her question. He did not think it would be a large amount, but the answer is unknown without testing the options.

Davies asked why the Board could not simply adopt the Washington Department of Fish and Wildlife (WDFW) criteria for barriers.

Davis clarified that the WDFW barrier criteria is specifically developed for fish passage and road crossing designs – it is situated for different environments.

Board Member Dave Herrera mentioned that the western Washington tribal motion #9 in the first panel report included a 10% floor for anadromous zone. He asked how either the landowner data or the additional data gathered for upper stream reaches translates to PHB criteria in the lowland areas.

Roni said they had very little data for the Puget Sound ecoregion. He clarified that the points they did have for the Puget Sound and coastal ecoregions may have been points captured at higher elevations and perhaps inadequate for data needed to inform on an anadromous floor.

Nelson asked what the panel had in mind when they discussed 'additional considerations' in their report.

 Fransen said the Cole study has been discussed several times over the years. He said the study might work across the landscape, but not necessarily on each stream. The goal of the FHAM was to find site-specific measurements on each stream. A fixed distance would remove the common sense approach from the surveyor. He acknowledged that this has merit under certain situations, but the panel did not investigate the Cole study in depth.

Joe Maroney added that a fixed width protocol should not apply to man-made barriers.

Bernath questioned how often a surveyor would have to stop and conduct a protocol survey on these higher reaches when they encounter a change from a 10% gradient or a 5% change.

Roni said the group found that even with LiDAR, the panel could not readily answer how often these PHBs would be located because they did not have adequate inflection points. He said it might be possible to assess that in a handful of streams.

Bernath asked whether the panel looked at the Cole study data for the eastside of the state.

Fransen responded by saying he did recommend the panel look at the Cole study more seriously and he suggested the study could have supplemented the eastside data evaluation.

Bernath asked Kai Ross to discuss the power of statistics in relation to gathering enough of a sample size to arrive at the best distribution.

Ross said the goal is to get enough sample points to adequately describe the population distribution. The aim is to get enough representation to capture the variance. The 50 to 70 percentage was derived from the number of sample points the panel thought was needed to encapsulate the variance of the distributions.

Janicki asked for clarification regarding the panel's justification for using 'polluted data' representing the coastal and Puget Sound lowlands needed to inform on a statewide rule.

Roni responded by restating the Board's instruction for drawing a random sample and supplementing that data with the landowner data. The panel had little data from the coastal and Puget Sound ecoregions. He said when compared together, the landowner data looked very similar to the other areas. Therefore, the panel thought it was appropriate to pull from the landowner data for representing the areas covering the coastal and Puget Sound ecoregions.

Ross clarified by stating that the landowner data was not unusable, but the panel wanted to ensure they had a representative sample spatially across multiple locations of the state.

Ray Timm clarified that the data they evaluated was landowner data. He said the panel found that the WTMF data did not contain all of the same information included in the originally provided landowner data. The original data previously provided by landowners included information that was not initially included on submitted WTMFs and was not available publicly – thus the data entered on the WTMFs were not comparable.

 Swedeen addressed earlier comments regarding the concern about data being coincident with the last fish, approximately 60% of the points contain data equating to the nose of last fish. She questioned that if this is the case and if the current system is based on fish plus, not fish presence, how should the Board address shared risk given the results of the data sets.

Nelson added that his comment earlier was acknowledging that folks are applying fish plus in practice, regardless if one thought the rule was based on fish presence. He said most WTMFs contain information on the last fish as well as end of habitat and with an ID team review, the point is set at habitat.

Fransen said the end of fish often equals the end of habitat – the surveyor may find a gradient/barrier or other feature that limits fish, if not it would not make it through the concurrence process. What is lacking in the data is where fish use ended and the surveyor continued beyond the last fish.

Roni concurred that the panel did not have end of fish data on 60% of the points. Many of the forms did not indicate last fish, but end of habitat. Therefore, they had data on the concurred point.

1 Berge added that the only data set they had was when the end of fish equated the end of habitat.

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Davies asked if the current default physicals metrics in rule could be used as a reasonable approach for PHB criteria.

Roni pointed out that default physical metrics are 'and' – both gradient and bankfull width. The panel based their analysis on 'or' – one or the other.

Fransen added that the default physicals require both [gradient and width] to be true. He said given the panel's analysis, the result show defaults to be the worst performing alternative.

Bernath asked if Board Members had questions on the definitions the panel used in their report or during the discussions.

Trotter said that although the term wetted width has been discussed, the panel based their analysis on bankfull width, since that is the standard. He acknowledged the confusion around barrier versus obstacle. He said some of the panel felt barriers were absolute blockage to fish, whereas he felt barriers referred to simple impediments to fish. He acknowledged the need to define these terms.

 Nelson asked what it would take to get more useable data from the Puget Sound and eastside of the state for a third report. Roni stated his opinion that gathering more data was unnecessary and may not provide the Board any more information to make a decision. He felt the panel had done what they were asked to do and any additional work would be futile.

Swedeen asked if someone from the panel would be available tomorrow to assist with understanding definitions and terms as the discussions progressed.

Roni suggested a one-pager 'cheat sheet' could be provided to help Board members understand these terms.

Bernath asked Berge to create and an explanation of the terms: obstacles, barriers, ratio, threshold, bankfull versus wetted width. Berge drafted diagrams briefly describing the terms on flipcharts. The charts were set up in the morning of the February 14 meeting.

NEXT STEPS IN RULE MAKING PROCESS

Marc Engel, DNR, presented the administrative rule making procedures the Board will follow upon filing a CR-102. The statutes involved in rule making include the Administrative Procedure Act (APA), the Regulatory Fairness Act and the State Environmental Policy Act. Staff will also conduct a review of long-term applications containing typed waters.

He proposed the Board could consider more than one PHB option for consideration in the rule making process. He said staff is recommending a special Board meeting on June 27, delaying the timeline for staff to bring draft rule to the Board with the intent for final adoption of the rule at the November Board meeting. Engel walked the Board through the analyses needed for rule adoption, which includes an economic and environmental analysis and long-term application review.

Engel discussed the goal of each product prepared for the June and November meetings. The 2 Board could consider a rule proposal with several PHB options at the June meeting. At the June meeting, the Board could request staff file the CR-102. He said the final rule proposal, final cost 3 4 benefit analysis and small business economic impact statement and draft concise explanatory 5 statement would be presented at the November meeting.

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He concluded his presentation with the next steps the Board might consider for tomorrow's meeting. The two steps include deciding on which set of PHB options to include in the rule proposal and directing staff to prepare for a CR-102 to begin the rule making process.

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20 YEAR FOREST HEALTH PLAN

- Chuck Hersey, DNR, provided an overview on DNR's 20 Year Forest Health Plan. He began by stating that the plan was directed through State legislation. He discussed the main purpose of the plan, the plan's mission and the plan's strategy. He said because forest health is in such a critical situation, DNR realized the plan should be a landscape-scale, cross-boundary approach in order to be successful. He outlined the five planning goals as follows:
- Goal 1 conduct restoration treatments in priority watersheds to increase forest and watershed resilience by 2037.
- Goal 2 reduce risk of uncharacteristic wildfire and other disturbances
- Goal 3 enhance economic development through implementation of forest restoration and management strategies
- Goal 4 plan and implement landscape-scale forest restoration and management treatments consistent with other landowner objectives
- Goal 5 develop and implement a forest health resilience monitoring program

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He explained that the prioritization method for selecting treatment areas include finding landscapes with the highest need and relative risk. The values at risk inform the appropriate ranking process for selecting priority watersheds for treatment. The elements for determining fire risk combines fire probability with fire intensity. From the risk evaluation, DNR was able to identify priority watersheds.

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He concluded by describing the planning process for the 2018 planning areas. He said DNR hopes to finalize the proposed planning areas by mid-February.

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COMPLIANCE MONITORING 2014-2015 BIENNIAL REPORT (W/ISPR REVIEW)

- 36 Garren Andrews, DNR, provided a presentation on the Forest Practices 2014-2015 Compliance
- Monitoring Biennial Report and the results from the independent peer review recommendations. 37
- 38 He outlined the objectives of the new study design and the 2014 program's re-designed
- 39 procedures, which involved increased statistical precision, quantitative estimates of compliance, a
- 40 better process to determine rule noncompliance and flexibility related to analyzing prescriptions. The prescriptions they evaluated included: desired future condition (DFC) options, no inner zone 41
- 42 harvest, non-fish bearing perennial and seasonal streams, Type A & B wetland management zones
- and various road and haul route rule sets. The results for water typing prescriptions on Forest 43
- Practices Applications (FPA) showed 11 waters under classified, 10 waters over classified and six 44
- 45 waters as being indeterminate. The 2014-2015 results for various rule sets are as follows: 46
 - DFC option 1, 94% of FPAs were compliant

- DFC option 2, 98% of FPAs were compliant
- No inner zone harvest, 94% of FPAs were compliant
- Type Np Waters, 94% of FPAs were compliant
- Type Ns Waters, 97% of FPAs were compliant
 - A and B Type wetlands, 94% of FPAs were compliant
 - forested wetland, 97% of FPAs were compliant
 - road compliance, 98% of FPAs were compliant

He explained that rule compliance refers to what was assessed on the ground versus what was stated in the FPA. FPA compliance refers to what was stated on the FPA. He said FPA compliance was generally higher than rule compliance for each rule set. The trends analysis showed that generally no observable trends were seen for most rule sets. He added that the no inner zone harvest and roads were the only prescriptions with detectible compliance trends.

Andrews said an independent peer review occurred on the program's design. The review showed that the statistical approach regarding the sampling procedure and the construction of the ratio estimator for compliance is sound. The recommended changes include using a "jackknife" ratio estimator, and including a description of the sample selection procedure in future compliance monitoring report appendices.

WASHINGTON GEOLOGIC SURVEY PRESENTATION

Kate Mickelson, DNR, gave an overview of the landslide inventory program. She said DNR provides maps for the public and other agencies to inform land use decisions. The data for individual landslide polygons provides various attributes including confidence intervals, ranging from low to high. She said the landslide susceptibility mapping projects is not intended for forestry areas.

 Abby Gleason, DNR, provided a presentation on the LiDAR Portal and the Geologic Information Portal, which is available to everyone on DNR's Washington Geological Survey website. She said the collection is progressing via federal grants, local partnerships, and state funding. The Washington Geological Survey works with USGS, other DNR divisions, local, tribal, federal and state agencies to add data to the LiDAR inventory and to help distribute this data publically. She said the quality of LiDAR varies across the state. She concluded the presentation by demonstrating how one can access and use the portal.

SMALL FOREST LANDOWNER ADVISORY COMMITTEE UPDATE

Vic Musselman, WFFA and Tami Miketa, DNR, provided an update on the Small Forest Landowner Advisory Committee. Musselman mentioned several highlights demonstrating the confidence small forest landowners have in obtaining resources for managing their resources and understanding the rules: they are working to complete a sample alternative plan application and hope to be done later this year; they have created guidelines for what to expect when an ID team is conducted to review an alternate plan; they created a handbook acting as a reference guide for members; they have asked DNR to include a review of forest practices documents by the committee to ensure they are clear for small forest landowners; and they have begun discussions regarding issues they identified with the FPA instructions. When they have addressed this priority,

46 they plan to take the concerns to the operations side of Forest Practices.

Miketa said she is impressed with the level of cooperation and the hard work members bring to the committee. She said they are effective in helping find solutions. She said the level of respect is commendable and values the open communication between her office and the advisory committee members.

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STAFF REPORTS

- 7 TFW Policy Committee Priorities
- 8 Davies asked what the status is on hiring a CMER scientist for the eastside of the state. Berge
- 9 responded that it is on the master project schedule, but listed as unfunded. The budget and
- schedule will be provided to the Board at the May meeting at which time the Board could make adjustments.

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- 13 Northern Spotted Owl Implementation Team and Safe Harbor Agreement
- Bernath commented that there has not been much movement on the safe harbor agreement.
- 15 However, internal review has been on-going for how to best operationalize it and move forward.

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- 17 No questions occurred on the following reports.
- 18 Adaptive Management Update
- Board Manual Update
- 20 Clean Water Act Assurances
- Compliance Monitoring
- 22 Rule Making Activity
- Small Forest Landowner Office Update
 - Upland Wildlife Update

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EXECUTIVE SESSION

27 Executive session occurred from 5:05 p.m. - 5:25 p.m.

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29 Meeting adjourned at 5:25p.m.

2	Regular Board Meeting – February 14, 2018
3	Natural Resources Building, Room 172, Olympia, WA
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5	Members Present
6	Stephen Bernath, Chair, Department of Natural Resources
7	Bob Guenther, General Public Member/Small Forest Landowner
8	Brent Davies, General Public Member
9	Carmen Smith, General Public Member/Independent Logging Contractor
10	Dave Herrera, General Public Member
11	Heather Ballash, Designee for Director, Department of Commerce
12	Jeff Davis, Designee for Director, Department of Fish and Wildlife
13	Lisa Janicki, Elected County Official
14	Noel Willet, Timber Products Union Representative
15	Patrick Capper, Designee for Director, Department of Agriculture
16	Paula Swedeen, General Public Member
17	Tom Laurie, Designee for Director, Department of Ecology
18	Tom Nelson, General Public Member
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20	Staff
21	Joe Shramek, Forest Practices Division Manager
22	Marc Engel, Forest Practices Assistant Division Manager
23	Patricia Anderson, Rules Coordinator
24	Phil Ferester, Senior Counsel
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26	WELCOME AND INTRODUCTIONS
27	Chair Stephen Bernath called the Forest Practices Board (Board) meeting to order at 9:00 a.m.
28	Introductions of Board and staff were made.
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30	REPORT FROM CHAIR
31	Bernath reported on the following:
32	• Cultural Resources – A meeting was held with principals on February 7, 2018 regarding the
33	staff work done within the last year. Possible proposals include funding for tribal participation
34	small forest landowner assistance, assessing the possibility of adding cultural resources into
35	the Forestry Riparian Easement Program and cultural resources training.
36	• The agency requested legislation regarding pre-application review for unstable slopes, and

FOREST PRACTICES BOARD

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PUBLIC COMMENT

the Rivers and Habitat Open Space Program.

engineer staff.

Elaine Oneil, Washington Farm Forestry Association (WFFA), invited the Board to attend their annual meeting in Winthrop, Washington in May.

other legislation regarding transparency and science died this session. The DNR funding for public safety is still in play and includes mapping along the SR-530 corridor and additional

Passage Program, \$3.5 million for the Forestry Riparian Easement Program and \$1 million for

A Capital budget was passed. Allocations include \$5 million for the Family Forest Fish

Ken Miller, WFFA, invited the Board to tour his tree farm to visualize the small forest landowner low impact template. He also shared his opinion that if those wanting more trees protected further upstream were willing to assure landowners no net loss of trees, a win-win policy solution could likely happen.

APPROVAL OF MINUTES

MOTION: Tom Laurie moved the Forest Practices Board approve the November 7 & 8, 2017

meeting minutes as amended.

SECONDED: Lisa Janicki

ACTION: Motion passed, 12 support/1 abstention (Willet).

POTENTIAL HABITAT BREAK RECOMMENDATION(S)

Bernath provided a brief account of the Forests and Fish Report's goal for modeling streams. He said the interim rule was intended to be the placeholder until the model could be completed. It was not intended to be applied for 20 years, but the model did not prove as accurate as intended. He said the scientific panel's process to analyze WTMF data reflects how waters are typed today. Therefore, until a model is ready, to determine the water typing, experts are going to continue to assess streams on a case by case basis where people choose not to use the default physicals.

Bernath then invited those individual caucuses bringing forward proposals to present their PHB recommendation to the Board.

Board Member Tom Nelson said that the industrial landowners stepped up to complete road maintenance and abandonment plan projects throughout the interim rule period.

Ray Entz, Kalispel Tribe and representing Upper Columbia United Tribes (UCUT), said their proposal is based on the panel's recommendation and believes the best fit is the 10% gradient, 2-foot width criteria. He believes the panel's recommendation protects the anadromous floor. The starting point would be the last known fish or the modeled point. He acknowledged that the point may not be the end of fish habitat, but provides the best starting point. He cautioned the Board not to discount the panel's work, which was specifically instructed by the Board. He said not adhering to the panel's recommendation is insulting. He clarified that the eastside tribal proposal would apply to both eastern and western Washington. He concluded by saying, although he does not support every element contained in the report, it is based on science and the Board should acknowledge that effort.

Karen Terwilleger, Washington Forest Protection Association (WFPA), referred to the document that WFPA provided the Board, which on page five contains their proposal. She suggested the Board consider a range of alternatives to assess cost, benefits and the accuracy of PHBs. Their recommendations for eastern and western Washington include a 5% gradient and a 30% or 20% ratio reduction in stream size. For the fish passage obstacle, a vertical 3-foot step; and for a non-vertical obstacle, a gradient over 20% and change in elevation greater than the upstream channel width.

Terwilleger said they believe any PHB alternative needs to be assessed against the Cole study. She said their caucus does not believe the metric of 'percent captured' is an analysis of accuracy or an indication of how well the criteria performed. She mentioned the misrepresentation of laterals in the expanded WTMF data and believes the combination of the proposal they put forward meets the requirements of the Forests and Fish Report and the Forest Practice Habitat Conservation Plan.

Jim Peters, Northwest Indian Fisheries Commission and representing westside Washington Indian Tribes, Ash Roorbach, Northwest Indian Fisheries Commission and Debbie Kay, Suquamish Tribe shared their PHB proposal. Peters read a portion of the Timber, Fish and Wildlife Agreement which states, "[t]he participants agreed that the State of Washington needs a viable timber industry and it needs to protect and enhance its fish, wildlife, water and cultural/archeological resources". He still believes it is the intent of this process.

He said their proposal recommends maintaining the integral role for ID team reviews. The proposal recommends establishing an anadromous fish zone applied to all streams below a 10% stream gradient where the PHB channel width metric is not applied to the area below the "floor." He referred to their written proposal, which outlines other recommendations such as use of physicals for man-made structures and suggestions for the validation study.

Debbie Kay clarified that the westside proposal would not use a width determinant as a PHB within the anadromous zone.

Board Member Jeff Davis mentioned that these low gradient streams are commonly under local government jurisdiction, but that local governments often rely on DNR water typing process.

Kay acknowledged that low gradient streams on non-forest land is an issue to the tribes.

 Ash Roorbach mentioned that the anadromous floor uses a barrier criteria, whereas above the floor a PHB obstacle would be appropriate. He clarified that below the floor their proposal identified criteria that is equivalent to a barrier as opposed to an obstacle; above the floor, they identified criteria for a slightly different obstacle than what was recommended by the science panel.

 Kay said the use of an ID team should be part of an evaluation within the anadromous floor when warranted because these are diverse systems. She said the difference is how this would be applied in rule versus what is done today. This is acknowledgment that streams under 2-feet may contain fish habitat when the current rule says anything less than 2-feet is non-fish.

Kay suggested that a protocol survey might be applied below the anadromous floor if an ID team determines that is an appropriate use. She mentioned the flexibility ID teams bring to these complex systems.

Davis asked the westside tribal representatives if they know how close their proposal comes to matching what is currently done on the ground.

Kay responded that their proposal would protect 6-inch streams that might be full of Coho or floodplains that seasonally contain fish where the current rules do not.

Board Member Brent Davies asked for their opinion regarding looking for fish in subsequent seasons.

Kay responded that they would be in support of the process to look for fish more than once or allow for other methods such as eDNA.

Davies asked for their suggestion for criteria for the eastside of the state.

Roorbach said they have been having conversations with several eastern tribes, but they are not comfortable attempting to speak to other proposals.

PUBLIC COMMENT ON PHB RECOMMENDATION

Claudine Reynolds, Port Blakey, said that rule and board manual guidance should not take the place of professional experience and the approach selected should be site specific for each situation. A ratio approach to determine the PHBs would allow the physical characteristics of each stream to be assessed in context to stream size. She said that test #15 in the science report, 5% gradient and 20% reduction, is most feasible. She said any PHB applied would need to be included in a validation study and the spatial analysis should be conducted as recommended in the WFPA proposal. She emphasized that surveyors begin their survey at known fish and assess a variety of changes in physical features, not just relying on one set of percentages or width metric.

Ken Miller, WFFA, said small forest landowners are unable to comprehend the PHB and FHAM debate. He asked the Board to recognize the disproportionate impact to small landowners. He suggested that increasing regulations might lead to conversions of forest land to highest and best use.

Kevin Godbout, Weyerhaeuser Company, agreed with Bernath's summary regarding the definition of habitat to capture methods to arrive at the appropriate location. He said he believes this process should involve a validation study before the implementation – this upcoming field season may prove possible to do so. He asked the Board to consider all alternatives in order to be inclusive and to assess an alternative in this rule making for the goal of protecting aquatic habitat and maintaining economic vitality.

 Mary Scurlock, Conservation Caucus, said the stream typing package the Board is duty bound to complete is the result of protractive negotiation and dispute resolution completed within the Adaptive Management Program. She said the Conservation Caucus is asking the Board to accept the westside tribal proposal as the single PHB criteria. She said they believe accepting multiple options increases the risk of delay. They believe the westside tribal proposal builds on alternatives tested by the science panel, reduces electrofishing and meets the Board's objectives. She said they are deferring to the westside tribal statement made earlier that the westside tribes are deferring to the Eastside tribes selection of an alternative for the eastside of the State. The Conservation Caucus believes that the 10% anadromous floor be identified and that the obstacle definitions are reasonable improvements to the ones proposed by the scientific panel.

Jamie Glasgow, Wild Fish Conservancy and representing the Conservation Caucus, said the Conservation Caucus supports the westside tribal PHB. He said their experience shows many

stream reaches below a 10% gradient floor are used by multiple fish species. They believe that appropriate training of surveyors and WTMF reviewers would result in a repeatable and implementable approach. This proposal reduces the use of electrofishing during a onetime sample. He alluded to the two types of obstacles – vertical and non-vertical – and believes it is necessary to scale the vertical criteria to channel width. He further clarified how the westside tribal proposal and the panel report differs regarding non-vertical obstacles.

Ray Entz, Kalispel Tribe and representing UCUT, said low gradient streams need to be protected in rule. The 10% gradient floor would protect fish in these systems. He acknowledged the science panel's work and indicated that the Board should follow those recommendations. He urged the Board to follow the advice the panel provided to the Board. He said that he did not think bifurcating the science panel's options would produce statistically different outcomes and doing so would not ignore the panel's recommendations.

Peter Goldman, Washington Forest Law Center, urged the Board to adopt the western Washington tribal proposal. He reminded the Board that the western tribal alternative is a compromise and fair end point. They believe the western tribal proposal best identifies fish barriers and obstacles. He asked the Board to acknowledge the Conservation Caucus' concession to allowing existing past Type N/F break to be grandfathered in as the regulatory break. He also wanted the Board to acknowledge their concession of the potential of letting a flood of FPAs pass before the rule takes place. He said they recognize the APA allows for alternatives, but wanted to let the Board know they do not need to. He said the western tribal proposal has the most support and believes the proposal by WFPA does not meet the goals and objectives of the rule. He summarized by urging the Board to act.

Chris Mendoza, Conservation Caucus, provided an example of why the anadromous floor is important. He shared his experience with a stream survey on a small forest landowner's property where Coho were found after an initial survey did not find any fish above a barrier. He said this demonstrates the seasonality for fish. As a result, he said the floor makes a lot of sense.

Arianne Jaco, Washington Environmental Council, acknowledged the Board and stakeholder's work to date. She said they recommend the Board adopt the western Washington's tribal PHB proposal. She said this proposal eliminates electrofishing in water where fish are known and believes the proposal where obstacles are the most sound. She urged the Board to consider only one PHB option and subsequently, one analysis.

 Karen Terwilleger, WFPA, asked the Board to adopt a rule that meets the objectives of both the Forests and Fish Report and Forest Practices HCP. She said the fish habitat technical group needs to be included in the analysis going forward. In order to have a robust rule, the Board needs to assess different options to determine the least burdensome alternative to landowners. She suggested these analyses will also help the Board understand those waters likely to be used by fish.

BOARD DISCUSSION ON POTENTIAL HABITAT BREAK RECOMMENDATION

Bernath asked if someone was interested in entertaining a motion.

Nelson said he is not comfortable with eliminating or choosing an individual alternative at this time. He said although the Board has received subjective numbers regarding if one stream metric will miss or predict fish, the Board has not received an economic analysis for what this is going to cost the small and large landowners or what the benefits to fish might be. He said he does not feel comfortable eliminating these alternatives until he has that information. He provided his draft motion to Board Members.

Nelson proposed to move forward and analyze four different alternatives and ask the fish technical group to analyze the cost benefits and accuracy so we can move forward on a permanent F/N break rule. The four PHB options are: the current rule, the UCUT proposal as presented this morning, the western tribes proposal as presented this morning and the landowner proposal as presented this morning, which is test #15 presented in August and now includes a description of the anadromous floor.

Nelson said he would like to see the analysis done for all four of the proposals. He said he would not feel comfortable making a decision until the costs, benefits, and accuracy are assessed and what each proposal is going to do for fish has been determined.

MOTION: Tom Nelson moved the Forest Practices Board direct staff to work with the current fish habitat technical group to analyze the following alternatives for costs, benefits and accuracy, in order to move forward toward implementation of a permanent F/N break fish rule:

- 1. No action existing rule language;
- 2. UCUT Proposal as amended during board discussion at 2/14/2018 meeting;
- 3. Western Tribes Proposal as presented at 2/14/2018 meeting; and
- 4. Landowner's Proposal, as presented at 2/14/2018 meeting; (test #15 from the science team's recommendations plus their description of an anadromous layer, eastern and western Washington.)

SECONDED: Noel Willet

Board Discussion:

Bernath clarified that the fish habitat technical group would not be doing the economic analysis.

Nelson said that he understood, but he did not want to leave the technical group out of the process because they are the folks who will have to be implementing this on the ground.

Bernath suggested that the motion be divided into two motions: a motion that lists the alternative PHB proposals that the Board wants to move forward, and a second motion that directs staff how they will analyze the rule proposal. He said that he wanted to keep the two pieces separate.

Nelson asked for clarification regarding what Bernath proposed.

Bernath explained that the motion would include the various PHBs the Board wants staff to consider in drafting the rule, technical guidance, cost benefit analysis (CBA), small business economic impact statement (SBEIS) and State Environmental Policy Act (SEPA) analysis.

Nelson said that is not what he proposed. He said that he did not want staff to choose which PHB and come up with something else. He said he wanted something that was tied back to the science

6 panel's report.

Bernath agreed with Nelson's intent. He said that he was not suggesting staff come up with their own PHB option. He clarified that a motion would include # 2, 3 and 4 of Nelson's motion to be moved forward as alternatives, and include a no-action alternative.

Board Member Paula Swedeen attempted to clarify by stating the language in the first part of the motion be about the way staff would analyze the proposals be about the 'what,' not the 'who' is going to be doing the analysis. A second motion would entail how staff will do the analysis.

Nelson said that is how he had worded it at first, but staff had changed it. He offered to take out the first line which directed staff to work with the current fish habitat technical group to analyze alternatives, and make that a second motion; followed by directing staff to work with the fish habitat technical group. He said if the first part included the evaluation of costs for PHB alternatives, he would be fine with that.

Bernath asked Board staff to use Nelson's motion as a working copy to amend during the Board discussion of potential changes.

Nelson stated the draft motion did not include the elements he suggested, which were: benefit, costs and accuracy.

Bernath asked if Nelson would agree to the analysis process being bifurcated into a second motion.

Nelson said he was working to formulate a one-step motion.

Bernath suggested they first decide which PHBs they want staff to analyze and then direct staff what to do with those proposals.

Board Member Tom Laurie asked for clarification on whether this motion would automatically move it into a cost benefit analysis.

Bernath and staff agreed.

 Nelson said his original motion was to assess costs, benefits and accuracy. If that wording were incorporated into the draft staff motion displayed on the screen, he would be comfortable with that idea. He reiterated that the inclusion of the terms costs, benefits and accuracy are very important to him.

Bernath said the second motion he would like to put forward is directing staff to develop the rule, guidance, SBEIS, etc. as required by the APA. He said he has concerns with the term accuracy.

Nelson said the intent of the motion was to include accuracy since he is not qualified or knowledgeable enough to eliminate one or another proposal at this point.

Swedeen confirmed Nelson's intent was to include all the alternatives and analyses and then to direct staff to do all the analyses that are required in the APA.

Nelson agreed.

Bernath asked staff to separate the PHB alternatives being analyzed from the motion directing staff to do the work. He suggested wording for the second part of the motion to include a concept for directing staff to incorporate the above PHB options into rule language, guidance and required economic and environmental analyses to accompany the draft water typing rule.

Nelson said he worded his motion the way he did because he was not satisfied with the product the Board got back from the science panel. He acknowledged the panel's hard work, but he did not feel they did what the Board asked them to do. He therefore wanted more information on the potential accuracy to implement these options. He said the accuracy to implement is just as important as the other analyses.

Bernath said he had concerns with assessing accuracy. He suggested that any accuracy understanding will be as accurate as the methodology one applies. He said if the Board was attempting a model, accuracy would be important, but what they are trying to do is approximate fish habitat likely to be used by fish.

Nelson said that he had originally intended to add the assessment of the feasibility to implement each option, but had removed that phrase to shorten his motion. He understands the small landowner's need to have a PHB methodology that is easy to implement. He would like a report back regarding either the accuracy or ease of implementation.

Bernath concurred with Nelson's idea and said that wording could be added to the motion that directs staff, in conjunction with stakeholders, to bring back a report on trying out each of the PHB proposals.

Nelson said okay.

Bernath asked if the mover and seconder would be okay separating the tasks in the motion.

Nelson suggested adding the idea that staff will work with both the fish habitat technical group and stakeholders for assessing the ability to implement each PHB option.

Several Board Members offered slight editing clarifications to the motion to improve the understanding of it.

Bernath acknowledged that there were now three possible motions. He asked if the mover of the motion and seconder are still okay with the motion as amended.

Nelson and Board Member Noel Willet concurred with the motion as amended.

 Davis said he is struggling with understanding the slight nuances with each proposal. He felt there was agreement around certain elements of these options. He believes there was agreement with the anadromous floor, but understands the slight difference with the eastside version. He pointed out the consensus with the 3-foot vertical drop and consensus on the 5% inflection on the westside of the state. He suggested the Board bring forward elements containing consensus and have the fish technical group test the alternatives and report their findings in June and the pieces lacking clarity could be part of the validation study. He again questioned the idea of assessing several PHB options when there were similarities within each one.

Phil Ferester, Senior Council, mentioned that if the Board's goal were to move forward with a CR-102 in June, the Board would need to have rule language. The rule language is the foundation upon which to do some of these analyses.

Nelson acknowledged the validity in Davis' suggestion, but still feels uncomfortable with eliminating some of the options even though consensus is found within parts of the options.

Board Member Dave Herrera voiced his support for Davis' suggestion and believes the Board could get closer to arriving at fewer options. He said he is concerned that there are some questions that will not be answered once the analyses are completed given the short period of time the Board is considering. He questioned the ability of staff to provide accurate economic assessments by the May or June meeting. He suggested the Board try to reach agreement today and find a path that is less onerous than what is currently being proposed.

Bernath said the Board needs to make a decision for PHBs today, whether it is one or many. He said staff needs to know what to do starting tomorrow and asking a stakeholder group to continue to arrive at consensus is unlikely.

Herrera responded by saying he believes the Board could come up with a short list of PHBs to put forward as one proposal to analyze. He felt the Board could do that today.

Swedeen offered her understanding of the cost benefit analysis as it relates to the proposals. She acknowledged the requirements in law and the importance the assessment will be for making a decision. She said it is easier to measure costs as a proposal is implemented on the ground, but there is more uncertainty regarding the way the PHBs will be used within the FHAM to protect fish. She is concerned that there may be similarity in the results of the cost benefit analysis. She suggested the benefits would be less clear because the Board does not have the information yet. Additional analysis will provide potential costs, but it will be guesswork to provide benefits to fish. She felt the Board is not in a position to make an accurate decision on costs without having analysis on benefits as well.

1 Nelson agreed that less than stellar information will be provided on the benefits of fish, but felt the

2 Board would have something to compare between the two. The potential cost impact is significant.

3 He is concerned that the options the Board is considering will create a second round of road

4 maintenance and repair planning scenarios. The cost assessment may show that many of the 5

streams already assessed may now need to be upgraded and have crossings that require a bridge.

He agreed that the costs may be more accurate and benefits less so, but feels all proposals should go forward so the Board can make an informed decision. He would have liked to see more alternatives brought forward.

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Board Member Bob Guenther acknowledged the hard work done within the last few months and did not want to waste the effort with technicalities. He felt the motion is inclusive of many factions. This motion moves the Board forward and will provide new information in May. He said he is in favor of the motion.

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Willet wanted to address Swedeen's comments. He said this rule making involves more than just trees on the ground. The economic impacts transfer to jobs and families. He said the uncertainty remains for fish habitat accuracy too and may remain so indefinitely. He said he does not support every element found in the PHB options, but believes having the options allow folks to analyze this more completely.

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Davis believes his pathway forward is in the same spirit of what he just heard. He questioned the feasibility of an analysis of 5% inflection when he heard folks say they could live with that. He is concerned with an anadromous floor reaching below 7% when there is a salmon and steelhead crisis in the state. He further questions the need to analyze the difference between 2-feet and .7 or .8 ratio. He said he understands the economic concerns mentioned by several Board Members, especially the potential impact to small forest landowners. The pathway he proposed would find common ground within the PHB options and perform the analysis only on the differences. Davies supports this idea. She said teasing out consensus would be a lot less work for staff and a sensible path forward.

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Nelson did not think there was much consensus as suggested by Davis and believes more information is needed before any combining could occur. He acknowledge that some folks may understand the science behind fish habitat, but does not feel he is qualified to do so until he gets more information.

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Davis said nothing is black and white in regards to fish science and suggested one could spend a trillion dollars on the science and the decision would end up right back at this table with this complicated conversation. He referred to the landowner proposal and questioned the feasibility to analyze an anadromous zone with a 2 to 10% floor. The answer will not be close to perfect until the validation monitoring comes forward to test these PHBs. He said he does not want to kick the can down the road. He felt there is enough information now to make a decision and move forward with PHB options plus the validation study.

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Davis said that over lunch, attempts were made to find commonality among PHB proposals and simplify the analysis, but he found it difficult to determine where the proposals could be combined.

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Nelson said his attempt was not to make the motion easier to analyze, but to make it inclusive so the Board could make an informed decision.

Davis said the anadromous floor is very important to WDFW and since wild salmon populations are still suffering, they support having a floor concept evaluated. He said he understands the problem with breaking up proposals to construct just one. He reminded the Board that rules for forest practices are also applied by local governments for land use decisions; therefore, the anadromous floor is vital.

Swedeen reminded the Board that the benefits to fish are just as important as the associated costs. Her experience shows that folks tend to make biased decisions toward things that are easier to quantify. She suggested that even though the benefits to fish will be difficult to quantify because of uncertainty, the Board should remember the importance of fish habitat and the importance of fish to the tribes. She concluded by saying she supports the motion on the table.

Davies asked if the Board is considering three separate motions or just one motion.

Bernath said the mover of the motion and the seconder has concurred to all three parts as displayed, but the Board can consider it as one motion. If there are any amendments to any of the three parts the Board needs to finalize that before a vote.

Davies said she supports making them separate motions. She believes Ray Entz made an amendment to the original UCUT proposal and wanted to ensure the Board included that amendment.

Davies said she wanted the motion to be clear regarding the group focused on assisting with the analysis. She wanted the motion to be inclusive and flexible to include others.

Bernath suggested adding 'and other stakeholders' to the motion.

Nelson said he was fine with the amendment that as long as the group has familiarity with the process. He wanted the implementation folks to have adequate knowledge.

Bernath attempted to read the different PHB proposals for consideration. He used a PHB table to compare each PHB alternative. He began with the westside Tribal proposal:

- westside of the state only
- 10% floor for the anadromous zone
- Change in 5% for stream gradient metric
- 2-foot bankfull width for width metric
 - 3-foot vertical obstacle
 - 30% gradient and elevation change greater than 2-feet upstream of bankfull width

Bernath asked Herrera if he had a copy of the PHB table to confirm the westside tribal proposal.

Nelson said his original motion included the draft PHBs as presented by the westside tribe this morning. He questioned why Bernath was referring to a matrix.

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- Bernath acknowledged that the proposals contained a lot more information that what is in the table, but that he was attempting to capture just the PHBs.
- 6 Herrera said he believed the PHB elements themselves are correct.

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- Bernath read the industrial landowner's proposal:
- Applies to both westside and eastside of the state
- 10 (Test # 15) width ratio of .8, not .7
 - 3-foot vertical obstacle
 - 20% gradient on non-vertical, which is based on the science panel's recommendations

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Bernath acknowledged that the landowner proposal included a westside anadromous fish floor and asked Nelson if they had arrived at a percentage for the anadromous floor.

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- Nelson said he was not sure about the .7 ratio versus .8 ratio. He said he had proposed what
- 18 Terwilleger had presented this morning, but did not remember which one that was.

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Bernath said he was simply reading from the motion the landowners had proposed, which was test 15, being 5% gradient and .8 width.

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- Bernath continued with the industrial landowner's proposal:
 - Obstacles as presented by the science panel

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Bernath asked Nelson if the landowner PHB proposal could be modified to include a percentage for the anadromous fish floor, rather than a range.

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Nelson said he would like to see a variety analyzed and questioned why staff could not analyze more than one metric. He said although 10% is being analyzed, it is not quite the same.

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Davies confirmed the westside tribal proposal vertical obstacle should be scaled to the bankfull width.

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35 Bernath concurred.

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- 37 Bernath read the UCUT proposal:
- Applies statewide
 - Change in 10% for stream gradient
 - 2-foot bankfull width for width metric

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Bernath asked Entz if the obstacle metric is slightly different from what the scientific panel put forth. Entz confirmed that it is not.

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- 45 Bernath continued with the UCUT proposal:
 - 10% anadromous fish floor

Nelson clarified that the .7 ratio came from option #7 from the initial report and was switched to .8 for option #15 in the second report. To be consistent with what the science team did, he said it is test #15, which is .8. For the anadromous fish floor, he asked the Board to use 5, 7, and 10 percent.

Board Member Lisa Janicki said she supports the three parts of the singular motion. She understood that the concept of ID teams would remain in place, but wanted to hear from the technical group regarding the specific situations where an ID team meeting might be convened.

Bernath said that ID teams are not convened on every water type proposal. He assumed it would be the exception to the rule – when concurrence cannot be reached and folks needed to meet on site to determine the appropriate spot.

Bernath, referring to the UCUT proposal, asked if Entz had a clarification to provide.

Entz clarified that the obstacle criteria was different from that recommended in the science report.

The UCUT obstacle criteria was included in the UCUT letter.

Bernath asked Entz to explain what the UCUT letter proposed.

Entz said he wished to amend what the letter stated and to go with what the science panel's report recommended.

Swedeen pointed out that the landowner proposal now contained three sets of criteria for the anadromous fish zone -5, 7 and 10%, and that the original proposal had the technical group getting together and doing some analyses and providing the summary to DNR. She wanted to clarify that instead, staff will be doing all these analyses. She wanted to be clear that the three options for the anadromous fish zone are being forwarded to staff for analysis.

 She acknowledged that the Board is not simply doing an economic analysis, but also an environmental analysis. She mentioned that in some fishery biologist's opinion, the lower end of the anadromous fish floor, for example 5%, might have more impact on fish than an anadromous fish floor of 10%. She wanted the Board to recognize that they will need to consider the environmental impacts these analyses may bring forward as well as the economic analysis.

Nelson suggested the analysis would show a negative benefit.

 Bernath reminded the Board that the responsible official will have three choices, a determination of non-significance for any option moving forward and the preliminary determination will happen at the June meeting. The other two choices are the mitigated determination of significance or a determination of significance which would require an environmental impact statement (EIS) of some kind. He suggested that if an EIS is determined to be required, the Board might want to consider which PHB option to put forward in the CR-102.

Davis asked for clarification regarding the analysis DNR staff will be conducting and how coordination with other stakeholders would occur.

Swedeen clarified that the coordination with a stakeholder group is just for the implementation portion of the three options, not on the analysis.

Davis asked how DNR would conduct the analysis on the anadromous zone when there are other resources with expertise informing on that subject matter.

Bernath said that DNR staff would have the pen moving forward. He said staff would work with stakeholders to prepare draft rule and guidance and work with other resources within the Department of Natural Resources (DNR) to conduct the economic analysis. There is every reason to assume they will reach out to others in this effort, including to WDFW or tribal staff. He suggested adding "direct staff in consultation with stakeholders to incorporate the options" to the second part of the motion.

Bernath asked if the motion mover and the seconder are in agreement with the amendment.

Nelson said that his original motion had the fish habitat technical group involved in more processes than just reporting on the implementation. He figured the technical group might also be involved in the rule process.

Bernath said staff has already reached out to the TFW Policy Committee (Policy) leads to inform on which technical individual they want to be involved in the stakeholder process.

Nelson said he wished to include the fish habitat technical group in the second part of the motion.

Swedeen said she was uncomfortable calling out the fish habitat technical group specifically as an entity and feels they would be given too much importance of weight in the decision. She said she was comfortable with the motion assuming the concept that DNR would reach out to technical expertise they deem necessary for the analysis rather than having the group constructed in any other way.

Nelson agreed, but wanted to ensure that the folks having specific expertise on the ground would be utilized for this process. If the intent of the motion is to have DNR reach out to others, then Nelson said he is in agreement with the motion.

Marc Engel, DNR, provided a description of the stakeholder outreach process. He said that staff works with the Policy leads to provide the names of technical staff they want involved in the process.

Davies noted a discrepancy with the UCUT proposal. She said the second bullet point is actually a little bit different from the panel's recommendation.

Entz clarified that UCUT will be dropping their suggestion and going with the science panel's recommendation.

Bernath asked if Board members had any other clarifying questions on the motion. There were none. Bernath asked Nelson to read his amended motion.

 MOTION: Tom Nelson moved the Forest Practices Board accept the following PHB options to be included in the draft rule proposal and accompanying analyses:

- 1. No action existing rule language;
- 2. UCUT Proposal as amended during board discussion at 2/14/2018 meeting;
- 3. Western Tribes Proposal as presented at 2/14/2018 meeting; and
- 4. Landowner's Proposal, <u>as amended</u> during board discussion at 2/14/2018 meeting; (test #15 from the science team's recommendations plus their description of an anadromous layer, eastern and western Washington.)

He moved the Forest Practices Board direct staff in consultation with stakeholders to incorporate the above PHB options into rule language, guidance and required analyses (CBA, SBEIS and SEPA) to accompany the draft water typing system rule.

He also moved to direct staff to work with fish habitat technical group and other stakeholders to report back at the June meeting on the ability to implement each approved PHB option.

SECONDED: Noel Willet

Board Discussion:

Swedeen noted the modifications made to both the UCUT and landowner's proposals as originally presented. She suggested slight wording to reflect the changes.

Nelson concurred with Swedeen's suggestion. He said the two changes to the landowner proposal involved using .8 from test #15 rather than .7 from the original report, and then test 5, 7 and 10% for the anadromous floor.

The final set of PHB alternatives accepted by the Board for analysis through the motion are summarized as follows:

Source	PHB Gradient/Width Combination Included in Scientific Panel Report?	PHB Stream Gradient Factor	PHB Stream Width Factor	PHB Natural Obstacle Factor	Anadromous Floor Presumption
WFPA	Yes; option 15 from 2 nd Science Panel Report	Change of 5% (both E & W WA)	0.8 ratio (2 nd Science Report Option 15)	≥ 3' non- deformable vertical; or ≥ 20% gradient and elevation change ≥ upstream bankfull width	Supports concept. Study options of 5%, 7% and 10% gradients to be used as the floor

Source	PHB Gradient/Width Combination Included in Scientific Panel Report?	PHB Stream Gradient Factor	PHB Stream Width Factor	PHB Natural Obstacle Factor	Anadromous Floor Presumption
Westside Tribes (NWIFC)	No; this is a hybrid approach of possible PHBs in 2 nd Science Panel Rept. (Defer to E WA tribes for E WA PHBs)	Change of 5% (W WA only)	≤2' bankfull width	≥ 3' non- deformable vertical or ≥ 1 bankfull width; or ≥ 30% gradient and elevation change ≥ 2x upstream bankfull width	Yes; all waters <10% gradient presumed to be fish habitat.
UCUT Kalispel Tribe	Yes; Option 4; top option for east (defer to W WA tribes for W WA PHBs)	Change of ≥ 10% (E WA only)	≤ 2' bankfull width	"Follow the Science Panel" ≥ 3' non-deformable vertical; or ≥ 20% gradient and elevation change ≥ upstream bankfull width	Yes; all waters <10% gradient presumed to be fish habitat.

Bernath asked staff to replace "as presented" with "as amended" to the UCUT and landowner proposal segments in the motion.

ACTION: Motion passed unanimously.

NEW BUSINESS

Bernath wanted to address some of the points he heard expressed during yesterday's public testimony regarding starting the economic analysis from last fish. He said that is not how we do business today. He said he would ask staff to base the economic analysis starting from "fish plus" and compare changes from F/N breaks determined using fish plus to those determined by applying each of the PHB options.

Nelson said he is not sure that is what the Board just voted on. He said that the motion referred to existing rule.

Davis said his interpretation of the language "no action" refers to the existing practice under the interim rule.

1 Nelson pointed out that the motion does say existing rule and suggested the Board conduct a new vote. Nelson questioned the ability to quantify fish plus. He asked if it would be wherever folks 2 3 put the habitat now.

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Bernath replied that it would be based on how F/N breaks were determined in current practice.

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Nelson acknowledged that it might be the only option since the end of fish is not known in many cases.

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Bernath said the science panel was very clear on how laterals should be treated. He said he would ask staff to move forward with the analysis consistent with the science panel's recommendation. Assuming a lateral stream is accessible from the main stem, the bottom end of the lateral would be the starting point for beginning the stream assessment when looking for end of fish habitat. He mentioned this to avoid any conflict regarding that practice when the results come back to the

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15 Board in June.

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Nelson agreed as long as that practice is consistent with the proposals.

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Bernath said it was consistent with the recommendations from the science panel and how they conducted their analysis.

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Davies asked the Board to clarify the mandate or direction for the fish habitat technical group in the third portion of the previous water typing motion. She felt the Board should provide structure for that group (i.e., who is on the group, who do they report to).

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Bernath confirmed that the motion directs staff to work with the technical group and other stakeholders. He said Board staff would be in charge. He asked Marc Engel to respond to Davies' concern.

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Engel said group members have not been identified at this point. He confirmed that staff would work through Policy leads and reach out to the group for testing the various field methodologies. He said that staff will reach out to stakeholders wanting to be involved.

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PUBLIC COMMENT (PM)

Ray Entz, Kalispel Tribe and Upper Columbia United Tribes, reminded the Board of their request to have the Board direct the AMPA to hire an eastside CMER scientist. He said they believe the decision to fill the position should be the Board and not remanded back to Policy to decide.

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39 Ken Miller, WFFA, said he was encouraged by the last Forests and Fish Policy Template Sub-Committee meeting as individual perceptions were shared of the legislative intent of various 40 RCW/WAC deference to small forest landowners. He said without knowing how folks interpret 41 42 legislation it is hard to have meaningful collaboration. He said he hopes after next week's meeting 43 the differences on at least the four major site-specific prescriptions will be narrowed down.

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ELECTRONIC SIGNATURE RULE MAKING

Marc Ratcliff, DNR, requested the Board adopt the rule adding the option to use electronic formats when submitting forest practices applications. He said the forest practices program is currently working on a business system that would allow applicants to submit FPAs and payments electronically.

He said one comment was received suggesting that the authority, or allowance for electronic payments be specifically mentioned in the rule. He said that the Department has always held that the phrase 'notifications and applications' implies the physical application as well as the required fee, so no need for the insertion in rule. Also, the FPA instructions will provide the necessary information for submitting an FPA and fees electronically.

 MOTION: Carmen Smith moved the Forest Practices Board adopt the rule proposal amending WACs 222-20-010 and 222-20-030 providing the option to utilize electronic signature and payments when submitting Forest Practices Applications to the department. She further moved the Board direct staff to file a CR-103 Rule Making Order with the Office of the Code Reviser.

SECONDED: Bob Guenther

Board Discussion:

None.

ACTION: Motion passed unanimously. (Tom Nelson not available for vote.)

PUBLIC RECORDS FEE SCHEDULE RULE MAKING

Marc Ratcliff, DNR, requested the Board adopt the rules specifying the fee structure the Board will use when charging for public records requests. He said the fee schedule outlined in the Public Records Act is the most cost-effective approach, and allows the public to clearly see the amounts the Board might charge for a request.

Carmen Smith moved the Forest Practices Board adopt the rule proposal amending chapter 222-08 WAC which implements House Bill 1595 by identifying the fee structure the department will use when collecting fees for public record requests. She further moved the Board direct staff to file a CR-103 Rule Making Order with the Office of the Code Reviser.

SECONDED: Lisa Janicki

Board Discussion:

MOTION:

41 None.

43 ACTION: Motion passed unanimously. (Tom Nelson not available for vote.)

BOARD COMMITTEE UPDATE ON EFFICIENCY AND EFFECTIVENESS

IMPROVEMENTS FOR THE ADAPTIVE MANAGEMENT PROGRAM

- 3 Board Member Lisa Janicki, Committee Chair noted the selection of Connie Lewis from the
- 4 Meridian Institute as their facilitator. She briefly discussed Lewis's resume and strengths. She said
- 5 she is hopeful this will bring back trust to the process.

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She said the priority will be to have caucus leads identify the person who they want interviewed by Lewis. Lewis will begin by interviewing each caucuses' chosen representative.

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Ferester reminded the Board that if more than the subcommittee were to attend those meetings, it would engage the open public meeting requirements.

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UPDATE FROM TFW POLICY SUBGROUP ON PI FOR WESTERN WASHINGTON LOW-IMPACT TEMPLATE PROPOSAL

Hans Berge, AMPA, provided a brief update on the work involved to evaluate the small forest landowner riparian template proposal. He noted the subgroup is in the science track to create the technical piece of the small landowner riparian template. Once this is completed, the policy track will commence.

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He said although the previous contractor was let go in November, the subgroup meetings have been productive. The group was able to go with the runner up contractor when the original contract was out for bid. He said the group is on track to report at the August Board meeting.

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UPDATE ON REQUESTED TEMPLATE REVIEW FROM THE BOARD

Marc Engel, DNR, provided an update on the group's review of past alternative plan templates and methodologies and Policy's feedback to the subgroup's ongoing work. He said Policy began discussing the Board's motion reviewing past low impact templates. He said Policy discussed what constitutes a low impact template and will be attempting to interpret the intent of the term in statute. He said a meeting is scheduled to review the two templates. Once all steps are complete, a recommendation will go to Policy.

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Guenther encouraged Board Members to visit Ken Miller's property in order to visualize the concept these templates are attempting to achieve. He said it is helpful to see how this is applied on the ground.

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2018 WORK PLAN REVIEW

Marc Engel, DNR, highlighted the changes to the work plan as a result of todays' meeting. The changes include moving Section 23 (Part 1) from August to November, moving Part 2 to November, moving the CR-102 from May to June 27 and moving the CR-103 from August to November.

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- 42 MOTION: Tom Laurie moved the Forest Practices Board approve the 2018 Proposed Work
- Plan as amended.

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45 SECONDED: Carmen Smith

- 1 ACTION: Motion passed unanimously. (Tom Nelson not available for vote.)
- 1 ACTION: Motion passed up 2 3 Meeting adjourned at 3:10 p.m.