STATE OF WASHINGTON
FOREST PRACTICES BOARD
PO Box 47012
Olympia, WA 98504-7012

Regular Board Meeting – May 9, 2018

Natural Resources Building, Room 172, Olympia

Please note: All times are estimates to assist in scheduling and may be changed subject to the business of the day and at the Chair's discretion. The meeting will be recorded.

AGENDA

9:00 a.m.	**Welcome and Introductions** Safety Briefing – Patricia Anderson, Department of Natural Resources (DNR)
9:10 a.m. – 9:30 a.m.	**Report from Chair**
9:30 a.m. – 9:45 a.m.	**Public Comment** – This time is for public comment on general Board topics.
9:45 a.m. – 9:55 a.m.	**Approval of Minutes** *Action: Approval of February 13 & 14, 2018, meeting minutes.*
9:55 a.m. – 10:10 a.m.	**Water Typing System Rule Making & Guidance Update and Recommendations –** Marc Engel, DNR *Action: Consider timeline recommendations*
10:10 a.m. – 10:25 a.m.	**Public Comment on the Water Typing System Recommendations**
10:25 a.m. – 10:45 a.m.	**Water Typing System Recommendations** – Marc Engel, DNR *Action: Consider changing rule packet timeline*
10:45 a.m. – 11:00 a.m.	**Break**
11:00 a.m. – 11:20 a.m.	**Potential Habitat Break Validation Study –** Howard Haemmerle and Phil Roni
11:20 a.m. – 11:35 a.m.	**Public Comment on the Potential Habitat Break Validation Study**
11:35 a.m. – 12:00 p.m.	**Potential Habitat Break Validation Study including first year Pilot study** – Howard Haemmerle and Phil Roni *Action: Consider approval of study design including a Pilot study to be completed in summer of 2018 and allocation of funding*
12:00 p.m. – 1:00 p.m.	**Lunch**
1:00 p.m. – 1:15 p.m.	**Public Comment** – This time is for public comment on general Board topics for those not able to make it in the morning.
1:15 p.m. – 1:35 p.m.	**2017-2019 CMER Master Project Schedule and Proposed Budget for 17-19 Biennium** – Howard Haemmerle and Angela Johnson, AMP staff
1:35 p.m. – 1:45 p.m.	**Public Comment on 2017-2019 CMER Master Project Schedule & Budget**
1:45 p.m. – 2:00 p.m.	**2017-2019 CMER Master Project Schedule and Budget** – Howard Haemmerle and Angela Johnson, AMP staff *Action: Consider approval of CMER Master Project Schedule & Budget.*
1:45 p.m. – 2:05 p.m.	**Board Subcommittee Update on Efficiency and Effectiveness Improvements for the Adaptive Management Program** – Lisa Janicki, Board Committee Chair and Connie Lewis, Facilitator

Future FPB Meetings

Next Meeting: August 8, November 14, 2018
Special Meeting: June 28, 2018
Check the FPB Web site for latest information: http://www.dnr.wa.gov/
E-Mail Address: forest.practicesboard@dnr.wa.gov
Contact: Patricia Anderson at 360.902.1413

2:05 p.m. – 2:20 p.m.	**Break**
2:20 p.m. – 2:40 p.m.	**Safe Harbor Agreement Update** – Lauren Burnes, DNR
2:40 p.m. – 2:55 p.m.	**Staff Reports** A. **Adaptive Management Update** – Howard Haemmerle, AMP B. **Compliance Monitoring –** Garren Andrews, DNR C. **Small Forest Landowner Office Update** -Tami Miketa, DNR D. **TFW Policy Committee Update** – Scott Swanson, TFW Policy Committee Co-Chair E. **Upland Wildlife Update –** Gary Bell, Washington Department of Fish and Wildlife **Annual Reports** A. **Western Gray Squirrel Annual Report** – Brandon Austin, DNR and Gary Bell, WDFW
2:55 p.m. – 3:10 p.m.	**2018 Work Plan Review -** Marc Engel, DNR *Action: Consider any changes.*
	Executive Session To discuss anticipated litigation, pending litigation, or any other matter suitable for Executive Session under RCW 42.30.11.

FOREST PRACTICES BOARD
Special Board Meeting – February 13, 2018
Natural Resources Building, Room 172, Olympia, WA

Members Present
Stephen Bernath, Chair, Department of Natural Resources
Bob Guenther, General Public Member/Small Forest Landowner
Brent Davies, General Public Member
Carmen Smith, General Public Member/Independent Logging Contractor
Dave Herrera, General Public Member
Heather Ballash, Designee for Director, Department of Commerce
Jeff Davis, Designee for Director, Department of Fish and Wildlife
Lisa Janicki, Elected County Official
Noel Willet, Timber Products Union Representative
Patrick Capper, Designee for Director, Department of Agriculture (9 a.m. – 12 p.m.)
Paula Swedeen, General Public Member
Tom Laurie, Designee for Director, Department of Ecology
Tom Nelson, General Public Member

Staff
Joe Shramek, Forest Practices Division Manager
Marc Engel, Forest Practices Assistant Division Manager
Patricia Anderson, Rules Coordinator
Phil Ferester, Senior Counsel

WELCOME AND INTRODUCTIONS
Chair Stephen Bernath called the Forest Practices Board (Board) meeting to order at 9:00 a.m.

Bernath stated the first day of the meeting would be a workshop to hear from the Science Panel regarding their potential habitat break recommendations. The Board would then hear how the scientific panel followed the Board's directions from the August 2017 meeting. Any action by the Board would occur at tomorrow's meeting

POTENTIAL HABITAT BREAK RECOMMENDATION FROM THE SCIENCE/TECHNICAL EXPERTS
Hans Berge, Adaptive Management Program Administrator (AMPA), and Phil Roni, Science Panel member, presented a summary of the panel's work, analyses and development process for the final recommendation criteria to determine potential habitat barriers (PHB). The presentation outlined the panel's recommendations resulting from the analysis of additional water type modification form (WTMF) data gathered from several Washington State ecoregions. Berge reiterated that a PHB is not necessarily the Type F/N break, but rather the first point of potential unfavorable habitat and the starting point for a protocol survey.

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

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

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

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.

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.

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.

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.

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.

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.

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

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.

Berge said he understands how the end of fish data points are necessary for the cost benefit 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 not a fatal flaw in determining the necessary PHB parameters.

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.

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.

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.

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

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 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 benefit analysis and small business economic impact statement and draft concise explanatory statement would be presented at the November meeting.

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.

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

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.

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.

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

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. He outlined the objectives of the new study design and the 2014 program's re-designed procedures, which involved increased statistical precision, quantitative estimates of compliance, a 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 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 Practices Applications (FPA) showed 11 waters under classified, 10 waters over classified and six waters as being indeterminate. The 2014-2015 results for various rule sets are as follows:

- 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, 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.

STAFF REPORTS

TFW Policy Committee Priorities

Davies asked what the status is on hiring a CMER scientist for the eastside of the state. Berge 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.

Northern Spotted Owl Implementation Team and Safe Harbor Agreement

Bernath commented that there has not been much movement on the safe harbor agreement. However, internal review has been on-going for how to best operationalize it and move forward.

No questions occurred on the following reports.

- Adaptive Management Update
- Board Manual Update
- Clean Water Act Assurances
- Compliance Monitoring
- Rule Making Activity
- Small Forest Landowner Office Update
- Upland Wildlife Update

EXECUTIVE SESSION

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

Meeting adjourned at 5:25p.m.

FOREST PRACTICES BOARD
Regular Board Meeting – February 14, 2018
Natural Resources Building, Room 172, Olympia, WA

Members Present
Stephen Bernath, Chair, Department of Natural Resources
Bob Guenther, General Public Member/Small Forest Landowner
Brent Davies, General Public Member
Carmen Smith, General Public Member/Independent Logging Contractor
Dave Herrera, General Public Member
Heather Ballash, Designee for Director, Department of Commerce
Jeff Davis, Designee for Director, Department of Fish and Wildlife
Lisa Janicki, Elected County Official
Noel Willet, Timber Products Union Representative
Patrick Capper, Designee for Director, Department of Agriculture
Paula Swedeen, General Public Member
Tom Laurie, Designee for Director, Department of Ecology
Tom Nelson, General Public Member

Staff
Joe Shramek, Forest Practices Division Manager
Marc Engel, Forest Practices Assistant Division Manager
Patricia Anderson, Rules Coordinator
Phil Ferester, Senior Counsel

WELCOME AND INTRODUCTIONS
Chair Stephen Bernath called the Forest Practices Board (Board) meeting to order at 9:00 a.m. Introductions of Board and staff were made.

REPORT FROM CHAIR
Bernath reported on the following:

- Cultural Resources – A meeting was held with principals on February 7, 2018 regarding the staff work done within the last year. Possible proposals include funding for tribal participation, small forest landowner assistance, assessing the possibility of adding cultural resources into the Forestry Riparian Easement Program and cultural resources training.
- The agency requested legislation regarding pre-application review for unstable slopes, and 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 engineer staff.
- A Capital budget was passed. Allocations include $5 million for the Family Forest Fish Passage Program, $3.5 million for the Forestry Riparian Easement Program and $1 million for the Rivers and Habitat Open Space Program.

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

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 regulator 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 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-option 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.

Nelson agreed that less than stellar information will be provided on the benefits of fish, but felt the Board would have something to compare between the two. The potential cost impact is significant. He is concerned that the options the Board is considering will create a second round of road maintenance and repair planning scenarios. The cost assessment may show that many of the

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.

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.

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.

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.

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.

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.

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.

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.

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.

Herrera said he believed the PHB elements themselves are correct.

Bernath read the industrial landowner's proposal:

- Applies to both westside and eastside of the state
- (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

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.

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

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

Bernath continued with the industrial landowner's proposal:

- Obstacles as presented by the science panel

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

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.

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

Bernath concurred.

Bernath read the UCUT proposal:

- Applies statewide
- Change in 10% for stream gradient
- 2-foot bankfull width for width metric

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

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, as amended 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 2nd Science Panel Report	Change of 5% (both E & W WA)	0.8 ratio (2nd 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 2nd 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.

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 put the habitat now.

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

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

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 Board in June.

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

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

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).

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.

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.

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.

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 RCW/WAC deference to small forest landowners. He said without knowing how folks interpret legislation it is hard to have meaningful collaboration. He said he hopes after next week's meeting the differences on at least the four major site-specific prescriptions will be narrowed down.

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.

MOTION: 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:
None.

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

BOARD COMMITTEE UPDATE ON EFFICIENCY AND EFFECTIVENESS IMPROVEMENTS FOR THE ADAPTIVE MANAGEMENT PROGRAM

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

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.

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

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.

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.

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.

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.

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.

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

SECONDED: Carmen Smith

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

Meeting adjourned at 3:10 p.m.

DEPARTMENT OF
NATURAL RESOURCES

FOREST PRACTICES DIVISION
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MEMORANDUM

April 25, 2018

TO: Forest Practices Board

FROM: Hans Berge, Adaptive Management Program Administrator

SUBJECT: 17/19 Biennial Budget

Attached is the TFW Policy recommended budget adjustments for the 17/19 biennium. You will notice the proposed budget follows the format of the Master Project Schedule and is organized by categories for your benefit. Additionally, I've included columns highlighted the biennial budget you approved in May 2017 (blue fill), the budget proposed by consensus by TFW Policy on 5 April 2018 (tangerine fill), and a third set of columns showing the difference between the two (green fill). The years outside of the 17/19 biennium are colored in gray and will be discussed at your August 2018 meeting. There are a few specific items that I would like to bring to your attention below.

Administration and Program Staff

There are two vacancies in our CMER science staff that are vacant and result in savings to the program. The proposed budget seeks to leave those positions unfilled for this biennium. Additionally, this proposed budget seeks to add an eastern Washington science staff position to support work at SAGE (Scientific Advisory Group Eastern). This assumes a person could start in December 2018.

Board Directed Projects

Water typing and the facilitation contract for the caucus principal's meeting have been added to the budget. The PHB validation study item includes a pilot to be conducted this summer ($128k) along with a full sampling of sites during the protocol survey window in 2019 ($598k). You will hear more on the status of the facilitator contract work at the meeting.

Active Research Projects

Several important projects in this category are making progress. During this biennium, both the Type N Hard Rock and Soft Rock extended studies (lines 28-33) will be completed. The original study is currently being considered at TFW Policy. One change to the budget is the removal of a riparian literature synthesis from the budget (line 25). Originally, this project was tied to the WFFA Proposal Initiation for a Westside template, but has since been separated from this process by incorporation of that work into a technical assessment (line 22).

Projects in Study Design and Moving to Implementation

The items in this section of the budget have made significant progress during fiscal year 2018. We are moving forward with the ENREP (Eastside Type N Riparian Effectiveness Project), the Type F Riparian Prescription Monitoring Project, and the Road Prescripation-Scale Effectiveness Project. Each of these projects are large and will be the focus of the program for the next 5 years. In addition, we have two major projects that we are hoping to start I the next biennium, the Forested Wetlands Effectiveness and the Unstable Slopes Criteria Evaluation and Development studies.

Projects Starting Study Design or Scoping

One major change in this category was a proposal that CMER made to refocus the eDNA literature synthesis into a study done in partnership with a larger study being conducted by the USDA Forest Service with the Oregon State Department of Forestry to investigate the use of eDNA sampling methodologies around detection of the uppermost fish in water typing. This project will complement the eDNA component in the PHB validation study.

Project funding outside of 19/21 BN

Policy is currently discussing several different proposals around funding outside of the current biennium. Given limited funding, those discussions largely focus upon extending sampling versus conducting new effectiveness studies. More discussion during the next few months will need to focus on extended monitoring for Type N Hard Rock/Soft Rock, initiating new amphibian work, and Clean Water Act Milestones (Roads Sub-basin Resample, Cumulative Effects, and Amphibians in intermittent streams).

Summary

In summary, the updated and revised proposed budget seeks to spend all of the research funds during the biennium. With the assumptions of revenue and expenses in the attached Master Project Schedule, the expected balance at the end of the 17/19 biennium is $11.

If you have any questions, please feel free to contact me at 360.902.1909, or hans.berge@dnr.wa.gov.

HB

Master Project Schedule and Budget for the Adaptive Management Program
Proposed Adjustment to 17/19 Biennium
Approved by the FPB 10 May 2017; Approval by Policy 5 April 2018 and going to Board for May meeting

NEW PROJECTS ARE IN RED FONT	***Approved by Board May 17***		**Adjustments by Policy April 2018**		**Differences**											
	FY 2018 Approved	***FY 2019 Approved***	**FY2018 Adjusted**	**FY2019 Adjusted**	**FY2018**	**FY2019**	**FY2020**	**FY2021**	**FY2022**	**FY2023**	**FY2024**	**FY2025**	**FY2026**	**FY2027**	**FY2028**	**FY2029**	**FY2030**
Administration and Program Staff																	
Program Administration (AMPA and Contract Specialist)	*267,000*	*267,000*	***267,000***	***267,000***	*0*	*0*	267,000	267,000	267,000	267,000	267,000	267,000	267,000	267,000	267,000	267,000	267,000
Project Support (Project Managers)	*346,500*	*346,500*	***346,500***	***346,500***	*0*	*0*	346,500	346,500	346,500	346,500	346,500	346,500	346,500	346,500	346,500	346,500	346,500
CMER Scientists (3 Scientists at NWIFC; 2 unfilled vacancies)	*766,533*	*832,625*	***566,533***	***547,625***	*200,000*	*285,000*	547,625	547,625	547,625	547,625	547,625	547,625	547,625	547,625	547,625	547,625	547,625
CMER Science Staff located Eastside (starting date of December 2018)	***0***	***0***	***0***	***70,000***	*0*	*(70,000)*	135,000										
Independent Scientific Peer-Review	*75,000*	*75,000*	***75,000***	***60,000***	*0*	*15,000*	65,000										
TFW Policy Committee facilitation	*75,000*	*75,000*	***75,000***	***75,000***	*0*	*0*	70,000										
TFW Policy/Board Technical Work	*75,000*	*75,000*	***125,000***	***0***	*(50,000)*	*75,000*	0										
CMER Conference (Facility, refreshments, programs)		*10,000*	***10,000***	***0***	*(10,000)*	*10,000*	10,000		10,000		10,000		10,000		10,000		10,000
Contingency Fund for Active Projects	*75,000*	*75,000*	***0***	***8,000***	*75,000*	*67,000*	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Statistician (on-call contract)	***0***	***0***	***0***	***0***	*0*	*0*											
Technical Editor (on-call contract)	*25,000*	*25,000*	***10,000***	***15,000***	*15,000*	*10,000*		15,000	15,000		15,000	15,000		15,000	15,000		15,000
Board Directed Projects (A)																	
LiDAR Based Water Typing Model/Physicals Study Design (combined)	*100,000*	*0*	***60,000***	***116,202***	*40,000*	*(116,202)*											
Potential Habitat Break Validation/Evaluation Study (Pilot and 1st Year of Sampling)	*0*	*0*	***0***	***726,489***	*0*	*(726,489)*	852,172	665,872	494,580	93,424							
WFFA Template PI Technical Assessment	*50,000*	*0*	***52,000***	***12,000***	*(2,000)*	*(12,000)*											
Facilitator for AMP improvement (Principal's meeting)			***100,000***	***50,000***	*(100,000)*	*(50,000)*											
Active Research Projects (B)																	
Riparian Literature Synthesis Project		*0*	***20,000***	***0***	*(20,000)*	*0*											
WetSAG_Wetlands Mapping Tool Validation	*100,000*	*0*	***25,000***	***75,000***	*75,000*	*(75,000)*											
RSAG_Extensive Riparian Status and Trends Monitoring- Vegetation, Type F/N- Westside (Remote Sensing)	*25,000*	*10,000*	***25,000***	***10,000***	*0*	*0*	50,000										
CWA_LWAG_Type N Experimental Buffer Treatment in Hard Rock Lithologies--Genetics (Response to ISPR Comments)	*19,000*	*0*	***10,000***	***0***	*9,000*	*0*											
CWA_Type N Experimental Buffer Treatment Project - Soft Rock Lithologies 1) Monitoring ends in fall 2017, 2-yr post-harvest	*221,000*	*100,000*	***221,000***	***100,000***	*0*	*0*											
Add-ons to Existing Projects (C)					*0*	*0*											
CWA_LWAG_Type N Experimental Buffer Treatment in Hard Rock Lithologies--Extended (Analysis & Summary Report)	*207,000*	*119,000*	***134,000***	***236,000***	*73,000*	*(117,000)*											
CWA_Type N Experimental Buffer Treatment Project in Hard Rock Lithologies -1) Monitoring ends June 2017, Report extended data	*100,000*	*50,000*	***100,000***	***136,655***	*0*	*(86,655)*											
CWA_Type N Experimental Buffer Treatment Project in Hard Rock Lithologies - 2) Monitor into 2019 until references lost	*87,000*	*126,000*	***87,000***	***0***	*0*	*126,000*											
Projects in Study Design and Moving to Implementation (D)																	
CWA_TWIG_Eastside Type N Riparian Effectiveness (ENREP)	*250,000*	*600,000*	***297,680***	***793,886***	*(47,680)*	*(193,886)*	648,811	667,394	686,719	626,609	366,695	152,267					
TWIG_Westside Type F Riparian Prescription Monitoring	*50,000*	*100,000*	***0***	***147,100***	*50,000*	*(47,100)*	131,750	0	5,000	5,000	100,000	360,000	360,000	250,000	40,000		
CWA_TWIG_Road Prescription-Scale Effectiveness Monitoring	*480,000*	*420,000*	***277,267***	***538,752***	*202,733*	*(118,752)*	374,500	330,500	403,000	400,500	406,000	291,000	212,000				
CWA_TWIG_Unstable Slopes Criteria Evaluation and Development	*50,000*	*150,000*	***25,000***	***50,000***	*25,000*	*100,000*	132,000	0	250,000	240,000							
CWA_TWIG_Forested Wetlands Effectiveness Study	*100,000*	*200,000*	***100,000***	***75,000***	*0*	*125,000*	200,000	300,000	150,000	150,000	150,000	200,000	200,000	200,000	40,000		
UPSAG_ Deep Seated Research Strategy	*10,000*	*125,000*	***10,000***	***0***	*0*	*125,000*	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
CWA_WetSAG_Wetlands Management Zone Effectiveness Monitoring	*0*	*50,000*	***0***	***0***	*0*	*50,000*		50,000	100,000		360,000	360,000	360,000	360,000			
Projects starting study design or Scoping (E)																	
CWA_UPSAG_Mass Wasting Landscape-Scale Effectiveness - Proof of concept	*80,000*	*0*	***0***	***25,000***	*80,000*	*(25,000)*											
RSAG_Riparian Characteristics and Shade Study	*5,000*	*0*	***0***	***3,000***	*5,000*	*(3,000)*	3,000	3,000	99,250	94,250	48,000						
ISAG_Literature Synthesis: Default Physical Criteria Assessment Project	*0*	*30,000*	***0***	***0***	*0*	*30,000*											
ISAG_Fish/Habitat Detection Using eDNA Project (rescoped to pilot project)	*40,000*	*20,000*	***40,000***	***20,000***	*0*	*0*											
SAGE_ETHEP	*0*	*0*	***0***	***0***	*0*	*0*	20,000	20,000									
AMP Research Expenses	*3,679,033*	*3,881,125*	***3,058,980***	***4,504,209***	*620,053*	*(623,084)*	***4,153,358***	***3,512,891***	***3,674,674***	***3,070,908***	***2,916,820***	***2,839,392***	***2,603,125***	***2,286,125***	***1,566,125***	***1,461,125***	***1,486,125***
Projected Available Funds for Research	*3,781,600*	*3,781,600*	***3,781,600***	***3,781,600***	*0*	*0*	***3,781,600***	***3,781,600***	***3,781,600***	***3,781,600***	***(1,525,400)***	***(1,525,400)***	***(1,525,400)***	***(1,525,400)***	***(1,525,400)***	***(1,525,400)***	***(1,525,400)***
Difference	*102,567*	*(99,525)*	***722,620***	***(722,609)***	*(620,053)*	*623,084*	***(371,758)***	***268,709***	***106,926***	***710,692***	***(4,442,220)***	***(4,364,792)***	***(4,128,525)***	***(3,811,525)***	***(3,091,525)***	***(2,986,525)***	***(3,011,525)***
REVENUE																	
GF-S - AMP Carry Forward	*240,100*	*240,100*	***240,100***	***240,100***			***240,100***	***240,100***	***240,100***	***240,100***	***240,100***	***240,100***	***240,100***	***240,100***	***240,100***	***240,100***	***240,100***
Fund Shift #1 - $557,000 per FY	*557,000*	*557,000*	***557,000***	***557,000***			***557,000***	***557,000***	***557,000***	***557,000***							
Fund Shift #2- $750,000 per FY	*750,000*	*750,000*	***750,000***	***750,000***			***750,000***	***750,000***	***750,000***	***750,000***							
GF-S - AMP Research	*1,640,000*	*1,640,000*	***1,640,000***	***1,640,000***			***1,640,000***	***1,640,000***	***1,640,000***	***1,640,000***	***1,640,000***	***1,640,000***	***1,640,000***	***1,640,000***	***1,640,000***	***1,640,000***	***1,640,000***
FFSA - AMP (Business and Occupation Tax surcharge)	*4,000,000*	*4,000,000*	***4,000,000***	***4,000,000***			***4,000,000***	***4,000,000***	***4,000,000***	***4,000,000***							
Subtotal of Revenue	*7,187,100*	*7,187,100*	***7,187,100***	***7,187,100***			***7,187,100***	***7,187,100***	***7,187,100***	***7,187,100***	***1,880,100***	***1,880,100***	***1,880,100***	***1,880,100***	***1,880,100***	***1,880,100***	***1,880,100***
EXPENSES																	
TFW Participation Agreements																	
Tribal Participation Agreements	*2,500,000*	*2,500,000*	***2,500,000***	***2,500,000***			***2,500,000***	***2,500,000***	***2,500,000***	***2,500,000***	***2,500,000***	***2,500,000***	***2,500,000***	***2,500,000***	***2,500,000***	***2,500,000***	***2,500,000***
NGO and County Participation Grants	*475,500*	*475,500*	***475,500***	***475,500***			***475,500***	***475,500***	***475,500***	***475,500***	***475,500***	***475,500***	***475,500***	***475,500***	***475,500***	***475,500***	***475,500***
State Agencies	*430,000*	*430,000*	***430,000***	***430,000***			***430,000***	***430,000***	***430,000***	***430,000***	***430,000***	***430,000***	***430,000***	***430,000***	***430,000***	***430,000***	***430,000***
Subtotal of TFW Participation Agreements	*3,405,500*	*3,405,500*	***3,405,500***	***3,405,500***			***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***
PROGRAM TOTALS																	
Revenue (referenced by line 66)	*7,187,100*	*7,187,100*	***7,187,100***	***7,187,100***			***7,187,100***	***7,187,100***	***7,187,100***	***7,187,100***	***1,880,100***	***1,880,100***	***1,880,100***	***1,880,100***	***1,880,100***	***1,880,100***	***1,880,100***
AMP Research Expenses (referenced by line 56)	*3,679,033*	*3,881,125*	***3,058,980***	***4,504,209***			***4,153,358***	***3,512,891***	***3,674,674***	***3,070,908***	***2,916,820***	***2,839,392***	***2,603,125***	***2,286,125***	***1,566,125***	***1,461,125***	***1,486,125***
TFW Participation Agreements (referenced by line 62)	*3,405,500*	*3,405,500*	***3,405,500***	***3,405,500***			***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***	***3,405,500***
Balance at the end of each fiscal year	*102,567*	*(99,525)*	***722,620***	***(722,609)***			***(371,758)***	***268,709***	***106,926***	***710,692***	***(4,442,220)***	***(4,364,792)***	***(4,128,525)***	***(3,811,525)***	***(3,091,525)***	***(2,986,525)***	***(3,011,525)***
Cumulative Balance at end of Biennium		*3,042*		***11***				*(103,049)*		***817,618***		*(8,807,012)*		*(7,940,050)*		*(6,078,050)*	

***Policy is still considering projects seeking funds outside of this biennium**
***Fiscal years beyond 2023 do not include funding a fund shift (no more money) or B&O tax ($8M per biennium)**

DEPARTMENT OF
NATURAL RESOURCES

FOREST PRACTICES DIVISION
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MEMORANDUM

April 25, 2018

TO: Forest Practices Board

FROM: Hans Berge, Adaptive Management Program Administrator

SUBJECT: Adaptive Management Program Staff Report

This memo highlights work completed and progress made in the Adaptive Management Program since the February 2018 Forest Practices Board Meeting. The areas of emphasis for this quarter include water typing and the small forest landowner template evaluation. A separate memo addresses the update of the 17/19 biennial budget and a presentation will be delivered at your 9 May 2018 meeting on the facilitation work related to the meeting of the TFW principal's.

Water Typing

As directed by the Board, I have been working with a team to develop a study design to validate potential habitat breaks (PHBs) used in the fish habitat assessment methodology (FHAM). To date, the study design is in Independent Scientific Peer Review (ISPR). Additionally, I reached out to technical representatives from caucuses to provide comments on the proposed study design. Both the ISPR comments and stakeholder comments will be integrated into the study design, where appropriate. The team will prepare a response matrix for comments that are not accepted/incorporated into the study design. At the time of preparation of this memo, I am uncertain if the ISPR process will be completed in time for the Board meeting on 9 May 2018.

One important component of the study design is to complete a pilot project to test the protocols (methodologies) to ensure that the study is as efficient as possible in providing appropriate data to validate the Board's identified PHB(s). The data collected this summer will be summarized in a report to the Board at your November 2018 meeting. The cost for conducting the pilot phase of the study is $128k.

Ongoing work to develop a study design to evaluate default physicals and the use of a model to define fish habitat is continuing. The expectation is to have a presentation of a peer reviewed study design to the Board in May 2019.

Small Forested Land Owner Template

We have a contract in place for a technical evaluation of supporting science around the WFFA proposed westside template submitted to the Board as a Proposal Initiation in February 2015. Results of this work are expected to be delivered to the committee in June 2018, and a recommendation integrating the science and policy tracks from TFW Policy is likely to be presented to the Board in February 2019.

CMER Science Conference

This is a reminder that the CMER Science Conference will be held in the Office Building 2 auditorium on 8 May 2018 from 9 until 4:30. Topics of the confernence include unstable slopes, remote sensing of riparian vegetation, hardwood conversion, amphibian genetics, riparian functions and temperature in Type N basins in hard rock lithology.

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MEMORANDUM

TO: Forest Practices Board

FROM: Garren Andrews, Compliance Monitoring Program Manager

SUBJECT: Current status of the Compliance Monitoring Program

2018 Compliance Monitoring standard sample field data collection commenced March 2018.

2016/17 Compliance Monitoring biennial report writing ongoing. Report expected to be completed Summer 2018.

If you have any questions please contact me at (360) 902-1366 or garren.andrews@dnr.wa.gov

GA/

DEPARTMENT OF NATURAL RESOURCES

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April 2, 2018

TO: Forest Practices Board

FROM: Tami Miketa, Manager, Small Forest Landowner Office – Forest Practices

SUBJECT: Small Forest Landowner Office and Advisory Committee

Small Forest Landowner Office Advisory Committee
Since my last report, the Small Forest Landowner Office Advisory Committee held a meeting on March 21, 2018. Discussions focused on the following topics:

- Update on the Forestry Riparian Easement Program and the Rivers and Habitat Open Space Program
- Discussion on the revised FPA/N Appendix A and new Water Type Modification Form
- Discussions on FPA/N Appendices
- Overview of upcoming WFFA Annual Meeting in May 2018
- Update of SFLOAC Action Plan

Status of the Forestry Riparian Easement Program (FREP), Family Forest Fish Passage Program (FFFPP), and Rivers and Habitat Open Space Program (RHOSP)
On January 19, 2018 the Capital Budget was finally approved. In February the SFLO was able to bring back the Conservation Easement Program Manager, Dan Pomerenk, to begin the FREP/RHOSP easement acquisition process. Unfortunately, all support staff for the conservation easements were not available to return to their positions. Consequently, the SFLO is in the process of recruiting and hiring the FREP/RHOSP Easement Coordinator and the two FREP Foresters. It is the intention to have all staff on board by June 1, 2018.

In the FY17-19 Biennium, with the $3.5 million allotted, it is estimated the Forestry Riparian Easement Program will purchase 39 easements. With the $5 million allotted, it is estimated the Family Forest Fish Passage Program will correct a total of 38 fish barriers. With the $1 million allotted, it is estimated the Rivers and Habitat Open Space Program will purchase two easements, one in a channel migration zone, and one in critical habitat for state threatened or endangered species.

Long Term Applications (LTA)
There are now a total of 249 approved long term applications, which is an increase of 2 approved applications since the end of the last reporting period (01/10/2018).

LTA Applications	LTA Phase 1	LTA Phase 2	TOTAL
Under Review	7	2	**9**
Approved	2	249	**251**
TOTAL	**9**	**251**	**260**

Upcoming Landowner Events

Invasive Weed Control Field Practicum
Kent, WA
Saturday, June 2, 2018

Invasive Weed Control Field Practicum
Mount Vernon, WA
Saturday, September 15, 2018

Forest Owners Field Days-
Forest Owners Field Day (Eastside) – Spokane (details coming)
Saturday, June 23, 2018

Forest Owners Field Day (Westside) – Woodland (details coming)
Saturday, August 18, 2018

For more information regarding these events go to
http://forestry.wsu.edu/

Forest Stewardship Coached Planning –
WSU's flagship class teaches landowners how to assess their trees, avoid insect and disease problems, attract wildlife, and take practical steps to keep their forest on track to provide enjoyment and even income for years to come. In this class landowners will develop their own Forest Stewardship Plan, which brings state recognition as a Stewardship Forest and eligibility for cost-share assistance, and may also qualify them for significant property tax reductions. For more information on these courses go to http://forestry.wsu.edu/

The following are scheduled Forest Stewardship Coached Planning courses:

Forest Stewardship Coached Planning – Aberdeen
Mondays starting April 23 through June 18, 2018

Forest Stewardship Coached Planning – Preston
Wednesdays starting September 5 through October 24, 2018

Forest Stewardship Coached Planning – Arlington
Tuesdays starting September 18 through November 6, 2018

Please contact me at (360) 902-1415 or tamara.miketa@dnr.wa.gov if you have questions.
TM/

WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

Washington Department of FISH and WILDLIFE

April 18, 2018

MEMORANDUM

TO: Forest Practices Board

FROM: Brandon Austin, Forest Practices Region Support Manager, Washington State Department of Natural Resources

Gary Bell, Forest Habitats Wildlife Biologist, Washington State Department of Fish and Wildlife

SUBJECT: 2017 Annual Report on the Board's Voluntary Cooperative Protection Approach for Western Gray Squirrel (WGS)

On November 12, 2013, the Board directed the Washington Department of Natural Resources (DNR) and Washington Department of Fish and Wildlife (WDFW) to annually report on the status Forest Practice Applications (FPAs) that may need WGS management plans and the success of the voluntary protection approach. DNR and WDFW will present this report at the May 9, 2018 board meeting.

This report is the fourth annual report to the board and covers the period from January 1, 2017 through December 31, 2017. It includes the results of WDFW's tracking data for FPAs and voluntary management plans, which help with evaluation of how well the voluntary protection approach for WGS is working. The report also includes WDFW's current and planned surveys for information on the distribution and habitat status of the squirrel, other forest landowner efforts to help in conservation of the WGS, and protection by counties.

We look forward to discussing the 2017 report with you at your May 2017 meeting. In the meantime, please do not hesitate to contact us: brandon.austin@dnr.wa.gov or 360-902-1635; gary.bell@wdfw.wa.gov or 360-902-2412.

Attachment

Cc: Joseph Shramek, Marc Engel, Donelle Mahan, Marc Ratcliff
Terra Rentz, Chris Conklin, Hannah Anderson

2017 Annual Report to the Forest Practices Board

The Status of a Voluntary Protection Approach for the Western Gray Squirrel
May 9, 2018

SPECIES BACKGROUND

The western gray squirrel (WGS) was listed as State Threatened by the Washington Fish and Wildlife Commission effective November 14, 1993.

In Washington State, the species occurs in three localized areas: the oak woodlands and conifer forests of Klickitat and southern Yakima counties; low to mid-elevation conifer forests in Okanogan and Chelan counties; and the oak woodlands and conifer forests on Joint Base Lewis-McChord in Pierce and Thurston counties.

The WGS inhabits transitional forests of mature Oregon white oak, ponderosa pine, Douglas-fir, and various riparian tree species (Linders and Stinson 2007). Habitat quality in Washington is assumed to be relatively poor compared to other parts of the species' range due to the lower number of oak species and degradation of pine and oak habitats. The cumulative effects of land conversion, logging, sheep grazing, and fire suppression largely eliminated the open-grown stands of mature and old growth pine and have degraded oak woodlands (Linders and Stinson 2007). The most recent population estimate for Washington was based on data gathered over thirteen years ago (1994 to 2005 by Linders and Stinson, 2007). At that time the population was estimated to be between 468 and 1,405 squirrels. Population size can fluctuate dramatically with disease and changes in food supply and is extremely difficult to assess range wide. Thus, WDFW is conducting surveys to assess occupancy within available habitat in core areas and habitat status for the WGS.

HISTORY OF FOREST PRACTICES BOARD ACTIONS

In 2013 staff from the Department of Natural Resources (DNR) and Washington Department of Fish and Wildlife (WDFW) collaborated on administrative and operational improvements to provide WGS protection measures as part of approved Forest Practice Applications (FPA). DNR staff incorporated these improvements into FPA processing which has since been applied to all FPAs potentially containing WGS or their habitat. Key components of this guidance include:

- DNR notes the presence of WGS or their habitat on the DNR *Office Checklist* page which becomes part of the FPA.
- DNR provides WDFW a courtesy email that an FPA has triggered a "hit" for potential WGS presence within the vicinity of the FPA. This provides notification on all new FPAs sent out for review to DNR forest practices foresters, WDFW biologists, and interested stakeholders that WGS or their habitat may be present within the proposed forest practices activity area.
- DNR includes a "note" on the FPA *Notice of Decision* page acknowledging the presence of WGS or their habitat in the harvest vicinity, and refers them to WDFW staff for assistance. Though this note is not a condition of the application, it is expected to inform the FPA proponent of the potential occurrence of WGS or their habitat and to provide WDFW contact information, further improving communications and increasing the likelihood of voluntary WGS protection.

On November 12, 2013, the Board directed DNR and WDFW to annually report on the number of FPAs that might need WGS management plans and the effectiveness of the voluntary protection approach. At the May 2017 Board meeting, DNR and WDFW staff presented the 2016 WGS Annual Report. WDFW also presented their Periodic Status Review for WGS, which recommended retaining the squirrel's state threatened status in Washington. This 2017 report marks the fourth annual report to the Board.

2017 FOREST PRACTICES APPLICATIONS/NOTIFICATIONS (FPA/NS)

Revised in November 2013, the screening process continues for FPA/Ns with the potential to affect WGS. Using WDFW's GIS data for documented WGS presence, nests, and/or potentially suitable habitat, WDFW and DNR both screen FPA/Ns for potential WGS impacts. DNR also notifies WDFW of all FPA/Ns within ¼-mile of these locations via email. WDFW then further evaluates the FPA/Ns for potential WGS conflicts, working with the landowner/land manager to conduct WGS nest surveys (as needed), discussing forest management goals and options, and developing voluntary WGS management plans. These management plans incorporate conservation measures identified in WDFW's *Priority Habitats and Species (PHS) Management Recommendations for WGS* (August 2010).

WDFW continues tracking FPA/N information for potential impacts to WGS. Information collected includes FPA/N number, date of posting in the Forest Practice Application Review System (FPARS), applicant name, whether they are a large or small landowner, if a WGS nest survey was needed or completed, if a WGS Management Plan was necessary or developed, and any additional pertinent information.

The following provides a summary of FPA/Ns that triggered a WGS "hit" from January 1, 2017 through December 31, 2017:

- A total of 87 FPA/Ns were identified as potentially being associated with WGS.
- Of these 87 WGS-related FPA/Ns, 80 FPA/Ns were located in Klickitat County, 4 in Skamania County, 1 in Yakima County, 1 in Clark County, and 1 in Kittitas County.
- Of the total 87 FPA/Ns, 31 were associated with large/industrial landowners, and 56 were associated with small forest landowners.

WESTERN GRAY SQUIRREL SITE MANAGEMENT PLANS

Throughout 2017, WDFW continued its WGS conservation efforts with landowners, conducting WGS nest surveys and coordinating with landowners to develop and implement voluntary WGS management plans. The large, industrial timber management companies implement voluntary WGS conservation on their lands by following guidance in WDFW's *Management Recommendations for Washington's Priority Habitats and Species for Western Gray Squirrel* (2010). They typically incorporate WGS surveys and habitat retention strategies into their timber harvest planning and layout. Due to the large volume of FPAs they may file each year, WGS nest surveys are not conducted and WGS management plans are not written for every FPA by WDFW staff. Rather, WDFW relies on each company to conduct surveys and incorporate management strategies into harvest plans. WDFW also keeps track of the number of industrial landowner FPAs that occur within the range of WGS.

WDFW staff spend a majority of time working with small forest landowners, conducting WGS nest surveys and developing WGS conservation strategies with the landowners when WGS presence is confirmed within the area of interest. The goal is to develop voluntary management plans that meet the landowner's needs while also providing protection for WGS and their habitat, which can be challenging depending on the type of harvest, the intended post-harvest stand conditions (thinning versus a clear-cut), and/or the economic interests of the landowner.

The following is a summary of management plan development and/or implementation activity for the time period of January 1 through December 31, 2017.

Of the total 87 WGS-related FPA/Ns:

- All 87 FPA/Ns involved the need for additional review, including such tasks as confirming WGS presence or absence, conducting a WGS nest survey, and/or confirming appropriate WGS protection measures to be implemented during forest practice activities:
    - 49 FPA/Ns resulted in no WGS nests and no need for WGS management plans.
    - 38 FPA/Ns required development and/or implementation of WGS management plans:
        - 20 FPA/Ns were associated with small landowners.
        - 18 FPA/Ns were associated with large or industrial landowners.
        - Of the 38 WGS management plans, 32 FPA/Ns (87%) incorporated adequate WGS conservation strategies. 5 FPA/Ns (13%) included less than ideal WGS protection measures (e.g. leaving nest trees only, etc.), and property access was denied on 1 FPA/N.
        - The 5 FPA/Ns with inadequate protection were associated with two small forest landowners who filed more than one FPA for various lands they own in Klickitat County.

- For the remaining FPA/N (1), permission to access a small forest landowner site in Clark County was denied so there was no way to determine if WGS were present and/or adequately protected.

Due to continued staffing and resource limitations, WDFW has not been able to conduct landowner compliance with WGS management plans and/or effectiveness monitoring for the current PHS recommendations. Ideally, increased capacity would provide an opportunity to re-visit FPA sites post-harvest for effectiveness monitoring. Ultimately, knowing more about how the PHS management recommendations may be influencing continued WGS occupancy of sites after harvests are completed would allow WDFW to enhance its adaptive management approach for WGS conservation.

2017 WDFW Surveys and Conservation Efforts

WDFW continued work on a state-wide survey effort for western gray squirrels with the goal of estimating the extent of suitable habitat occupied by the species within each of the 3 known extant populations: Puget trough, North Cascades, and South Cascades. Previous efforts in 2015/16 failed due to low detection rates in areas known to be occupied. In 2017 we ran pilot surveys in all 3 population areas using revised methods designed to increase the detection rates of squirrels where they are present. The new methods proved very successful with detection rates >90%, achieved primarily by employing a greater number of detection devices (hair tubes) at each survey point. New protocols based on the 2017 work will be employed in 2018 and 2019 with the goal of sampling the 3 known extant populations and estimating the percent of habitat occupied.

WDFW began a project aimed at assessing the change in extent of western gray squirrel habitat from 1993 (year the species was listed as state-threatened) to the present (2017). The assessment will focus on lands comprising the North and South Cascades populations; areas where extensive forestlands have changed as the result of wildfire and timber extraction. Preliminary work accomplished in 2017 included: defining discrete focus areas for the assessment, compilation and assessment of all existing land cover layers, and development of an approach to use orthophotographs to aid in detecting habitat change. Analysis of habitat change will be accomplished in 2018 and 2019.

WDFW continued to work with Joint Base Lewis-McChord to conserve western gray squirrel habitat on the base. We consulted with their forestry and wildlife staff when timber harvests were planned in areas occupied by WGS, helping them accommodate for WGS habitat in their prescriptions.

Other Landowner Conservation Efforts

In 2015, WDFW had initiated discussions with SDS Lumber Company about development of a landscape-level management approach for some SDS ownership in the Klickitat region. The goal of this landscape plan would be to formally incorporate WDFW's *Priority Habitats and Species Management Recommendations for Western Gray Squirrel (August 2010)* into a Habitat Management Plan (HMP) for SDS lands. WDFW staffing changes, combined with other competing priorities for both SDS and WDFW, have delayed progress on the effort but

both parties remain committed to the existing WGS conservation strategies while anticipating continued development of a landscape-level HMP as time and resources allow.

Back in 2010, Hancock Forest Management (HFM) had begun research pertaining to WGS in Klickitat County. Objectives of the research included: (1) developing a detection probability model for nests as related to WGS surveys, (2) quantifying the relationship between nest counts and squirrel abundance, and (3) evaluating the efficacy of using GPS telemetry to quantify squirrel use in response to forest management. Unfortunately, the lead researcher left HFM and efforts to finalize the analysis and summarize the trapping mark/recapture data were never completed.

PROTECTION BY COUNTIES

Washington's Growth Management Act (chapter 36.70A RCW) requires that local jurisdictions protect critical areas, including fish and wildlife habitat conservation areas. Regulations (WAC 365-190-130(4)(a)) specify that counties should identify and classify habitat for federal and state listed and sensitive species and should utilize WDFW's Priority Habitats and Species (PHS) database when doing so. The PHS database contains GIS location data for Western Gray Squirrels and is routinely requested by counties to support their land use planning. This is the same data that WDFW staff use to screen FPA/Ns, as well as other proposals going through the State Environmental Policy Act (SEPA) process, for potential project impacts to WGS.

SUMMARY

All proposed forest practice activities identified as potentially having an impact to WGS were screened by WDFW and DNR. WDFW staff conducted nest surveys and worked with landowners having WGS nests present within their harvest units to consider the WGS PHS management recommendations, and develop and/or implement voluntary conservation measures for WGS.

Back in January of 2016, WDFW completed a formal periodic status review (PSR) of the species. Because of the species' relatively small total population size, continuing threats, and a lack of information suggesting that any of the three populations have either reached the down-listing goals of the recovery plan or substantially declined since 2005, the Washington State Fish and Wildlife Commission took action that the WGS remain a state threatened species in the state of Washington.

On-going surveys by WDFW are intended to provide information to better clarify current WGS distribution, occupancy of available habitat in core areas, and further assess the status of the species and their habitat for the next scheduled periodic status review in 2021. These surveys, combined with continued tracking of FPAs and management plans, will allow WDFW and DNR to monitor and evaluate the effectiveness of the voluntary protection approach. All information will be used to provide recommendations, as needed, on any possible changes or improvements to the forest practices protection strategies for WGS.

State of Washington
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May 9, 2018

M E M O R A N D U M

To: **Forest Practices Board**

From: **Gary Bell, Wildlife Biologist, Forest Habitats Section**

Subject: **Upland Wildlife Update**

The following provides a brief status update for ongoing or pending actions pertaining to priority wildlife species in forested habitats:

Marbled Murrelet
1992: Federally listed as Threatened
1993: State listed as Threatened
1996: Federal critical habitat designated by USFWS
1997: FPB enacted State Forest Practices Rules
2017: State up-listed to Endangered

The up-listing of the marbled murrelet from state threatened to endangered became effective on February 4, 2017. With an observed 4.4% annual population decline since 2001 the status of the marbled murrelet in Washington has worsened since state listing in 1993. Without strategies to address threats to the species it is likely the marbled murrelet could become functionally extirpated in Washington within the next several decades. WDNR, in consultation with WDFW, recommended that the Forest Practices Board (Board) support WDFW's initiation of a marbled murrelet rule assessment involving a diverse group of stakeholders, which was planned to be convened in early 2018. Due to some staffing changes, initiation of the assessment has been delayed, but plans are to convene the group in mid-2018. The group will evaluate rule effectiveness in protecting murrelet habitat, identify weaknesses in rule language and/or on-the-ground implementation, consider potential habitat conservation incentives, and strive to bring consensus recommendations to the Board.

WDFW continues working with partners to conduct at-sea monitoring surveys and pursuing other critical research regarding sea diet. USFWS and WDFW are also revisiting the Federal Recovery Plan and considering possible recovery actions for protection of the Murrelet.

Canada Lynx
1993: State listed as Threatened
1994: FPB enacted voluntary management approach
2000: Federally listed as Threatened
2017: State up-listed to Endangered

The up-listing of the lynx from state threatened to endangered became effective on February 4, 2017.

Current information indicates that the distribution of lynx in Washington has contracted significantly from its historic range and the only remaining resident lynx population is in Okanogan County. Ongoing threats to lynx include loss and fragmentation of habitat, small population size, and the potential effects of climate change. Most habitat changes have been due to large wildfires within the last 12 years. Current estimates of lynx population size suggest it may include approximately 54 individuals. There are no indications that the conservation status of Washington's lynx population has improved since it was state and federally listed.

As a result of the up-listing, WDFW recommended to WDNR (and subsequently, WDNR to the Board) that no action be taken at this time to add Canada Lynx to the forest practices rule designation for critical habitats (state). It was also recommended that the voluntary protection approach for lynx be continued, and that WDFW would continue collaboration with landowners to evaluate and refine existing and former lynx habitat management plans (State DNR lands and private industrial lands). This evaluation process will also explore alternatives to the habitat management plans framework that may provide enhanced opportunities for lynx conservation. WDFW is also working with academic partners, Canadian federal and provincial entities, USFWS, conservation organizations, and tribes, to define recovery actions that can be implemented in the near term to benefit lynx.

Northern Spotted Owl
1988: State listed as Endangered
1990: Federally listed as Threatened
1996: FPB enacted State Forest Practices Rules
2012: USFWS designation of revised critical habitat
2016: State retention of Endangered status

At its February 2016 meeting the Washington Fish and Wildlife Commission voted to retain the Northern Spotted Owl as endangered in the state of Washington. The species' population has continued to decline, primarily from ongoing habitat loss from timber harvest and wildfires, as well as competitive interactions with Barred Owls. The Northern Spotted Owl Implementation Team (NSOIT) continues working towards developing a Safe Harbor Agreement (SHA) for forest landowners to provide federal assurances while protecting existing habitat and recruiting new habitat. The group is also exploring other opportunities for landowner incentives.

Fisher
1998: State listed as endangered
2016: Federal status: Final decision for west coast DPS - not warranted for listing (April 2016).

The fisher, a member of the weasel family, continues to be re-introduced to the state after disappearing from Washington's forestlands during the last century. So far, WDFW and partners have successfully relocated a total of 159 fishers from British Columbia to the Olympic National Park and other federal lands within the southern Cascade Mountains. Sixty-nine (69) fishers have been released at Mount Rainier National Park and the Gifford Pinchot National Forest since December 2015.

Unfortunately, due to extensive wildfires in British Columbia (BC) in 2017 affecting fishers and fisher habitat in the area where WDFW has been receiving source fishers, BC made the decision that they could no longer provide animals for translocation to Washington. This resulted in a delay of reintroductions into the Cascades during winter of 2017/2018. WDFW is exploring partnership opportunities with the Calgary Zoo and Alberta Environment and Parks, Canada, to potentially receive fishers from Alberta for reintroduction into the north Cascades, ideally in the coming winter of 2018-2019.

These recovery efforts, combined with the Candidate Conservation Agreement with Assurances (CCAA) program administered by WDFW, are assisting the species return to the state. Non-federal landowners can enroll in the CCAA and receive federal regulatory assurances in the event that the fisher becomes listed under the ESA anytime in the future. By signing on to the CCAA, landowners agree to follow basic

conservation measures that protect fishers that may use habitat on their private lands. To date, 45 landowners and 2.9+ million acres of non-federal forest land are enrolled in the CCAA and additional landowners can enroll at any time.

Future Updates to the Board

The forest practices rules require that when a species is listed by the Washington Fish and Wildlife Commission and/or the U.S. Secretary of the Interior or Commerce, DNR consults with WDFW and makes a recommendation to the Forest Practices Board as to whether protection is needed under the Critical Habitat (State) rule (WAC 222-16-080). WDFW and DNR continue to coordinate in order to anticipate federal actions and/or state action in response to changes in the status of any given species.

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FOREST PRACTICES BOARD
2018 WORK PLAN

TASK	COMPLETION DATE/STATUS
Adaptive Management Program	
• Buffer/Shade Effectiveness Study (amphibian response)	May
• CMER Master Project Schedule Review*	May
• CMER Master Project Schedule Compliance Review*	August
• Hardwood Conversion Study	May
• PHB recommendation from science/technical experts	February
• TFW Policy Committee Progress Report on Unstable Slopes Recommendations from the Board approved Proposal Initiation	As needed
• Small Forest Landowner Western Washington Low Impact Template: TFW Policy Recommended Review Process & Timeline*****	November
• TFW Policy subgroup & SFL Report on template alternatives and methodologies	February
• Hard Rock Study	August
Annual Reports	
• WAC 222-08-160 Continuing review of FP rules (Annual Evaluations), *by tradition the Board has received an annual evaluation of the implementation of cultural resources protections*	August
• Clean Water Act Assurances	August
• Compliance Monitoring 2014-2015 Biennial Report (w/ISPR Review)	February
• Compliance Monitoring 2016-2017 Biennial Report	August
• Northern Spotted Owl Conservation Advisory Group	August
• Taylor's Checkerspot Butterfly Report	May
• TFW Policy Committee Priorities*	August
• Western Gray Squirrel	May
Board Manual Development	
• Section 12 Forest Chemicals	2019
• Section 23 (Part 1) Field Protocol to Locate Mapped Divisions Between Stream Types*	November
• Section 23 (Part 2) Perennial Stream Identification*	November
CMER Membership	As needed
Critical Habitat - State/federal species listings and critical habitat designations	As needed
Field Tour	October
Forest Health and Wildfire Recommendations for Process & Timing	February
Washington Geologic Survey Presentation	February
Rule Making	
• Water Typing System – CR103	November
• Water Typing System – CR102	June 27
• Electronic FPA/N, Signature and Payment	February
• Public Records Fee Schedule	February
Subcommittee Recommendations on AMP Improvements	On-going
Cultural Resources Recommendations from Facilitated Process (progress reports)	On-going

Italics = proposed changes *Updated February 2018*
**= TFW Policy Committee*

FOREST PRACTICES BOARD
2018 WORK PLAN

TASK	COMPLETION DATE/STATUS
Quarterly Reports	
• Adaptive Management Program*	Each regular meeting
• Board Manual Development	Each regular meeting
• Compliance Monitoring	Each regular meeting
• Clean Water Act Assurances	February
• Legislative Activity	February & May
• NSO Implementation Team	Each regular meeting
• Rule Making Activities	Each regular meeting
• Small Forest Landowner Advisory Committee & Office	Each regular meeting
• TFW Cultural Resources Roundtable	*To be determined*
• TFW Policy Committee Work Plan Accomplishments & Priorities*	Each regular meeting
• Upland Wildlife Working Group	Each regular meeting
Work Planning for 2019	November

Italics = proposed changes *Updated February 2018*
**= TFW Policy Committee*