

Concise Explanatory Statement
In Compliance with RCW 34.05.325(6)
Forest Practices Board

Desired Future Condition Rule Making
August 2009

REASONS FOR ADOPTING THE RULE

On August 12, 2009 the Forest Practices Board adopted an amendment to WAC 222-30-021(1)(b), the rule that consists of prescriptions and options for harvesting riparian inner zone trees on forest lands adjacent to Type S and F Waters in western Washington. Two statutes authorize this rule adoption. RCW 76.09.040 authorizes the Board to establish minimum standards for forest practices, and RCW 76.09.370 authorizes the Board to change the rules protecting aquatic resources if the changes are consistent with recommendations resulting from the scientifically-based adaptive management process.

In 2005 the adaptive management Cooperative Monitoring, Evaluation, and Research (CMER) committee completed and forwarded to the Policy committee (Policy) results of a study that evaluated the validity of the current riparian “desired future condition” performance targets for riparian stands adjacent to fish-bearing streams in western Washington. This study, entitled *Validation of the Western Washington Riparian Desired Future Condition (DFC) Performance Targets in the Washington State Forest Practices Rules with Data From Mature, Unmanaged, Conifer-Dominated Riparian Stands*, may be viewed on the CMER website at http://www.dnr.wa.gov/BusinessPermits/Topics/FPAdaptiveManagementProgram/Pages/fp_am_cmer_publications.aspx. (This study is hereinafter referred to as the “validation study.”)

On August 30, 2005, Policy petitioned the Forest Practices Board for rule making citing the validation study’s findings that:

- Basal area per acre of mature, unmanaged conifer-dominated riparian stands in western Washington are significantly different from values used in the existing rule;
- Basal area per acre of mature, unmanaged conifer-dominated riparian stands is not significantly different by site class; and
- The site class identification maps are in many cases not correct.

Policy recommended that the Board investigate the scope of potential outcomes to resolve the issues identified by the validation study. The Board filed a CR-101 in October 2005, and ultimately considered the three rule proposals described below. All three included an increase in the target basal area per acre in the stand requirement to 325 square feet regardless of site class. This is the median value of the validation study’s measured basal areas of mature, unmanaged conifer-dominated stands. Two of the proposals included additional provisions, both intended to help mitigate loss of timber revenue from increasing the target basal area to 325 square feet per acre.

Proposal 1

Increased the target basal area per acre stand requirement for all site classes to 325 sq. ft. at age 140.

Proposal 2

- Increased the target basal area per acre stand requirement for all site classes to 325 sq. ft. at age 140.
- Changed the inner zone management Option 2 “leaving trees closest to the water” to allow:
 1. The basal area per acre of the required 20 inner zone conifer leave trees (\geq 12 inches diameter at breast height) to be credited towards meeting the stand requirement; and
 2. Additional inner zone management for site classes III and IV on streams greater than 10 feet in width when the combined basal area per acre of the core and inner zones exceed the target basal area per acre of 325 sq. ft. at age 140. This additional inner zone management would not be allowed any closer than 80 feet from the stream (i.e., a 30-foot no-cut portion of the inner zone adjacent to the 50-foot no-cut core zone).

Proposal 3

- Increased the target basal area per acre stand requirement for all site classes to 325 sq. ft. at age 140.
- Changed the inner zone management Option 2 “leaving trees closest to the water” to allow the basal area per acre of the required 20 inner zone conifer leave trees (\geq 12 inches diameter at breast height) to be credited towards meeting the stand requirement.

ADOPTION DATE OF THE RULE

The Board adopted Proposal 3 on August 12, 2009.

DIFFERENCES BETWEEN PROPOSED RULE AND ADOPTED RULE

Proposal 3 was adopted as proposed.

SUMMARY OF PUBLIC COMMENT

This section contains a summary of comments the Board received via two processes: The comment period pursuant to the Administrative Procedure Act (APA) RCW 34.05.320 including hearings, and comment sessions allowed specific to this rule making during the February 11, March 31, May 20, and August 12, 2009 Board meetings. The Board received a total of 37 sets of comments from individuals and representatives of companies and other organizations during the APA comment period. A total of 21 comments were given during the meetings.

This comment summary is presented in four sections, three sections summarizing comments in support of each proposal, and one that summarizes comments not in support of any of the three proposals. Responses are given where it is appropriate to respond (in italic font). The responses indicate how the final rule reflects the Board’s consideration of the comment, or why it fails to do so.

Comments in support of adopting Proposal 1.

Comment: Proposal 1 is the only proposal supported by a scientific study conducted under the state-mandated adaptive management process.

Response: Ultimately the Board determined proposals 1 and 3 were responsive to the validation study. The adaptive management process for this rule making consisted of CMER conducting a study of mature unmanaged conifer-dominated riparian stands in western Washington, Policy recommending that the Board investigate the scope of potential outcomes to resolve the issues identified by the validation study, and the Board considering ways to respond in rule.

The Board considered three alternative ways to respond to the validation study, all of which increased the basal area targets for western Washington and also considered ways to mitigate impacts to the state's timber industry.

The Board adopted Proposal 3. The distinguishing characteristic of Proposal 3 as compared to Proposal 1 is the allowance of the growth model crediting the basal area of the 20 leave conifer trees per acre (required in the outermost portion of the inner zone under the Option 2 management option). The rationale for allowing for this basal area credit is threefold. In the validation study:

- 1) All trees in the study plots were counted to derive basal area metrics;*
- 2) Researchers did not make an adjustment to factor out the basal area of the 20 leave trees per acre;*
- 3) The retention trees provide ecological function within the riparian management zone; and*
- 4) An analysis by CMER members completed in August 2009 concluded that any potential change in riparian functions (due to this provision) would be difficult to detect. (This CMER report may be viewed at http://www.dnr.wa.gov/BusinessPermits/Topics/OtherInteragencyInformation/Pages/bc_fp_materials_20090812.aspx)*

Comment: Process is important. Proposal 1 is supported by the adaptive management science process. Proposals 2 and 3 are not.

Response: The Board agrees that process and the concept of science-based decision making is important. The adaptive management process is outlined in WAC222-12-045(2)(d). CMER develops and conduct scientific studies, Policy makes recommendations to the Board in the form of a petition based on CMER's findings, and the Board makes the final determination on changes to the rules.

The Board believes that the adaptive management process was followed for this rule making, and that Proposal 3 was a legitimate product of that process.

Comment: The DFC requirements under the Forest Practices Habitat Conservation Plan (FPHCP) specifically state that the 20 conifer leave trees per acre in the inner zone under harvest Option 2 cannot be counted towards applicable stand requirements, and therefore Proposals 2 and 3 are not consistent with the FPHCP.

The FPHCP describes the rules the Forest Practices Board adopted in 2001. The stipulation of not counting the inner zone leave trees under Option 2 was based on basal area requirements in the rules adopted in 2001 (190 to 285 square feet depending on site class). However, an integral part of the FPHCP is a formal, structured Adaptive Management Program to refine or adapt the rules as new information becomes available. The Board responded to the Adaptive Management Program's validation study by increasing the basal area requirement to 325 square feet for all site classes. The Board considered Proposal 3 to be consistent with the FPHCP.

Comment: The allowances of proposals 2 and 3 will make the attainment of “desired future conditions” less likely.

After the validation study was completed, the Board made a decision to use the median value, 325 square feet, of the study's measured basal areas as the target metric for the desired future condition of stands at age 140. The likelihood of attaining that basal area target would be the same under any of the three proposals because they all required the same basal area target for all site classes.

Comment: Proposal 1 provides the most protection and will complement the funding and efforts being spent via the Puget Sound Partnership.

The forest practices rules are designed to prevent sediment and chemical discharges to waters of the state, as well as ensure cool stream temperatures. None of the three proposals would have compromised these aspects of the rules.

Comment: Proposal 1 is a simpler amendment that will be easier to enforce.

All three proposals would require the use of a growth model to determine if harvest can occur within the inner zone, including the number of trees by diameter class allowed to be harvested under Option 1, and the acreage of harvest under Option 2. None of the three would be simpler or more complex to implement than the others, and none would be easier or more difficult to enforce.

Comment: Proposal 1 has the least potential for a law suit.

Your opinion is noted.

Comments in support, or conditionally in support of adopting Proposal 2.

Comment: The Board is justified in taking a cautious approach when increasing regulation in response to adaptive management research, because:

- Adaptive management research has not yet begun to determine if the *current* rules are meeting the resource objective and performance targets established in the Forests and Fish Report Schedule L-1.
- All of the proposals, including Proposal 2, meet the basal area target the Board selected.
- It is the least costly alternative to landowners while meeting the Board’s selected target and incorporating the adaptive management science into the rules.
- Proposal 2 satisfies the requirements of the Administrative Procedure Act which mandates that the rule adopted be the “...least burdensome alternative that will achieve the general goals and specific objectives.”
- According to the Board’s environmental analysis, it is not expected that Proposal 2 would result in significant adverse impact to the environment.

Response: Proposal 2 differed from proposals 1 and 3 in that it contained the additional provision of allowing harvest of excess basal area in the inner zone of site classes III and IV lands adjacent to streams greater than 10 feet in width. CMER did not study the impacts of this portion of the proposal on riparian function. In effect, Proposal 2 would have decreased riparian buffers at some sites when the validation study indicated a need to further enhance riparian buffers at all sites. For these reasons, the Board determined that Proposal 2 did not satisfactorily meet the goals and objectives of the Forest Practices Act’s adaptive management provisions.

Comment: Proposal 2 follows the framework of the current rule, reducing the cost of retraining foresters and engineers to comply with the law.

Response: All of the proposals followed the framework of the current rule. Under all of the proposals, tree counting and use of the growth model is necessary to receive site-specific information about permissible harvest options and volume.

Comment: Modify Proposal 2 by allowing thinning outside 75 feet from the edge of a stream that has no discernable impact on stream buffer function.

Response: Proposal 2 did not affect the thinning option; however the thinning option (Option 1) does allow thinning closer to the stream than 75 feet, depending on the amount of basal area available on a site in excess of the basal area requirement.

Comment: Modify Proposal 2 by re-inserting thinning from below the floor into Option 2 of Proposal 2. This would further balance the rule to meet adaptive management findings at the least cost.

Response: This may be referring to a thinning strategy in an early rule proposal the Board was considering in 2008. In May 2008, the Board decided not to continue with the proposal referred to as “Rule Proposal #2-WFPA” which changed the thinning strategy

under Option 1 harvest. This was because of a concern that the numbers in the proposed thinning table were not statistically defensible.¹

Comments in support of adopting Proposal 3.

Comment: Proposal 3 is based on best available science.

Response: All three proposals were responsive to the validation study. They all included the increase to the basal area requirement of 325 square feet per acre.

Comment: Proposal 3 is the most straightforward of the three proposals for excess basal area removal while achieving the perceived riparian function benefits in the other two proposals. It allows for operational flexibility, thus allowing for accurate implementation. Compliance monitoring would be feasible under this proposal.

Response: None of the three proposals would have been simpler or more complex to implement than the others. All three proposals would have required the use of a growth model to determine if harvest is allowable within the inner zone.

Comments opposed to the adoption of any of the rule proposals. The following comments are arranged by subject matter. Responses are given, where appropriate, in italic font.

Notice of proposed rule.

Comment: It appears that the public hearings and written comments might be a waste of time, and the Board has already made its decision to increase the basal area requirement. In your “Reasons supporting proposal” statement you indicate that “... the Board has determined that the forest practices rules should be adjusted to ensure that appropriate riparian buffers are maintained...” This approach to socialistically imposed, non-scientific rules is appalling, especially during these times of economic crisis.

Response: Board members take the public review and comment process seriously, and consider every individual comment before adopting a rule. It is true that all of the proposals increased the basal area requirement. This is because of the Board’s responsibility to respond to conclusions of the Adaptive Management scientific research that the forest practices riparian rules are not presently adequate to achieve a desired future riparian condition at a stand age of 140 years.

The Board adopted Proposal 3. This alternative was determined to be less costly for landowners than Proposal 1 and still faithful to the scientific work that was carried out.

¹ Forest Practices Board meeting minutes, 5/21/2008, p. 11.

http://www.dnr.wa.gov/BusinessPermits/Topics/OtherInteragencyInformation/Pages/bc_fp_agendas_minutes.aspx

Costs to landowners, over-regulation, and regulatory uncertainty.

Comment: If any of the proposals are adopted, many more landowners have to leave 100 percent of their trees in the riparian areas. The more regulation the Board adopts, the less income for forest landowners, and the more there will be conversion of forest land to other land uses less protective of fish and wildlife habitat.

Response: Your comment is noted. The Board is in the difficult position of having a dual responsibility as a rule making body: to ensure that the rules result in aquatic habitat protection and restoration, but not to overly burden the state's timber industry. As previously explained, the Board adopted Proposal 3 as the least costly alternative that was still faithful to the scientific work that was carried out under the Adaptive Management Program.

Comment: There was an expectation that the Forests and Fish Agreement and the subsequent FPHCP would provide 50 years of regulatory certainty for landowners. Uncertainty in the regulatory system is not conducive to staying in business.

Response: The Forests and Fish Report indicated that landowners can be assured that rules will not be changed unless peer-reviewed, scientific research under the purview of the Adaptive Management Program shows that the rules do not adequately meet resource objectives. This was also the Legislature's intent when it passed the Salmon Recovery Act, which included amendments to state law based upon the Forests and Fish Report. See [RCW 76.09.370\(7\)](#) and [RCW 77.85.180\(1\)](#).

Soon after the Forests and Fish rules were adopted, the Adaptive Management Program placed a high priority on conducting a validation study in regards to whether the Desired Future Condition riparian performance targets accurately reflected stand conditions for mature, unmanaged conifer-dominated riparian stands in western Washington. Once completed, the validation study found that the basal areas of such stands are significantly higher than the performance targets originally required in the Forests and Fish Report and the 2001 rule amendments. The current rule making is the ultimate result of that validation study.

The FPHCP provides landowners the certainty that they won't be subject to "take" of federally listed aquatic species under the Endangered Species Act if they follow the rules. The Incidental Take Permit granted by the U.S. Fish and Wildlife Service and the NOAA – Fisheries Service is for a 50-year period. The Services required that the rules could be adjusted based upon new scientific information.

Comment: The proposals perpetuate and intensify disproportionate impact on small forest landowners. There are 55,000 small forest landowners on 5 million acres of forest land. Currently the FREP program is back-logged because of insufficient funds. Funding of this program is bound to get worse with the current state economic forecast.

Response: As predicted by the commenter, the Legislature did not fund the Forest Riparian Easement Program for the 2009-2011 biennium. This is not something that the Board can control. However, as discussed at the August 12, 2009 Forest Practices Board meeting, the Department of Natural Resources is working hard to continue discussions with legislators in the hope of receiving funding for this program.

Comment: In general, any regulation of riparian areas disproportionately affects small forest land owners because their ownerships are mostly in the lowland areas where the most fish habitat streams are located.

Response: The Board adopted Proposal 3 as the least cost alternative that achieved the goals and objectives of the Forest Practices Act, particularly with regard to the adaptive management program. However, because the Board is sensitive to disproportionate impacts on small forest landowners, the Board wants to develop a simplified approach for landowners to manage in the riparian inner zone. The Board forwarded a request to the Adaptive Management Program and to date a subcommittee of Policy has proposed a fixed-width template for small forest landowners. The Board is likely to discuss this subject at its next two meetings on November 10, 2009 and February 2010.

Comment: All of the proposals continue a regulatory system that is too complex for family forest landowners to take advantage of management opportunities in the riparian zone. A simple fixed-width buffer would be an improvement over any of the proposals.

Response: The simplified approach described in the previous response would be based on a fixed-width buffer.

Comment: The Board has not produced a credible “least burdensome alternative” analysis which is required by the Administrative Procedure Act.

Your opinion is noted.

Comment: Unless the state is prepared to do the following, the Board should leave current rules as they are:

- Eliminate all property taxes on riparian management zones.
- The state should pay the costs of setting up the zones, particularly if the landowner owned the land before the rule is in effect.
- The state should pay the net value of merchantable timber left at the price that was received for adjacent timber.

Response: Two of these suggestions, eliminating property taxes and paying the cost of riparian management zone set up, exceed the Board’s statutory authority. The

Legislature would need to pass laws to create those types of mitigation. In regards to the third item, paying the net value of retained merchantable timber, the Legislature has already established the Forest Riparian Easement Program for that purpose. As mentioned previously, the Department of Natural Resources is working hard to continue discussions with legislators in the hope of having funding reinstated for this program.

Comment: It is very discouraging that, due to the higher basal area requirement, I will not be allowed to harvest trees I could have harvested under the current rule but I left intentionally for additional wildlife benefit and for future harvest.

Your comment is noted.

Comment: Landowners are frustrated when it comes to leaving trees adjacent to streams on low productivity sites where it is unlikely future woody inputs, shade contributions, or increased basal area will impact salmon habitat in a positive manner.

Response: Regardless of the productivity of the lands adjacent to Type F Waters, those lands in their unmanaged condition have historically provided the functions (woody debris, shade, bank stability, leaf litter and nutrients, etc.) conducive to fish habitat. The rules are designed to ensure riparian functions are maintained or restored on Type F Waters.

Comment: It is important to recognize that the DFC basal area target and associated inner zone harvest limitations are only part of a suite of forest practices rules for protecting riparian functions near fish streams including: Protection of channel migration zones; riparian zone widths based on site potential tree height and stream channel width; three zones - a no-harvest 50-foot core zone, a variable width inner zone, and an outer zone where sensitive sites are protected; a 75 foot shade rule that virtually prohibits thinning closer than 75 feet from the stream; the 57 leave trees per acre requirement under inner zone option 1, and the no-cut floors under option 2 which result in additional basal area retention.

Your comment is noted.

Adaptive management and scientific basis for rule making.

Comment: The Adaptive Management Program does not seem to consider economic viability. So far, the CMER studies have only caused an increase in regulation.

Response: The economic impacts of rules are not evaluated within the framework of the Adaptive Management Program, but are analyzed as a requirement of Washington's administrative law, specifically under [RCW 34.05.328\(d\) and \(e\)](#).

With this rule making, a total of two of the studies conducted under the Adaptive Management Program in the past nine years have resulted in increased restrictions on timber harvest because those studies concluded that the rules as originally adopted

would not meet the established resource objectives. This does not mean that all CMER studies will result in increased regulation.

Comment: There were several comments regarding the validation study. In summary, the comments stated that the study was biased, that is was not based on a representative sample of average historical riparian forest stand conditions, that the peer review found numerous flaws in the study, and that contrary to the study's conclusions, site class does significantly affect forest stand growth.

Response: Policy accepted the validation study as complete and appropriately reviewed by the Adaptive Management Program's scientific peer review process, and the Board accepted Policy's petition for rule making. (The peer review process can be seen in [Board Manual section 22, Guidelines for Adaptive Management Program, Part 4.](#))

Comment: What has FFR accomplished so far as a basis for refinement through Adaptive Management?

Response: As mentioned in a previous response, two Adaptive Management studies have resulted in rule changes since the Forests and Fish rules were adopted. Both were "validation monitoring and research" studies (see [Schedule L-1 of the Forests and Fish Report](#), under key question #3). One was the [Type N Stream Demarcation Study](#) which resulted in the eliminating a default basin for use in determining stream initiation points, and the other was the DFC validation study. They were both given high priority after the rules were adopted to ensure that performance targets are the right ones to meet resource objectives.

The commenter may be referring to the fact that the effectiveness of the rules for meeting riparian and water quality objectives has not yet been accomplished. Three research projects are planned to evaluate the effectiveness of the Westside Type F riparian prescriptions in meeting resource objectives: the Westside Type F Riparian Prescription Monitoring Project, the Type F Experimental Buffer Treatment Project, and the Type F Performance Target Validation Project. It is not yet known when these projects will be conducted.

Comment: The study design excludes broadleaf stands. If shade and nutrients are desirable characteristics, broadleaf vegetation should be acceptable where nature insists, and studies should include broadleaf stands in the data being collected.

Response: Broadleaf, or hardwood, vegetation is recognized as beneficial for shade and nutrients in riparian areas. However, the purpose of the validation study was, as specified in the report, designed to evaluate the validity of the current riparian DFC performance targets for riparian stands, as defined in [WAC 222-30-021\(1\)](#). The performance targets are based on stands that include conifer.

The DFC model, basal area metric and riparian impact.

Comment: The proposals perpetuate an inappropriate use of a model for decision making. Models should be used as tools for decision making rather than to dictate the answer.

Your comment is noted.

Comment: The proposals perpetuate a regulatory system that uses an inappropriate metric (basal area) for attaining the goal of riparian function. Higher basal area often means denser stands. Dense stands produce smaller pieces for woody debris in streams, and consequently a shorter time that the pieces provide function. The Board should provide a regulatory alternative that will encourage riparian restoration rather than ecological stagnation. Wider no-cut areas will not be conducive to improved riparian function.

Response: Your comment on a basal area metric as a surrogate for function is noted. Landowners may propose an alternate plan that would incorporate thinning to restore the riparian area. The alternate plan rules are in WACs 222-12-040 and 222-12-0401.

Comment: There are known relationships between forest structure and properly functioning conditions. Basal area does not address forest structure.

Your comment is noted.

Comment: The Board should convene an outside panel of forest ecologists to review the whole notion of using basal area targets as a surrogate for riparian function.

Your comment is noted.

Comment: In many cases, riparian areas can benefit from thinning to achieve late-seral conditions in the best and fastest way possible. Thinning should be encouraged. If the regulatory system is too complex landowners won't thin.

Your comment is noted. Landowners may utilize the Option 1, "thinning from below" management option, but that does not address the complexity issue. As previously mentioned, landowners may propose an alternate plan that would incorporate thinning to restore the riparian area. The alternate plan rules are in WACs 222-12-040 and 222-12-0401.

Comment: Densely stocked unmanaged second growth conifer will take many decades to reach a desired condition for habitat.

Your comment is noted.

Comment: A basal area of 325 square feet per acre is not achievable on site class III, IV and V ground.

Your comment is noted.

Prepared by Gretchen Robinson.