Alternate Plans & Hardwood Conversions

Permitting

and

Some Case Reviews

What is an alternate plan?

- An alternate plan is a proposal contained in a Forest Practices Application that departs from the standard rules as provided for in WAC 222-12-040. Hardwood conversions are a type of alternate plan.

- My experience is utilizing alternate plans for forest practices activities involving riparian management zones but they could be used to plan a harvest under other circumstances.

Alternate Plans and Resource Protection

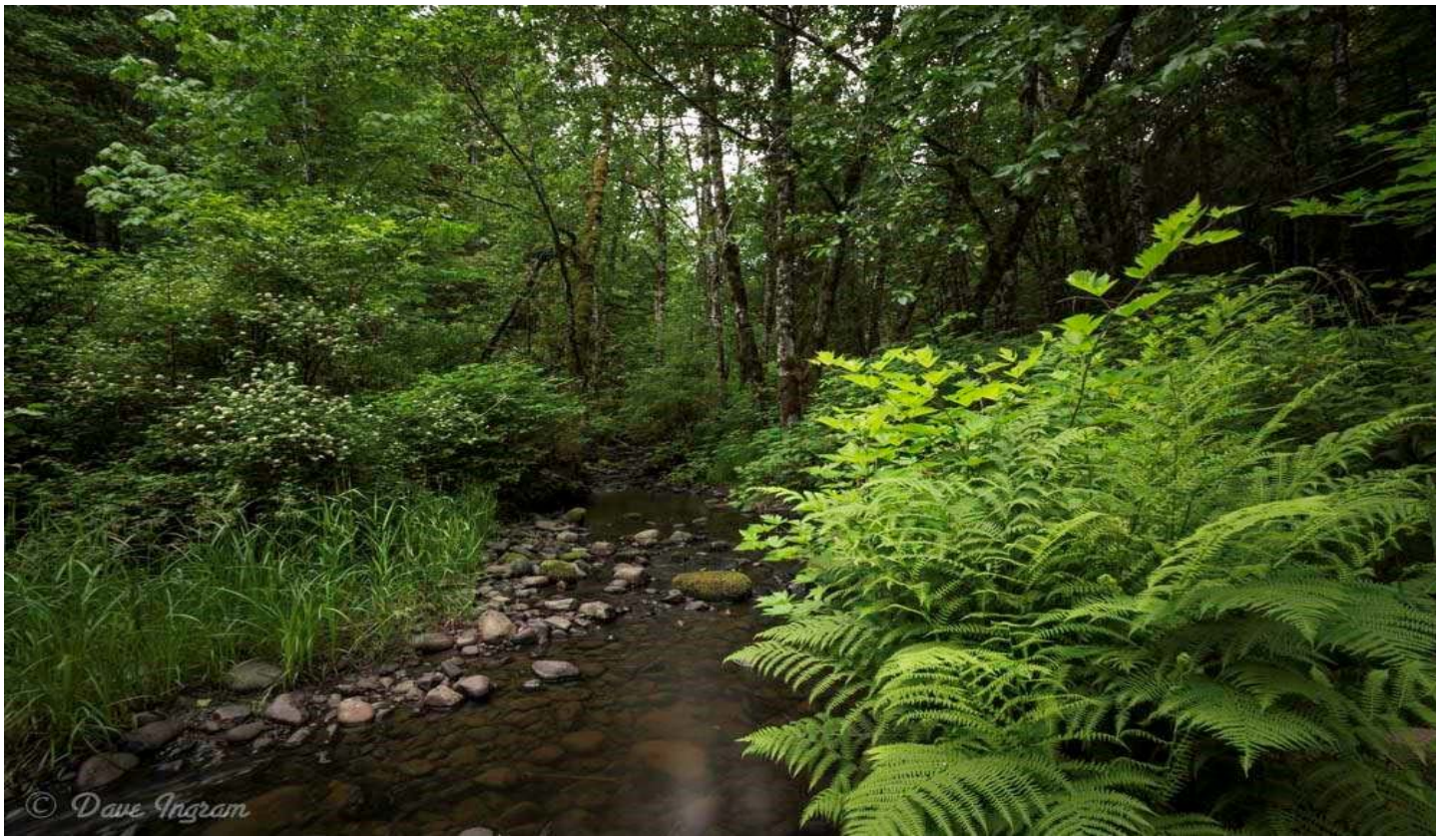
- Alternate Plans have to provide resource protection "**at least equal in overall effectiveness**" to the standard rules as determined by an Interdisciplinary Team and on-site review. The ID Teams generally consist of the Timber, Fish, and Wildlife (TFW) Cooperators including DNR, WDFW, DOE, interested tribes, and landowners.

ID Teams

- ID Team meetings are an opportunity for a proponent to “sell” their proposal and for reviewers to evaluate.

Riparian Zone Hardwood Conversions

- Generally do not allow the removal of any conifer trees in the core or inner zones as this is thought to be counterproductive to achieving Desired Future Condition (DFC) in the RMZ. There is a template for alternate plan allowing thinning in overstocked conifer dominant RMZ's allowing thinning from below (removing smaller diameter conifers).



Harvest Layout and Preparation

- Riparian Management Zones:

- Core zone from BFW to beginning of Inner zone. A representative sample of the outer edge of core zone must be marked in the field for review.

- Inner zone to beginning of Outer zone. A representative sample of the outer edge of inner zone must be marked in the field for review.

- The core and inner zones are where most of the departure from standard rules takes place.

- Collect stand data within the RMZ such as average TPA, Basal Area, Average DBH, current levels of LWD, stream shade.

- Areas of influence of riparian function: stream shade conditions, bank stability, sediment filtering, nutrient input. Forest Practices Board Manual Section 21 offers good guidance on this.

WASHINGTON STATE DEPARTMENT OF
Natural Resources

For DNR Region Office Use Only	
FPA/N #:	
Region:	
Received Date:	

Forest Practices Application/Notification
Alternate Plan Form

This form provides an outline for preparing an Alternate Plan. Although not required, it will help you prepare your Alternate Plan. Include the completed form with your Forest Practices Application. Refer to Board Manual Section 21 for help in developing your alternate plan, or contact your DNR region office for assistance.

TYPE OR PRINT IN INK:

Landowner information

Name of LANDOWNER	Phone: Email:

Contact person information.

Contact Person	Phone: Email:

1. **Current conditions and management goals:**
   a) List the predominate tree species, average tree height and age; note excessive blowdown, fire damage, root rot or other forest health issues; describe topography.
   b) Describe the resource management goals you wish to achieve through this alternate plan.

4. **If you are planning activities in the riparian area, fill in the table below.**

Stream Segment Identifier	Watertype (S,F,Np)	Affected Stream Segment Length (feet)	Average Bankfull Width (feet)	Average width of no cut buffer (feet)	Harvest one side or both sides

5. **Does this plan propose to remove hardwood trees within a riparian area in order to plant conifers?**

   No____ **Yes** ____ If yes, describe the species to be planted. Include a schedule of brush control activities to ensure the planted trees will be vigorous and free to grow after three growing seasons.

6. **List the specific parts of the Forest Practices Board Rules that the proposal departs from:**

   See Washington Forest Practices Board Rules at;
   http://www.dnr.wa.gov/BusinessPermits/Topics/ForestPracticesRules

WAC Section	Sub-section	WAC Section/Sub-section Title

7. **Attach map(s) (preferably 1" = 400' scale) with updated stream locations, wetlands, unstable slopes and roads.** Clearly designate proposed alternate plan area. The alternate plan area must also be shown on the forest practices activity map.

8. **Attach information, such as a timber cruise, water type modification forms, technical field notes, literature references, etc., that support the alternate plan.**

9. **Small Forest Landowner Office Monitoring**

   The Small Forest Landowner Office (SFLO) is required to monitor small forest landowner alternate plans for cumulative effects.

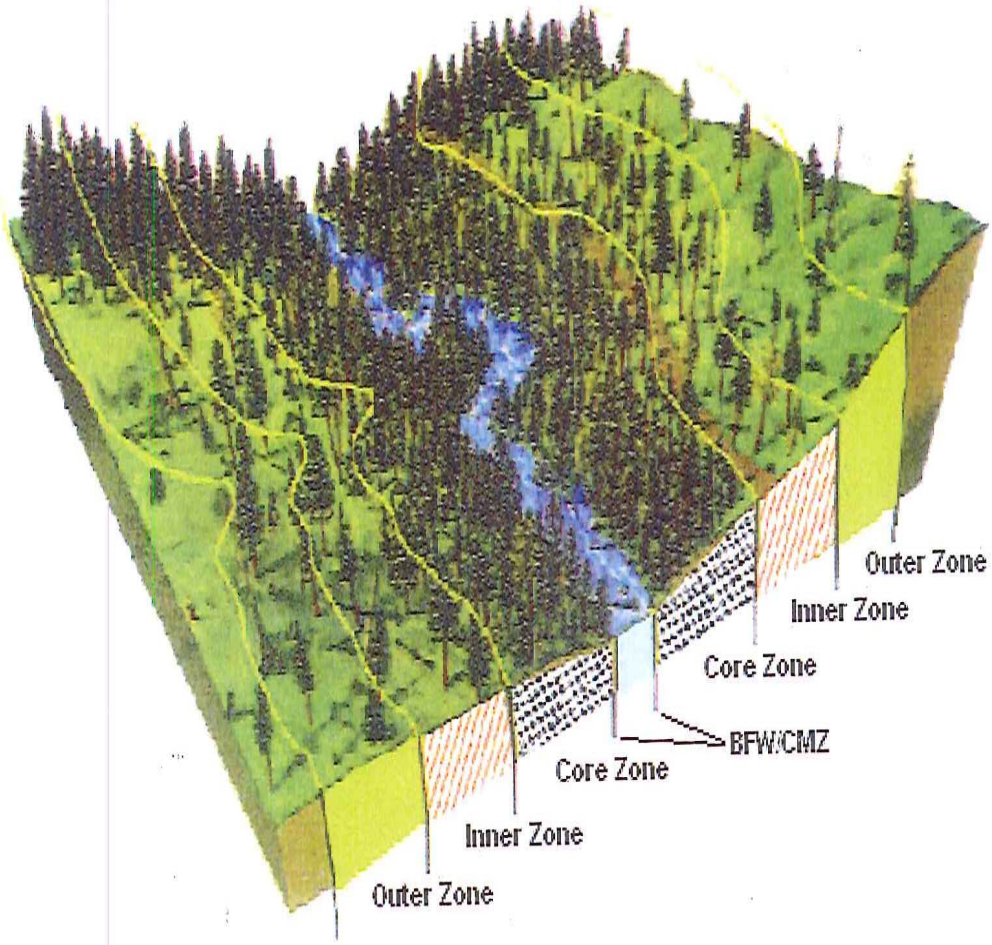
   a) **Does this alternate plan contain a monitoring strategy**

      ____ Yes ____ No If yes, please attach.

   b) **May SFLO staff access the alternate plan site to conduct monitoring?**

      ____ Yes ____ No

Type S and F Riparian Management Zone Cross-Section



Case 1: Blaine

- Alder dominated stand running about 11 mbf/acre mix of sawlog and pulp. Topography was flat to gently sloping. 75 acre total harvest unit

- Contained about 4,000’ of Type F stream frontage in 3 separate reaches.

- Site Class III requiring 140’ total RMZ width with a 105’ no cut buffer (each side of stream) under standard rules for no inner zone management.

- This equates to 19+ acres of foregone harvest area under standard rules. 19 acres @ 11 mbf/ac. = 209 mbf loss.

- The stand lacked conifer in the RMZ making Desired Future Condition (DFC) more difficult to attain. LWD issues.

Blaine Alternative Proposal

- 25’ no-harvest core zone
- 25’-75’ remove hardwoods 10” + dbh
- 75’-105’ remove all hardwoods (trees can’t reach stream anyway)
- Retain all conifer within 105’ of Bank Full Width.
- Retain 20 tpa 12”+ in the outer zone.
- Utilize fall-away, yard-away techniques to the maximum extent possible.
- Operate during dryer soil conditions.
- ID Team amended 25’ no-harvest core zone to 40’ and retained the remaining portions of the proposal.

Comparison of Standard Rules and Alternate Plan

Standard Rules

- Volume realized from 105’ RMZ under standard rules: 0
- Standard permitting costs of unit layout FPA paperwork
- Standard reforestation costs
- Achieve DFC slower

Alternate Plan

- Volume realized under Alternate Plan: ~131 mbf
- Extra unit layout costs, stand data collection, additional paperwork
- Additional reforestation, brush control, monitoring/reporting costs.
- Achieve DFC sooner.

Case 2: Portal Way

- Alder/birch dominated stand with scattered cedar and clumps of Douglas fir. 18 acre total harvest unit
- Approx. 2,000’ of RMZ on 2 separate stream reaches.
- Site Class V requiring 68’ no-cut buffer and 90’ total buffer under standard rules. (only one side in harvest unit on each stream)
- Equates to approx. 3 acres at 12 mbf/ac. = 36 mbf foregone harvest under standard rules.
- Most of the RMZ lacked significant conifer component making DFC harder to obtain.
- The west stream was actually functioning as the county road ditch and has been periodically dug out for drainage purposes. Nevertheless the stream met the physical descriptors for type F water and was treated as such.
- Presence of stream (ditch) adjacent county road, double railroad tracks helped to justify greater removal in the western stream as the larger trees were considered potential hazard trees (transportation infrastructure are public resources protected under the Forest Practices Rules).

Portal Way Alternative Proposal

- **West Stream**: Remove all merchantable trees on the east side of the stream (stream/ditch next to road and railroad tracks).
- Maintain a 30’ equipment limitation zone from the west stream.
- Aggressive reforestation with shorter growing (shore pine) native species immediately adjacent to the stream that would provide habitat function without growing tall enough to be hazards to the railroad and public road.
- **North stream**: remove all hardwoods within the first 60’ of buffer while leaving all conifer. Leave 20 trees per acre larger than 12” in the outer zone.
- Aggressive reforestation with western redcedar, Douglas fir, and shore pine.

Portal Way: Comparison of Standard Rules and Alternate Plan

Standard Rules

- Volume realized in 68’ no-harvest buffer: 0
- Standard reforestation and brush control costs.
- Achieve DFC slower.

Alternate Plan

- Additional volume realized under Alternate Plan:
- West Stream: approx. 1.5 ac. @ 18 mbf/ac. = 27 mbf
- North Stream: approx. 1.5 ac. @ 12 mbf/ac. = 18 mbf
- Marginally higher reforestation costs.
- Moderately higher brush control costs for plantation.
- Achieve DFC faster.

Case 3: Deming

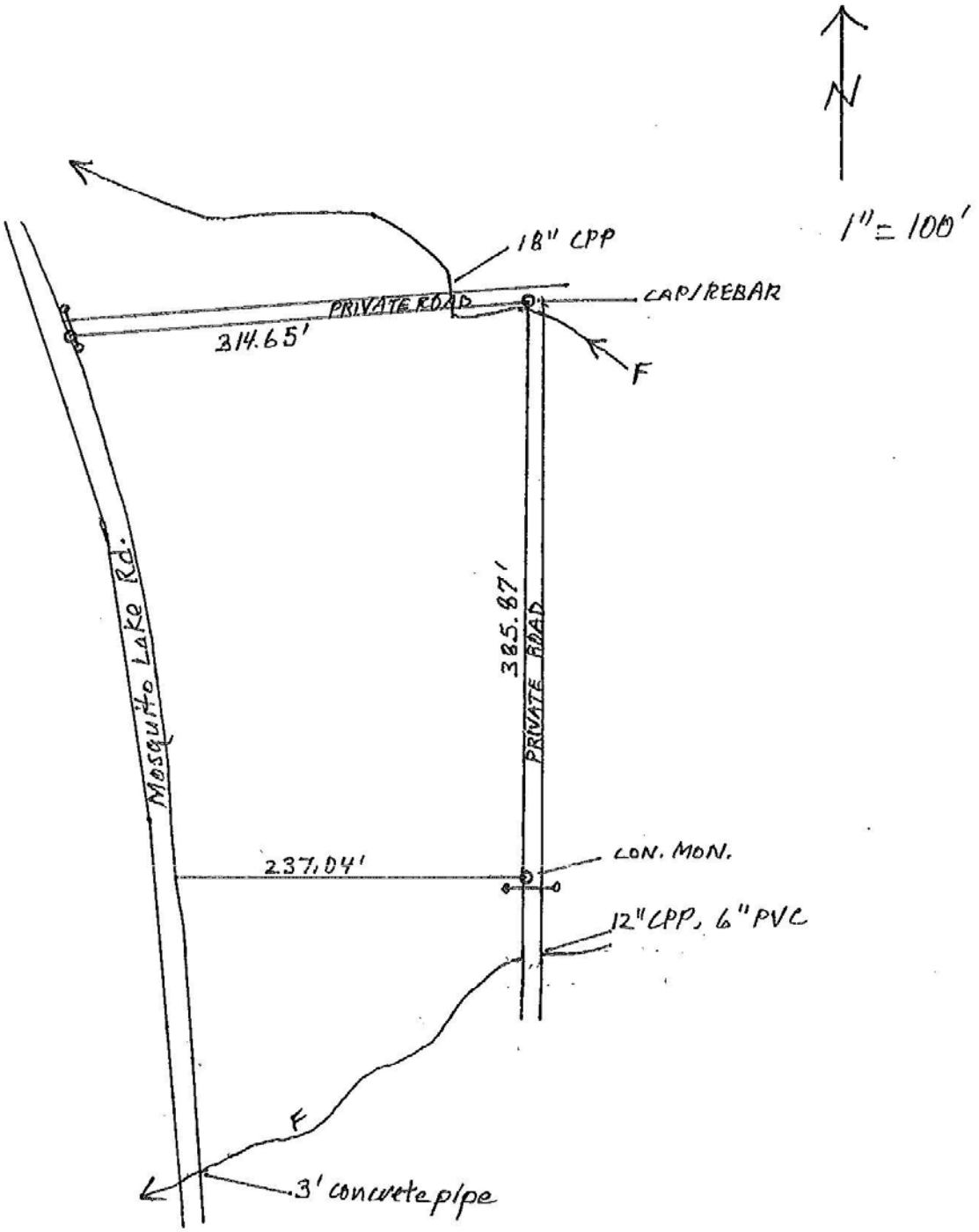
- Small ~3 acre unit of mixed conifer/hardwood running about 20 mbf/ac.
- About 300’ of stream reach on two separate streams.
- Both stream are not on the subject property but are close enough to have buffers overlap/effect the harvest unit.
- Road on 3 sides of the unit.
- Site Class II requiring 113’ no-cut buffer under standard rules with no inner zone management.

Deming: Alternate Plan Proposal

- North RMZ: 30’ no-cut core zone, 83’ hardwood removal only, 57’ retain 20 t.p.a. 12”+ in outer zone.

- South RMZ: 70’ no-cut core zone, 43’ hardwood removal only, 57’ retain 20 t.p.a. 12”+ in outer zone.

Supplemental Map for Alternate Plan



Deming: Comparison of Standard Rules and Alternate Plan

Standard Rules

- Volume realized from 113’ no-cut core zone + inner zone: 0
- Standard reforestation costs.
- Achieve DFC slower

Alternate Plan

- Additional volume realized under Alternate Plan:
- North stream: ~ 10 mbf alder.
- South stream: ~ 4 mbf alder
- Marginally higher reforestation/plantation maintenance costs.
- Achieve DFC sooner

Summary of Alternate Plan Costs/Benefits

- Allows applicant to work with site specific conditions (streams, public roads, railroads) to both benefit the timber owner by capturing greater hardwood volume and the resource by achieving DFC faster.
- May involve marginally higher reforestation costs from greater planting density, larger planting stock, and potentially greater plantation maintenance costs.
- Marginally higher permitting costs in additional layout time and paperwork .
- All Alternate Plan proposals are subject to approval by Interdisciplinary (ID) Teams as to meeting the threshold of “at least equal protection” of the resources.

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