Part of Long Term FPA - Approved 2022
Hardwood Conversion - Monitoring Plan

WASHINGTON STATE DEPT OF
NATURAL RESOURCES

-294[redacted]

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:
[redacted]	[redacted]

Contact person information.

Contact Person	Phone:
J[redacted]	[redacted]

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.

a) The dominate species are Red alder and Sitka spruce. There are areas with a mix of Douglas-fir, bigleaf maple, Western redcedar and Grand fir. Some old-growth spruce/cedar stumps were observed in the inner zone. The conifer average heights at nearly 100 feet, while the red alder average 100 feet. The stand age exceeds 60 years. There is minor blowdown from the 2007 and more recent windstorms. The area contains gentle slopes up to 20 percent.

b) A one-sided hardwood conversion of the inner zone site class 1 (from average 50 ft. to 150 ft.) along 1500 ft. of Type Fish (F1) Stream known as [redacted]

See Custom Map.

2. **Proposed Management Activities:** Describe what activities will be conducted (example; harvest, tree planting, road construction, etc). Describe where, how, and when each activity will be conducted.
NOTE: A representative sample of the proposed alternate plan area must be flagged on the ground for interdisciplinary team review.

An average of 50 feet core zone boundary is flagged blue & orange with blue paint. There will be minimal harvest in the core zones. All leave trees in the inner zone are marked with blue/red paint L's and other marks. The objective is to harvest the alder and leave all existing Sitka spruce, Douglas-fir, Western red-cedar/other conifers in the inner zone RMZ segment described in No.1. The conversion area will be replanted with spruce/Grand-fir or Douglas-fir\cedar. The emphasis is to plant shade tolerant spruce/Grand-fir in shadier areas while planting Douglas-fir in more open areas.

The harvest is planned to occur sometime within the next fifteen years and reforestation within one year after harvest. Seedling survival and brush control checks will occur at year 1 and 2 after planting. Additional seedlings will be planting and brush slashed if necessary before year 3. Manual brush control/precommercial thinning of alder/bigleaf maple are planned within 3 to 10 years following harvest to ensure seedlings grow well.

3. **Describe how your proposed management activity would affect the alternate plan area**
For activities in a riparian area:
   a) Describe the current level of large woody debris, shade, bank stability, sediment filtering and nutrient input.
   b) Explain the short and long term changes in the amount of large woody debris, shade, bank stability, sediment filtering and nutrient input from the current level. Be as specific as possible. See Board Manual Section 21

a) Large Woody Debris: The F1 conversion unit contains 5 conifer LWD and 6 MWD pieces tallied. There were 28 hardwood MWD pieces tallied. Tree per acre average 100. On the basis of each 100 foot spacing sample point in the core riparian zone, the proportion of hardwood to conifer is at 86 to 14 percent respectively.

Shade: The conversion unit has moderate levels of shade. Shade levels were noted with densiometer in September with readings every 100 feet abd averaged over the segments. Densiometer shade readings averaged 92 percent. Alder dominates the overstory, while vine maple dominates the understory.

Bank Stability: F1 contains areas of moderately stable banks with a mix of clay, cobbles and boulders that are moderately confined. The vegetated banks are dominated by salmonberry and Stinging nettle. Dominate shrubs are red elderberry and stink currant (Ribes bracteosum).

Sediment Filtering: F1 contains areas with moderate sedimentation where banks are un-vegetated. Where banks are vegetated sedimentation levels are contained. There is optimal ability to minimize sedimentation due to maximum interception of rainfall through a dense multi-layer canopy.

Nutrient Input: F1 contains moderate nutrient availability with a diverse mix of over and under-story vegetation.

See Alternate Plan Form Number 3 Additional Comments:

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

-294 [redacted]

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*
F1	F	1500	23	50	One Side

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.

300+ trees per acre to be planted. Douglas-fir is planted in lower shade areas. Cedar, Grand fir, or spruce are planted in areas with excessive brush/shade. This depends on availability of seedlings and choice of landowner. The cedar would be planted with installed tree cages to minimize animal browzing. The spruce or grand-fir would be planted in other areas of moderate shade and less brush.
See Alternate Plan Form Number 5 Additional Comments:

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
222-30-021	(1) b	Western WA. R.M.Z.s
222-30-040		Shade Requirements to Maintain Stream Temperatures

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

Alternate Plan Form Number 3 Additional Comments:

b) Large Woody Debris: F1 contains a one sided conversion for 1500 feet. A 50 feet average un-harvested buffer will keep the immediate forest intact along with all existing conifers in the inner zones. The expected levels of LWD will likely increase as some alders or conifers blow over. The future conifer-dominated inner and outer zones will provide high quality LWD.

Shade: F1 will have minimal shade fluctuation after harvest due to predominant southeast facing slope.

Bank Stability: Bank stability is expected to remain unchanged with the 50 feet buffer and extensive well-established salmonberry, stink currant and vine-maple under-story.

Sediment Filtering: Sediment filtering is expected to remain stable after harvest. The F1 conversion will result in continued dense under and over-story vegetation and trees. The future inner and outer zones will be established with conifer as opposed to an alder dominated over-story currently. Conifer dominated stands retain rainfall better than alder stands and result in improved sediment filtration.

Nutrient Input: Needles and leaf litter are an essential component of the nutrient cycle of a stream by serving as food sources for insects and fish. An edge effect from 50 feet buffers will result in increased growth and diversity of under-story vegetation further improving nutrient cycling in the riparian area and duff development on the forest floor.

MONITORING PLAN

Alternate Plan Form Number 5 Additional Comments:

The hardwood conversion sites will be checked at years 1, 2 and 3 following harvest to monitor conifer seedling survival and brush/alder control. Additional seedlings will be planted and brush slashed if necessary before year 3. Manual brush control/pre-commercial thinning and cutting of alder/big-leaf maple is planned within 3 to 10 years following harvest to ensure seedling grow well.