OLD CHANNEL Migration Zone Below Dam
Type S & F Site Classes II & III

[redacted]

WASHINGTON STATE DEPARTMENT OF
Natural Resources

For DNR Region Office Use Only	
FPA/N #:	[redacted]
Region:	[redacted]
Received Date:	5-14-15

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.

DNR SAID THIS EXCEPTIONALLY WELL WRITTEN!

TYPE OR PRINT IN INK:

Landowner information

Name of LANDOWNER	Phone: [redacted]
[redacted] LLC	Email:

Contact person information.

[redacted]	Phone: [redacted]
	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.

a) 95% alder, 40-75 year old, 60'-90' ht, medium to full stocking, top dieback beginning due to age and ice storm breakage, heavy salmonberry and brush understory, on flat ground. Total of 24 conifer inside harvest unit, all to leave, as well as all (scattered) ash and all maple (except sprouted clumps).

b) Primary goal is to establish conifer for late-seral development along river [redacted] Wildlife Habitat Mgmt Area (HMA) has 250' no-cut buffers on river (per PHS requirements, and except for hardwood conversion) so all ground within that buffer will be managed to late-seral conditions after reforestation. This is one of the few sites along the 2 1/3 miles of ownership on the south side of the river where any harvest could be done, as most is operationally unfeasible. The c. 125' lineal that is 10' to 20' inside the core zone, and the c. 700' lineal that averages about 30' inside the inner zone, is < 2% of the FFR "no-cut buffers" acreage on the south side of the river, and < 1% of the PHS buffer acreage the HMA is managed under. 90%+ of the existing FFR core/inner zone buffers on the south side of the river is hardwood or non-stocked, and 95%+ on the north side of the river.

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.

Feller/buncher cutting of alder in core and inner zones, inside 118' fixed-width template line, as shown on map. Estimated dozen alder to cut inside core and two dozen inside inner zone, along 800' of river frontage, during summer operating window. 30' ELZ on river. Leaving all species except alder. No conifer cut within unit, except 1-2 trees snagged outside 170' FFR buffer created per HMA requirements. Shovel or skidder yarding into upland landing site.
Two small pockets of 20' x 50' and 30' x 50' of pure low brush, between the cutting line and the river, are proposed to rake back brush with scarifying cat to plant about 35 shade-tolerant conifer and seed grass, under the canopy. Cat scarification of the harvested ground is to establish seedlings (300-440 tpa, to be determined) and seed native grasses (fall after harvest, and before planting) per attached seed order sheet.
Planting will be of Doug fir (where not shaded by leave trees, as have open south exposure) and shade-tolerant (likely grand fir) where impacted by leave trees. Expected one-time 3' radius grass spray applied to seedlings spring after planting. Hand brush-cutting around seedlings as necessary until free-to-grow, with at least 190 tpa stocking, then likely pre-com thin at age 12-15 to expedite large-diameter/heavy crown development.

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

LWD a) LWD at one small site along 800', on a "mini-island" close to shore, has 1/2 dozen med-sized alder in the water. Rest is full-flow river bank, with maybe 600' lineal with med-sized alder for future entry.
b) Remaining alder on the south bank will enter river as die over next 2-3 decades, but river flow likely to move them downstream. Larger and longer-lasting conifer, in long-term, will begin to supply LWD in 40-50 years, and more likely to remain as anchored by large root system.

Shade a) Moderate shade along reach currently, although minimally beneficial effect due to size of river and because dam release in summer maintains temperature in mid-50's for quite large volume of water flow.
b) Long-term shade will diminsh grreatly under status quo due to loss of existing alder to mortality. Short-tem shade loss of harvested trees not leaning towards river mitigated by conditions noted above. Long-term shade increase much better than current due to conifer tree heighth, longevity, and higher "density", but dam-influenced river temperature will still predominate.
Note: densiometer measurements not possible and meaningless on river of this size. Also, DFC for medium-stocked (at best) pure hardwood stand intended for partial conversion would be irrelavent, as it is by definition a 'given' it does not meet minimums.

Bank a) Relatively stable & average, with 2'-3' along most of reach. Likely to deteriorate as alder die if roots tip.
b) Short-term should be same except for possible blowdown. Long-term should be improved from low-density, windfirm conifer development.

Sediment a) Flat ground, with slight rise at riverbank for much of the ground, is currently filtered virtually100%.
b) Short and long-term same, as trees/vegetation nearest river mostly retained, grass seeded on any exposed soil, and favorable topography not affected by harvest.

Nutrient a) Moderate from alder leaves and other hardwood in late fall.
b) Some decrease short-term from harvest, but likely unmeasurable impact per discussion in 1 b). Long-term should be at least equal to existing because of eventual larger conifer crown sizes, and definitely more if alder left to deteriorate and die over next few decades, replaced by "old-growth" brush.

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
A	S	800'	70'+	85-90'	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.

Doug fir where south exposure, grand or cedar in understory & where shaded by leave trees, winter after harvest. Native grass seeding of exposed soil from logging/scarification fall after harvest. Grass spray spring after planting 3' circle around seedlings. Mechanical brushing as necessary annually until free-to-grow. The forest management plan for the [redacted] HMA requires a winter and summer regen recon, and is under supervision of WDFW for wildlife areas. Reforestation report to be filed with DNR. Previous Conif Restoration AP was FPA [redacted]

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. RMZs
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**

Pre-SPLY ☒ Yes ☒ No If yes, please attach. -see #5

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

☒ Yes ☐ No

CMZ Assessment Form
Forest Practices Application/Notification

Note: Complete and attach this informational form to your FPA if you answered "Yes" to FPA question 13 j. See Board Manual Section 2 (BM 2) for guidance on evaluating Channel Migration Zones (Forms within BM 2 are optional).

Applicant Office Review:

1. Screening tools used: ☐ GIS ☒ Aerial Photo Years: 1967, 1978, 2014 ☐ LiDAR ☐ USGS Topographic Map
   ☒ Other (describe): ON SITE

2. Are you aware of channel movement or did you observe obvious channel movement between aerial photograph years?
   ☒ No, continue with to question 3 ☐ Yes, skip to question 5

3. Evaluate valley confinement using USGS topographic map(s) or aerial photographs.
   ☒ Valley floor is significantly wider than the channel. Channel migration ~~may~~ ~~be~~ ~~occurring~~. CANNOT OCCUR
   ☐ Valley floor is very narrow, obviously less than twice as wide as the channel. If you can clearly see this circumstance on the aerial photographs, it is unlikely that channel migration is occurring.

4. Did you observe any of the following on the aerial photographs? – NONE –
   ☐ Side Channels ☐ Multiple Channels (Braiding)
   ☐ Large Gravel Bars ☐ Wood Jams
   ☐ Eroding Banks ☐ High Sinuosity or Sharp Channel Bends
   ☐ New Channels Occurring Between Photo Years (Avulsions)

Field Review:

5. Date of field review: 3/30/15

6. Person(s) that conducted field review:
   [redacted] WITMA FORESTER
   [redacted] WDFW BIOLOGIST
   Name Title/position
   [redacted] WDFW BIO
   Name Title/position
   [redacted] Q.I.N. BIO

7. If CMZ is present check the component(s) present in your CMZ delineation.
   ☐ Avulsion hazard area ☐ Erosion hazard area (attach erosion rate calculations) – NEITHER –

8. What was the distance of channel walked? What was the length of CMZ boundary delineated? 800'
   ±400'

9. Briefly describe how you determined a CMZ exists, how you delineated the outer edge of the CMZ, and how you marked the outer edge of the CMZ on the ground (flagging color, paint, etc.):

   ANCIENT GRAVEL BARS AND LOW SPOTS EXIST IN THE FLAT ALLUVIAL SITE. OLD RIVER CHANNEL EXISTS TO WEST OF SITE, SOUTH OF CURRENT CHANNEL.

   LOCATION NOW BELOW [redacted] DAM WITH AT LEAST PARTIALLY REGULATED CONTROL. NO RIVER MOVEMENT IN THIS AREA FOR 50 YEARS. NO LONGER AN 'ACTIVE CMZ'. NOT MARKED ON GROUND.

Revisions after ID Team Review on-site

[redacted] Dam LLC

Forest Practices Application [redacted] Unit # 3 Alternate Plan Modification

Per JD Team review June 9, 2015, the following items are to be changed or added to the FPA for the Hardwood Conversion / Conifer Restoration Alternate Plan (AP) :

1) Under Proposed Management Activities, a double row of Doug fir and/or Grand fir-hemlock will be planted along the northernmost edge of the adjoining riparian pasture (# R-1) to the west of the AP unit, planted concurrently in a 12' X 12' diagonal spacing, and maintained (along with the AP seedlings) into free-to-grow condition (f-t-g). This will be an approximately 300' long by 10' strip, to be mowed prior to planting (as site preparation), spot sprayed for grass competition, and likely sleeved. Replanted as necessary to achieve a minimum 67% survival (distributed) at f-t-g. This will provide long-term conifer benefits to a reach of the south side of the river currently without any conifer species.
Also, hand spraying (only) as necessary in the AP unit to insure seedling survival of the conifer will be: a) with aquatic-approved chemicals within 75' of the OHW; b) by a licensed pesticide applicator; c) no spraying closer than 30' of OHWM at the two small pockets (20' wide X 50' deep and the 30' wide X 50' deep) of planting in non-stocked openings north of the harvest boundary, and no closer elsewhere than 75' d) all label requirements to be followed, as required for licensed applicators . Up to three applications of grass and/or brush spray may be needed to reach f-t-g, due to intense competition from grass and brush that will occur on this site .

[redacted]
Authorized rep for [redacted] Dam LLC
June 10, 2015