



PRE-SALE REPORT

McPhillip Seed Cedar

CR401411

PREPARED BY: Mike Burke, Lands Resource Specialist, Senior

REVIEWED BY: Scott Bonk, Lands Resource Supervisor

APPROVED BY: Jay Sila, Lands Area Manager

I. GENERAL INFORMATION

A. General Location:

This sale is located approximately thirteen (13) miles northeast of Orofino, Idaho in the McKinnon Creek and Phillips Creek drainages

B. Historical:

Portions of the sale area were burned by wildfires in 1910 and again in 1925. The sale area was previously entered in 2014 as part of the McKinnon Face Timber Sale. During that entry, pockets of beetle-infested and at-risk Douglas-fir trees were removed from Units 1 and 3 of the proposed sale area. In 2020, the area was entered again under the McPhillip Pole Timber Sale, during which approximately 4,600 cedar poles were removed.

C. Purpose of Sale:

1. Maximize long-term revenue to the Endowments through sustainable management of endowment timberlands.
2. Move towards the Area's Desired Future Conditions (DFC) by adjusting species composition to more seral species (white pine, western larch, and Douglas-fir) which are more resistant to fire, insects and pathogens and by adjusting the age/size class distribution on the area to reduce defect, mortality, and improve growth.
3. To convert deteriorating stands of suppressed timber to a highly productive stand of tree species suited to the site using a clearcut prescription. Release established natural regeneration by applying an overstory removal prescription.
4. To conduct necessary road opening and new road construction within the sale area. This work will provide access and conduct desired road maintenance that will help ensure water quality and that the roads can be used for future management activities.

II. CURRENT CONDITIONS

A. Physiographic:

1. Drainages:

This sale lays within or between the drainages of McKinnon Creek (to the east) and Phillip Creek (to the west). McKinnon Creek forms the east boundary of Unit 3 & 4; Unit 1 is located in the Phillip Creek drainage and Unit 2 lays between these drainages. Both streams are Class II and drain directly into Dworshak Reservoir. Numerous unnamed Class II streams are within the sale area, all of which drain into Dworshak Reservoir. None of the streams within the sale area are 303d listed or contain bull trout.

2. Aspect:

North, Northeast

3. Slopes:

0% - 100%, Average 70%

4. Soil Characteristics:

There are two major soil types within the sale area. Rettig-Township complex comprises 83% of the sale area and is composed of colluvium derived from gneiss, schist, or mica schist parent material capped by volcanic ash. Aldermand ashy loam comprises the remaining 17% of the sale area and is composed of alluvium derived from granite or metamorphic parent material capped by volcanic ash. The Cumulative Watershed Effects Assessment (CWE) defines these soils as having a high potential for surface erosion, and a high potential for mass failure.

5. Elevation:

1,720'-3,040' (Avg. 2,350')

B. Stand Description:

1. Habitat Type:

The stand is primarily characterized by the western redcedar/queencup beadlily (THPL/CLUN) habitat type, with grand fir/queencup beadlily (ABGR/CLUN) occurring on west-facing aspects.

2. Pathological:

The wildfires of 1910 and 1925 left a mosaic of burned and unburned areas across the landscape. Most of the current insect and disease concerns are concentrated in timber that survived these historic fires. Douglas-fir within the stand exhibits moderate to heavy levels of Schweinitzii root and butt rot (*Phaeolus schweinitzii*) and Armillaria root disease (*Armillaria ostoyae*). Grand fir within the area contains moderate levels of Indian paint fungus (*Echinodontium tinctorium*).

3. Entomological:

The area is currently exhibiting moderate infestation levels of Douglas-fir bark beetle (*Dendroctonus pseudotsugae*). Beetle infestation was the primary factor leading to the McKinnon Face Timber Sale in 2014, which removed approximately 4,000 MBF of beetle-infested and at-risk Douglas-fir timber from the area. Grand fir within the area is also exhibiting minor infestation levels of fir engraver beetle (*Scolytus ventralis*).

4. Current Stand Structure:

UNIT	TYPE	SPECIES COMPOSITION (MBF %)	AGE	TEN YEAR GROWTH RATE (INCHES)	ACRES
1	12	DF(40%),GF(25%),CE(19%),WL(11%),PP(5%)	70-200	0.70	53
2	12	GF(41%),CE(38%),DF(17%),WL(4%)	70-200	0.70	31
3	12	DF(52%),GF(19%),CE(16%),WL(13%)	70-200	0.70	87
4	12 43	GF(60%),CE(20%),DF(13%),WL(7%) GF(61%),DF(25%),WL(9%),CE(2%),WP(2%),PP(1%)	70-200 7-12	0.70 N/A	96
5	12	GF(81%),DF(19%)	70-200	0.70	1
				Total Acres:	268

III. MANAGEMENT PLAN**A. Transportation Plan:**

ROAD TYPE	WORK PERFORMED	MILES
Spur	New Construction	0.31
Spur	Reconstruction	0.20
Secondary	Opening	3.83
Spur	Opening	2.71
	Total Miles:	7.05

B. Silvicultural and Harvest Plan:

1. Treatment Summary:

UNIT	SILVICULTURAL PRESCRIPTION	NET ACRES	CURRENT MBF/ACRE	CURRENT TREES PER ACRE (TPA)	RESIDUAL MBF/ACRE	RESIDUAL MERCHANTABLE TPA	RESIDUAL WILDLIFE TPA
1	Clearcut	53	12.34	43	0	0	3-5
2	Clearcut	31	20.52	40	0	0	3-5
3	Clearcut	87	26.69	98	0	0	3-5
4	Overstory Removal	96	13.11	25	0	0	3-5
5	Right-of-Way	1	9.88	24	0	0	0

2. Anticipated Stand Composition:

UNIT	TYPE	SPECIES COMPOSITION (%TPA)	TPA	ACRES
1	50	WL(100%)	436	53
2	50	WL(100%)	436	31
3	50	WL(100%)	436	87
4	43	GF(61%),DF(25%),WL(9%), CE(2%),WP(2%),PP(1%)	740	96
5	90	N/A ROW	N/A	1
Total Acres:				268

3. Treatment Description:

Units 1, 2, and 3 will utilize a clearcut prescription. These stands consist primarily of old-growth, large-sized sawtimber and contain moderate levels of root rot. A clearcut prescription was selected due to the lack of a sufficient number of high-quality, root rot-resistant seed trees to provide adequate natural regeneration.

This treatment in OSR Unit 4 will remove the overstory across approximately 96 acres to promote the release and continued development of established natural regeneration. Unit 4 has successfully achieved natural regeneration and is currently exceeding desired stocking levels.

Unit 5 is right-of-way (ROW) clearing for construction of permanent road infrastructure.

4. Clearcut Justification:

Clearcutting in Units 1, 2, and 3 is economically justified due to the terrain, with approximately 89% of the area requiring cable yarding. These stands consist primarily of old-growth, large-sized sawtimber and contain moderate levels of root rot. Retaining merchantable volume for a future overstory removal would increase logging costs and delay stand establishment compared to artificial regeneration methods. Clearcutting will allow for timely establishment of a new stand composed of desirable, root rot-resistant species better suited to the site.

Indicators of root disease and stem decay are present throughout the stand, including Armillaria root disease (*Armillaria ostoyae*), Schweinitzii root and butt rot (*Phaeolus schweinitzii*), and Indian paint fungus (*Echinodontium tinctorium*). The stand is also exhibiting fir engraver beetle (*Scolytus ventralis*) activity in the grand fir and Douglas-fir bark beetle (*Dendroctonus pseudotsugae*) activity in the Douglas-fir. Mortality is increasing, particularly within the grand fir component, and overall stand vigor is declining due to the combined effects of insect activity, disease, and stand age.

These conditions further support the clearcut prescription by allowing for the removal of diseased, insect-affected, and susceptible trees while providing for the prompt establishment of a healthy stand composed of desirable species through artificial regeneration.

a) Forest Improvement Activity:

Following harvest, clearcut units 1, 2, and 3 will be assessed for vegetation concentrations to determine whether herbicide treatment is warranted for site preparation. Following any necessary site-preparation treatment, western larch will be planted in these units due to their location within traditional big game winter range. Western larch is generally more capable of recovering from browsing damage than many associated conifer species, while its deciduous nature and winter needle loss may reduce its attractiveness to browsing big game during the dormant season. Additionally, its rapid juvenile growth allows seedlings to grow above the primary browse zone more quickly, improving the likelihood of successful stand establishment. The grand fir/queencup beadlily and western redcedar/queencup beadlily habitat types are highly productive and are expected to respond well to this treatment.

OSR Unit 4 will receive a post-sale regeneration assessment to determine whether supplemental planting is necessary. If interplanting is required, western larch will be planted to increase the seral species component. Unit 4 will also be evaluated for precommercial thinning once the stand reaches an appropriate age and dominant trees are sufficiently established to optimize stocking levels and achieve the desired species composition.

b) Harvest Specifications:

Method	Acres	Volume MBF	Equipment Specification	Distance
Cable Yarding	238	4,345	Intermediate to long span cable yarding that is equipped with a locking carriage and has lateral yarding capability of 50 feet.	Up To 2,000'
Ground Based	30	535	Ground based equipment will not be operated on slopes over 45%, as determined by the State FIC (Forester-In-Charge).	Up To 620'

C. Hazard Management Plan:

This plan will serve as a guide to reduce the slash hazard to levels as required by the Idaho Forestry Act Fire Hazard Reduction Law. Tree length skidding will be required on all units to help mitigate the amount of slash in the woods. Limbing, topping and long butting will be done on the landing. The Purchaser will excavator pile all slash accumulated on landings, and on roadsides in all units. All roadside and landing piles will be burned.

D. Erosion Control Plan:

To minimize sedimentation into streams within the sale area, the following measures will be taken:

1. Erosion control measures shall be installed as operations progress, at the end of each logging season, prior to freeze-up when winter logging is anticipated, or as designated by the State (Forester-in-charge).
2. All roads with rolling dips installed will have the dips maintained to ensure proper functioning throughout the life of the contract.
3. Skidding and hauling will not be permitted when soil conditions are such that excessive soil erosion and/or compaction may result.
4. The State shall grass seed sale access roads and landings at the termination of the sale.
5. Native surfaced roads accessing the sale area are gated year-round and are limited to vehicles less than 50" in width.

E. Forest Practices Act:

No variances are anticipated for this sale.

IV. IMPACT STATEMENT

A. Aesthetics:

Portions of the sale area will be visible from across Dworshak Reservoir, from State and private industrial timber roads, and from the reservoir itself. However, as natural regeneration becomes established and planted trees mature, the visual impacts of the harvest are expected to diminish over time.

B. Affected Interests:

USACE (United States Army Corps of Engineers) property lines are the northern sale boundaries for Units 1,2 and 3 of this sale. All USACE/IDL ownership lines have been surveyed and all blazed trees and line posts will be left intact for future reference of ownership boundaries. No fences exist. The property boundary between the IDL/PotlatchDeltic Holdings, LLC has been surveyed as well, and the existing property line is well defined with a combination of line trees and line posts. A memorandum of understanding will be in place with the USACE allowing the State to tie a cable on Corp land if needed to achieve deflection for line skidding purposes.

C. Air Quality:

Burning associated with this sale may cause limited air quality impacts. Burning operations will be coordinated with the Montana-Idaho Airshed Group.

D. Cultural Resources:

There were no identified historical or cultural resources found within the sale area.

E. Leases:

David Crow, Todd Hill, and Tracy Hill (Hill/Crow Grazing Allotment G-400003) have a grazing lease in the proposed sale area. Harvesting in these units should have minor, if any, effect on the normal grazing operations in these areas. Lessees will be informed during annual grazing meetings of the proposed harvest activity within the allotment. No grazing issues are anticipated.

F. Roads and Traffic Patterns:

All access into the sale area is closed to the public by gates and will remain in effect during this sale. Existing unsurfaced access roads into the sale area are closed to all vehicles greater than 50" in width. Some increased traffic on Dent Johnson Cut-Off Road and Johnson Mill Road will occur when there is active hauling. Safety signs will be posted as needed on all access roads.

G. Site Productivity:

There are no anticipated significant impacts to long-term site productivity that are anticipated.

H. Water Quality:

No significant impacts on water quality are anticipated with harvesting the proposed timber sale. The terms and items listed within the contract documents, with adherence to the Idaho Forest Practices Act, were designed to help minimize any sedimentation problems.

I. Wildlife and Fisheries:

Idaho Fish and Game (IF&G), through annual notification, was provided with an opportunity to comment but did not respond.

Snags and green culls will be reserved, when possible, to help provide habitat for various wildlife.