FY2021/22 Harvest Plan
Old Peak Road
Corvallis Forest

An area of ±64 acres is planned for ground based thinning and selection harvest be operated in fall 2021 to spring 2022. Stands are comprised predominantly of 60-100 year-old Douglas-fir stands, with both older and younger trees present. A total of ±1,045,000 board feet of Douglas-fir is planned for harvest. Logger selection will be by a qualifications and price based bid process in spring/summer 2021.

Attribute	Stand Number		
	1802	**1803**	**1805**
Harvest Acreage	26	11	27
BA/ac (square feet)	240	242	403
Trees/ac	193	390	239
Trees/ac >6" dbh	63	43	74
Avg DBH (inches)	26.4	31.8	31.4
Avg Ht (feet)	163	147	178
Slope	0-15%		
Volume/ac (mbf)	52	59	104
Percent cut	40%	20%	25%
Est. harvest volume	**520**	**85**	**440**

Areas were selected for treatment based on:

1. Opportunities to increase structure and diversity and promote development of multi-age stand structure initiated by previous treatments in 2007 and 2009.
2. Desire to encourage and maintain development of understory shrub and forb layer that resulted from previous treatments and recent natural disturbance events such as wind.
3. Size of operation that creates a viable operational scale
4. Opportunity to reduce potential impacts of conifer stand on Old Peak meadow.

Stand Conditions

The harvest area is comprised of three separate naturally regenerated stands with trees that vary in age from about 60-100 years old with occasional 200+ year old individual trees. These stands were naturally regenerated following a history of homesteading and agricultural use which ended around 1900. All three stands were previously treated. Stand 1802 was thinned in 2007 and stands 1803 and 1805 were thinned in 2009. The ground based thinning treatments resulted in canopy openings and

soil disturbance that facilitated natural conifer regeneration in the understory that is heavy in places. Planted seedlings also persist from the earlier treatments. Understory conifer species include Douglas-fir, western hemlock, western redcedar and grand fir. Snag creation was used to supplement thinning treatments and natural snags are distributed throughout the stand due to root rot pockets and wind events. Bigleaf maple and chinkapin are the primary hardwoods and they are generally sparsely distributed across the site.

Stand 1803 has the oldest trees, largest average diameter, highest spatial variability and highest concentration of snags and downed wood of the three stands. Stand 1802 has the youngest trees and least developed understory, though there are pockets of very dense natural regeneration in the understory. Stand 1805 has a mixture of the oldest and youngest trees on the site, and significant variability in tree density understory development.

Desired Future Condition

- Multi-aged, wind-firm stands with complex structure including vertical and horizontal heterogeneity
- Variable tree density with group selection openings to maintain young cohort and encourage understory development
- Maintenance and recruitment of hardwoods
- Maintenance and ongoing recruitment of snag and lying dead wood features

Harvest Prescriptions

- Matrix Thinning: Focused on removal of suppressed and intermediate crown classes to foster resiliency and heterogeneity of the stand. Thinning will occur across all diameter classes with retention of the most vigorous and windfirm trees. Live crown depth and diameter will be primary factors in tree selection. Approximately 30% of the standing conifer basal area will be removed as designated by the forester. Thinning spacing is expected to be variable, with dominant trees retained and existing species composition preserved.
- Heavy Thinning: Localized areas of heavy thinning will be designated where approximately 65% of the conifer basal area will be removed. These treatments will favor retaining the most vigorous and wind-firm trees, in a clumped distribution of where possible. The intent is to ensure maintenance of crown depth and vigor of dominant trees. Other objectives of heavy thinning include increasing light resources to areas of established advanced regeneration and well developed native shrubs to contribute to structural variability of the stand. Heavy thinning will also be used adjacent to the Old Peak Meadow to reduce conifer stocking and allow planted and natural establishment of hardwoods and other preferred understory shrub species.
- Group selections: Openings from 0.1 to 0.5 acre in size will be designated where all trees will be removed to benefit adjacent dominant trees, advanced regeneration or shrub layers. Groups will be distributed across the thinning area and located to enhance existing structural features or add variability to areas that

are lacking structural diversity.

- Patch cuts: Areas of up to 3 acres will be designated where 80% of the trees will be removed to establish a new age cohort and retain existing stand legacies. Regeneration may be existing advanced regeneration, or established by planting.
- Minimal disturbance areas: Areas that contain preferred structural features and conditions (e.g.: snags, developed native understory, advanced regeneration) will be designated and protected from disturbance through limited entry, equipment exclusion and/or directional felling. The goal with these designations is to ensure these features persist and develop, and to avoid significantly reducing the frequency of the features in the stands.

Equipment/Operations

- Hand falling or mechanized harvesting is permitted as weather allows. Equipment must be sized correctly for treatment and tree size subject to forester approval.
- Ground yarding by shovel or dozer. Suggested main skid trails will be flagged; alternate locations may be proposed by the logging contractor, subject to forester approval.

Tree Selection Criteria

- Thin from below (remove trees with small crowns) with some retention of young trees with full crowns if present
- Retain existing species composition
- Vary density and create gaps based on tree vigor and condition
- Retain snags and wildlife trees consistent with OSHA requirements

Sensitive Resources

Water: There are no streams inside or adjacent to the treatment area.

Wildlife: Northern spotted owl and marbled murrelet surveys indicate no presence of these species in or near the harvest area therefore there is no impact on operations.

Snags/Woody Debris: Snags are generally located in isolated pockets due to wind events, root rot or other pathogens. Lying dead wood will be left intact whenever possible and defective log segments will be left in the woods to enhance lying dead wood stocks. Select pockets of snags that provide high value habitat will be identified and protected from disturbance. Additional snags may be retained at the logger's discretion if safety permits it.

Botanical: No rare or endangered species were noted. Understory vegetation is variable depending on canopy cover and dominated by native species such as sword fern, hazel, Oregon grape and various forbs. Native shrub plantings at the meadow edge adjacent to the harvest area should be protected.

Invasive Species: False-brome was noted in several areas and will be treated with backpack herbicide application before operations. Exotic blackberry is also present in isolated locations.

Cultural/Archaeological: A cellar hole and old fruit trees from an old homestead-era cabin are located southeast of the meadow just outside the harvest area should be protected. No other historical or cultural sites are known to exist in the operation area.

Access

Access is via Old Peak Road to Woods Creek Road across Starker Forests lands. Improvements to be complete by City of Corvallis prior to logging include:

- Rehabilitate and rock approximately 1,400' of existing road. Treatments include removal of vegetation/small trees, smoothing the running surface and applying 6-12" of rock
- Grading and spot rocking on Old Peak Road following treatment to return the road to pre-use condition.

Contractor will be responsible for grading following use.

Timing

Operations will begin after October 15, 2021 and be completed by June 30, 2022.

Preparatory Work

Initial field reconnaissance and site evaluation has been completed. Prior to logger showing, unit boundaries, retention areas, and road improvement areas will be flagged and GPS located. Sample marking including example group selection areas and marking in thin areas will be completed before the bid showing. Treatment areas will be designated and marking of all trees to cut will be completed prior to startup. Road rehab work will be completed by City prior to start of logging operations.

Environmental Impact Assessment

- Immediate (during/after activities): Soil disturbance will be limited to log landings and main skid trails
- Short-term (1-2 years): Understory vegetation will develop quickly following thinning. Invasive species populations will be monitored and treated if necessary. Minor windthrow is expected, and will generally be left to add to lying dead wood levels. An additional young tree cohort is expected to show up as a result of natural seeding. Group selections areas will support a heavy shrub layer or natural regeneration, depending on beginning conditions and slash cover.
- Mid-term (2-10 years): Stand vigor will be maintained and crowns will expand in response to release. Existing advanced regeneration and shrub layer will increase in growth and vigor.
- Long-term (>10 years): Increased snag recruitment, stabilization of existing dominant trees. Advanced regeneration will be established and begin to compete for limited resources. Shrub layer will stabilize and potentially transition as crowns expand and advanced regeneration occupies mid-story position.

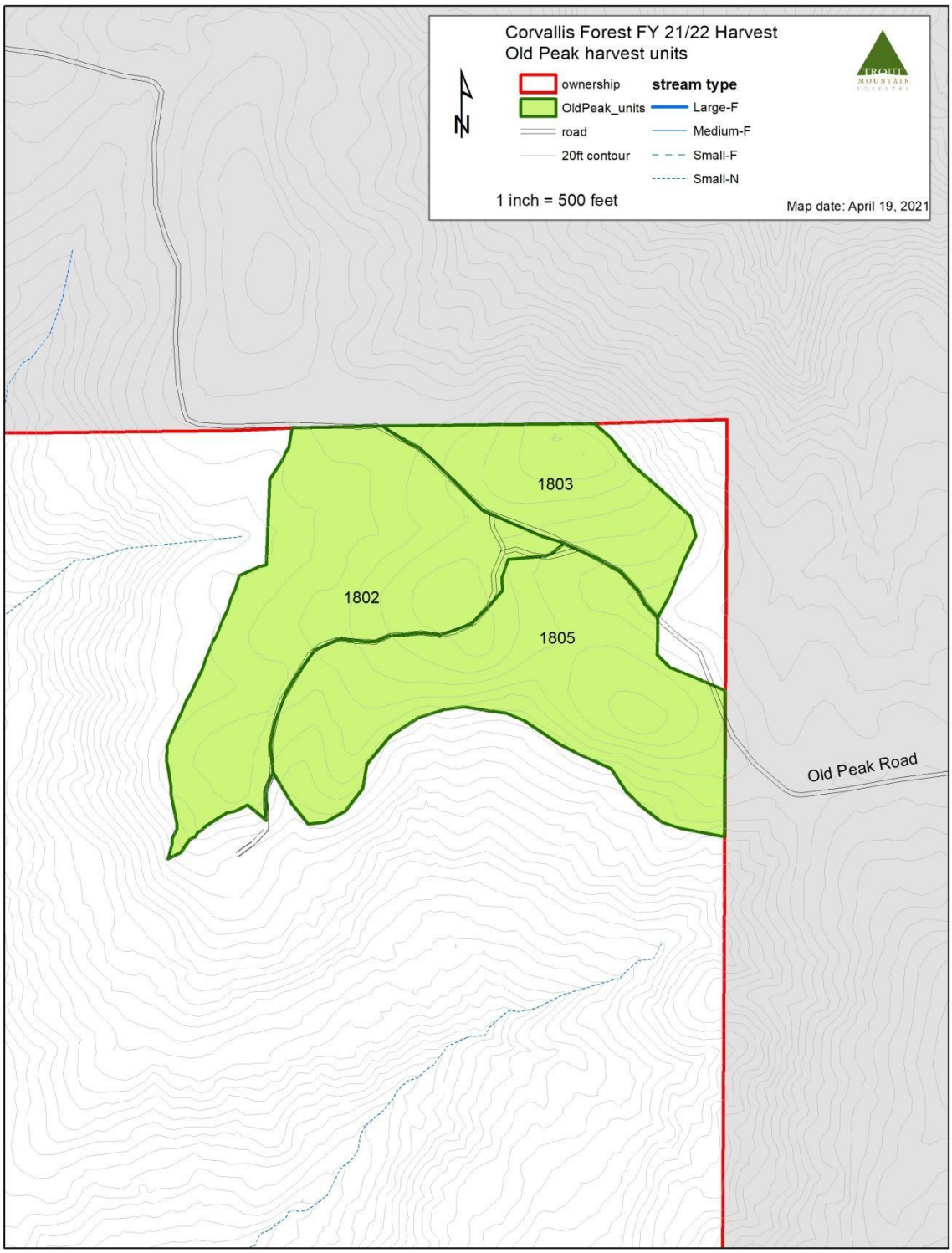
Subsequent Operations

- Road Maintenance: Apply spot rock and grade haul roads as per Starker Forests road use permits. Smooth roadside landings, clear culvert catch basins, maintain ditches, install water bars on haul spurs. Forester will seed landings and disturbed roadsides with native grass mix to minimize erosion risk.

- Regeneration: Some minor planting following installation of openings.
- Monitoring: Monitor roadside weeds spring 2022 and 2023, with spot treatment if necessary. Monitor for blowdown, thinning response, and snag recruitment late. Monitor regeneration, both planted and natural.
- Next Treatment: 15-20 years

Budget (Draft)

Activity	***Detail***	***Cost***	***Income***
Log sales	1,045 mbf @ $850/mbf		$888,250
Logging	1,045 mbf @ $275/mbf	$287,375	
Trucking	1,045 mbf@ $100/mbf	$104,500	
Spur and landing rehab	25 stations @ $150/sta	$3,750	
Spur rock	50 loads @ $250/load	$12,500	
Landing rock	12 loads @ $250/load	$3,000	
Maintenance rocking	15 loads @ $250/load	$3,750	
Planting	5 acres @ $540/ac	$2,700	
Administration		$24,900	
total		***$442,475***	***$888,250***


Corvallis Forest FY 21/22 Harvest
Old Peak harvest units
ownership
OldPeak_units
road
20ft contour
stream type
Large-F
Medium-F
Small-F
Small-N
1 inch = 500 feet
Map date: April 19, 2021
TROUT MOUNTAIN FORESTRY
1803
1802
1805
Old Peak Road