# Timber Sale Appraisal
# Last West

## Sale NC-341-2025-W00748-01

**District: N Cascade**

**Date: February 24, 2025**

## Cost Summary

| | Conifer | Hardwood | Total |
|---|---|---|---|
| **Gross Timber Sale Value** | $1,944,601.63 | $0.00 | $1,944,601.63 |
| | | **Project Work:** | ($23,911.00) |
| | | **Advertised Value:** | $1,920,690.63 |

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**District: N Cascade** **Date: February 24, 2025**

## Timber Description

**Location:** Portions of Sections 1 and 12. T12S, R1E, W.M., Linn County, Oregon.

**Stand Stocking:** 40%

| Specie Name | AvgDBH | Amortization (%) | Recovery (%) |
|---|---|---|---|
| Douglas - Fir | 26 | 0 | 97 |
| Western Hemlock / Fir | 26 | 0 | 97 |
| Red Cedar | 27 | 0 | 97 |

| Volume by Grade | 2S | 3S & 4S 6"-11" | SM & Better | 4S | Total |
|---|---|---|---|---|---|
| **Douglas - Fir** | 2,843 | 702 | 147 | 0 | 3,692 |
| **Western Hemlock / Fir** | 142 | 33 | 0 | 0 | 175 |
| **Red Cedar** | 19 | 0 | 0 | 4 | 23 |
| **Total** | 3,004 | 735 | 147 | 4 | 3,890 |

**Comments:** Pond Values Used: Local Pond Values, December 2024.

Red alder and other hardwoods Stumpage Price = Pond Value minus Logging Cost:
$156.62 /MBF = $480/MBF - $323.38/MBF

Pulp Price: $20/MBF = $2/ton X 10 ton/MBF

Other Costs (with Profit & Risk to be added):
Season 1 Equipment Move-In: Accounted for in Logging Cost
Equipment Weed Wash: (($50/hr labor cost) X 6 hour wash time = $300 X 4 pieces of equipment = $1,200 X 2 Seasons = $2,400
Intermediate support tree: 2 @ $125 = $250
TOTAL Other Costs (with Profit & Risk to be added) = $2,650

Other Costs (No Profit & Risk added):
Weyerhaeuser Road Use/Rock Wear Fee: $2.29/MBF/Mile X 5.14 Miles x 3,890 MBF = $45,787.63

SLASH DISPOSAL COSTS
In-Unit Piling: $300/ac x 45 acres = $13,500
Move-In: (($250/hr loaded transport) + ($25/hr x 2 pilots)) X 4 hour Move-In Cycle = $1200
Equipment Weed Wash: (($50/hr labor cost) X 6 hour wash time = $300
Covering Piles: ($8.00/pile x 135 piles) + ($50/hr x 2 covering personnel x 12 hours) = $2,280
TOTAL Slash Disposal Costs = $17,280

ROAD MAINTENANCE COSTS
Grader Move-In: $1,050
Roller Move-In: $1,050
General Road Maintenance: 3.6 miles X $2,100/mile + (move in $2,100) = $9,660
TOTAL Road Maintenance Costs = $9,660/ 3,890MBF = $2.48/MBF

# Timber Sale Appraisal
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**District: N Cascade**

**Date: February 24, 2025**

## Logging Conditions

**Combination#: 1**

| | |
|---|---|
| Douglas - Fir | 27.00% |
| Western Hemlock / Fir | 27.00% |
| Red Cedar | 27.00% |

**Logging System:** Cable: Large Tower >=70
**Process:** Manual Falling/Delimbing
**yarding distance:** Short (400 ft)
**downhill yarding:** No
**tree size:** Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
**loads / day:** 7
**bd. ft / load:** 4800
**cost / mbf:** $255.33
**machines:** Log Loader (A)
Tower Yarder (Large)

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**Combination#: 2**

| | |
|---|---|
| Douglas - Fir | 73.00% |
| Western Hemlock / Fir | 73.00% |
| Red Cedar | 73.00% |

**Logging System:** Track Skidder
**Process:** Manual Falling/Delimbing
**yarding distance:** Short (400 ft)
**downhill yarding:** No
**tree size:** Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
**loads / day:** 14
**bd. ft / load:** 4800
**cost / mbf:** $148.81
**machines:** Log Loader (B)
Track Skidder

# Timber Sale Appraisal
# Last West

## Sale NC-341-2025-W00748-01

**District: N Cascade** **Date: February 24, 2025**

## Logging Costs

| | | | |
|---|---|---|---|
| **Operating Seasons:** | 2.00 | **Profit Risk:** | 12% |
| **Project Costs:** | $23,911.00 | **Other Costs (P/R):** | $2,650.00 |
| **Slash Disposal:** | $17,280.00 | **Other Costs:** | $45,787.63 |

**Miles of Road** **Road Maintenance:** $2.48

| Dirt | Rock (Contractor) | Rock (State) | Paved |
|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 |

**Hauling Costs**

| Species | $ / MBF | Trips/Day | MBF / Load |
|---|---|---|---|
| Douglas - Fir | $0.00 | 3.0 | 4.8 |
| Western Hemlock / Fir | $0.00 | 3.0 | 4.5 |
| Red Cedar | $0.00 | 2.0 | 4.0 |

# Timber Sale Appraisal
# Last West

## Sale NC-341-2025-W00748-01

**District: N Cascade** **Date: February 24, 2025**

## Logging Costs Breakdown

| Logging | Road Maint | Fire Protect | Hauling | Other P/R appl | Profit & Risk | Slash Disposal | Brand & Paint | Other | Total |
|---|---|---|---|---|---|---|---|---|---|
| **Douglas - Fir** | | | | | | | | | |
| $177.57 | $2.55 | $2.26 | $89.41 | $0.68 | $32.70 | $4.44 | $2.00 | $11.77 | $323.38 |
| **Western Hemlock / Fir** | | | | | | | | | |
| $177.57 | $2.55 | $2.26 | $95.37 | $0.68 | $33.41 | $4.44 | $2.00 | $11.77 | $330.05 |
| **Red Cedar** | | | | | | | | | |
| $177.57 | $2.55 | $2.26 | $160.94 | $0.68 | $41.28 | $4.44 | $2.00 | $11.77 | $403.49 |

| Specie | Amortization | Pond Value | Stumpage | Amortized |
|---|---|---|---|---|
| Douglas - Fir | $0.00 | $835.73 | $512.35 | $0.00 |
| Western Hemlock / Fir | $0.00 | $520.94 | $190.89 | $0.00 |
| Red Cedar | $0.00 | $1,255.65 | $852.16 | $0.00 |

# Timber Sale Appraisal
# Last West

## Sale NC-341-2025-W00748-01

**District: N Cascade** **Date: February 24, 2025**

## Summary

**Amortized**

| Specie | MBF | Value | Total |
|---|---|---|---|
| Douglas - Fir | 0 | $0.00 | $0.00 |
| Western Hemlock / Fir | 0 | $0.00 | $0.00 |
| Red Cedar | 0 | $0.00 | $0.00 |

**Unamortized**

| Specie | MBF | Value | Total |
|---|---|---|---|
| Douglas - Fir | 3,692 | $512.35 | $1,891,596.20 |
| Western Hemlock / Fir | 175 | $190.89 | $33,405.75 |
| Red Cedar | 23 | $852.16 | $19,599.68 |

**Gross Timber Sale Value**

**Recovery:** $1,944,601.63

**Prepared By:** Zane Sandborg **Phone:** 503-781-7754

# SUMMARY OF ROAD COSTS

## SUMMARY TABLE

## Last West Timber Sale

**Project No. 1**

**NEW CONSTRUCT :**

| Segments | Length | 6"-0 Reclaim | Rocking<br>Jaw Run<br>6"- 0" | Crushed<br>1.5"- 0" | Culverts<br>1.5"- 0" | Total<br>Construct $ |
|---|---|---|---|---|---|---|
| B to B1 | 1+50 | 200 cy | | | | $ 3,361.38 |
| C to C1 | 1+05 | 165 cy | | | | $ 2,725.35 |
| Landing A | 0+50 | 60 cy | | | | $ 1,412.24 |
| Landing D | 0+50 | 60 cy | | | | $ 1,412.24 |
| Landing E | 0+40 | 48 cy | | | | $ 1,229.79 |
| Waterbar Spur G, H & I | 17+80 | | | | | $ 5,850.00 |
| Totals | 21+75 | 534 cy | | | | $ 15,991.00 |
| Total miles | 0.41 | | | | | |

**MOVE-IN :** $ 7,920.00

**Project No. 1** $ 23,911.00

| **GRAND TOTAL** | **$ 23,911.00** |
|---|---|

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# MOVE-IN COSTS

## MOVE-IN COSTS

**Last West**

| Move in costs | | | | | | | |
|---|---|---|---|---|---|---|---|
| No. | Equipment Description | Transport Cost | Hours of Transport | Cost to Move | Weedwash Time (Hrs) | Weedwash Labor ($65/hour) | Total Cost |
| 1 | Grader | $ 225.00 | 6 | $ 1,350.00 | 0 | $ - | $ 1,350.00 |
| 1 | Rollers & Compactor | $ 225.00 | 6 | $ 1,350.00 | 0 | $ - | $ 1,350.00 |
| 1 | Excavator | $ 225.00 | 6 | $ 1,350.00 | 6 | $ 390.00 | $ 1,740.00 |
| 0 | Small backhoe | $ 225.00 | 6 | $ 1,350.00 | 3 | $ 195.00 | $ - |
| 1 | Tractors Dozer (D5 - D8) | $ 225.00 | 6 | $ 1,350.00 | 6 | $ 390.00 | $ 1,740.00 |
| 1 | Dump Truck (10 cy +) | $ 110.00 | 2 | $ 220.00 | 0 | $ - | $ 220.00 |
| 1 | Loader | $ 225.00 | 6 | $ 1,350.00 | 0 | $ - | $ 1,350.00 |
| 0 | Road Brusher | $ 225.00 | 6 | $ 1,350.00 | 6 | $ 390.00 | $ - |
| 1 | Water Truck (1000 gallon) | $ 85.00 | 2 | $ 170.00 | 0 | $ - | $ 170.00 |
| | | | | | | Total one time | $ 7,920.00 |

| | |
|---|---|
| **TOTAL MOVE-IN COSTS =** | **$ 7,920.00** |

## PROJECT NO. 1

## NEW CONSTRUCTION

Sale: **Last West** Road Segment: **B to B1**

NEW CONSTRUCTION:

| | Station Quantity | Designed Cubic Yards/Station Pit Run 8"+ | 1.5"- 0" | Reclaim | Soil | Cost per Station or Acre | Sum $ |
|---|---|---|---|---|---|---|---|
| New construct | 1+50 | | | 78 cy | | $ 650.00 | $ 975.00 |
| Two-way Junction | 0+30 | | | 78 cy | | $ 125.00 | $ 125.00 |
| Landing (50' x 50') | 0+50 | | | 120 cy | | $ 600.00 | $ 300.00 |

**SUB-TOTAL** $ 1,400.00

SURFACING:

| Size | Roads | Turn Arounds | Two-way Junctions | Culvert Bedding | Landing | Dissipator (cy/pipe) | Total | Reclaim & Haul Combined $ | Cost |
|---|---|---|---|---|---|---|---|---|---|
| 1.5"- 0" | | | | | | | | $ - | $ - |
| 6" Jaw Run | | | | | | | | $ - | $ - |
| Reclaim Rock | 117 cy | | 23 cy | | 60 cy | | 200 cy | $ 9.79 | $ 1,961.38 |
| | | | | | | Total = | 200 cy | | |

**SUB-TOTAL** $ 1,961.38

**TOTAL** **$ 3,361.38**

Sale: **Last West** Road Segment: **C to C1**

NEW CONSTRUCTION:

| | Station Quantity | Designed Cubic Yards/Station Pit Run 8"+ | 1.5"- 0" | Reclaim | Soil | Cost per Station or Acre | Sum $ |
|---|---|---|---|---|---|---|---|
| New construct | 1+05 | | | 78 cy | | $ 650.00 | $ 682.50 |
| Two-way Junction | 0+30 | | | 78 cy | | $ 125.00 | $ 125.00 |
| Landing (50' x 50') | 0+50 | | | 120 cy | | $ 600.00 | $ 300.00 |

**SUB-TOTAL** $ 1,107.50

SURFACING:

| Size | Roads | Turn Arounds | Two-way Junctions | Culvert Bedding | Landing | Dissipator (cy/pipe) | Total | Reclaim & Haul Combined $ | Cost |
|---|---|---|---|---|---|---|---|---|---|
| 1.5"- 0" | | | | | | | | $ - | $ - |
| 6" Jaw Run | | | | | | | | $ - | $ - |
| Reclaim Rock | 82 cy | | 23 cy | | 60 cy | | 165 cy | $ 9.79 | $ 1,617.85 |
| | | | | | | Total = | 165 cy | | |

**SUB-TOTAL** $ 1,617.85

**GRAND TOTAL** **$ 2,725.35**

## NEW CONSTRUCTION

**Last West** Road Segment: **Landing A**

| | Station | Designed Cubic Yards/Station | | | | Cost per | |
|---|---|---|---|---|---|---|---|
| | Quantity | Pit Run 8"+ | 1.5"- 0" | Reclaim | Soil | Station or Acre | Sum $ |
| New Construct Landing | 0+50 | | | 120 cy | | $ 650.00 | $ 325.00 |
| Grubbing | 1 | | | | | $ 500.00 | $ 500.00 |

| | |
|---|---|
| **SUB-TOTAL** | $ 825.00 |

| | | Turn | Two-way | Culvert | | Dissipator | | Reclaim & Haul | |
|---|---|---|---|---|---|---|---|---|---|
| Size | Roads | Arounds | Junctions | Bedding | Landing | (cy/pipe) | Total | Combined $ | Cost |
| 1.5"- 0" | | | | | | | | $ - | $ - |
| 6" Jaw Run | | | | | | | | $ - | $ - |
| Reclaim Rock | | | | | 60 cy | | 60 cy | $ 9.79 | $ 587.24 |
| | | | | | | Total = | 60 cy | | |

| | |
|---|---|
| **SUB-TOTAL** | $ 587.24 |
| **GRAND TOTAL** | **$ 1,412.24** |

**Last West** Road Segment: **Landing D**

| | Station | Designed Cubic Yards/Station | | | | Cost per | |
|---|---|---|---|---|---|---|---|
| | Quantity | Pit Run 8"+ | 1.5"- 0" | Reclaim | Soil | Station or Acre | Sum $ |
| New construct Landing | 0+50 | | | 120 cy | | $ 650.00 | $ 325.00 |
| Grubbing | 1 | | | | | $ 500.00 | $ 500.00 |

| | |
|---|---|
| **SUB-TOTAL** | $ 825.00 |

| | | Turn | Two-way | Culvert | | Dissipator | | Reclaim & Haul | |
|---|---|---|---|---|---|---|---|---|---|
| Size | Roads | Arounds | Junctions | Bedding | Landing | (cy/pipe) | Total | Combined $ | Cost |
| 1.5"- 0" | | | | | | | | $ - | $ - |
| 6" Jaw Run | | | | | | | | $ - | $ - |
| Reclaim Rock | | | | | 60 cy | | 60 cy | $ 9.79 | $ 587.24 |
| | | | | | | Total = | 60 cy | | |

| | |
|---|---|
| **SUB-TOTAL** | $ 587.24 |
| **GRAND TOTAL** | **$ 1,412.24** |

**Last West** Road Segment: **Landing E**

| | Station | Designed Cubic Yards/Station | | | | Cost per | |
|---|---|---|---|---|---|---|---|
| | Quantity | Pit Run 8"+ | 1.5"- 0" | Reclaim | Soil | Station or Acre | Sum $ |
| New construct Landing | 0+40 | | | 120 cy | | $ 650.00 | $ 260.00 |
| Grubbing | 1 | | | | | $ 500.00 | $ 500.00 |

| | |
|---|---|
| **SUB-TOTAL** | $ 760.00 |

| | | Turn | Two-way | Culvert | | Dissipator | | Reclaim & Haul | |
|---|---|---|---|---|---|---|---|---|---|
| Size | Roads | Arounds | Junctions | Bedding | Landing | (cy/pipe) | Total | Combined $ | Cost |
| 1.5"- 0" | | | | | | | | $ - | $ - |
| 6" Jaw Run | | | | | | | | $ - | $ - |
| Reclaim Rock | | | | | 48 cy | | 48 cy | $ 9.79 | $ 469.79 |
| | | | | | | Total = | 48 cy | | |

| | |
|---|---|
| **SUB-TOTAL** | $ 469.79 |
| **GRAND TOTAL** | **$ 1,229.79** |

## RECLAIM ROCKED SPURS

Sale: **Last West**

Road Segment: **Spur G, H & I (Reclaim Rock)**

NEW CONSTRUCTION:

| | Station | Designed Cubic Yards/Station | | | | Cost per | |
|---|---|---|---|---|---|---|---|
| | Quantity | Reclaim 6"-0" | 1.5"- 0" | Reclaim | Soil | Station or Acre | Sum $ |
| Reclaim 3- spurs | 17+80 | 30 | | | | $ 150.00 | $ 2,400.00 |
| Waterbar | 23 | | | | | $ 150.00 | $ 3,450.00 |

**SUB-TOTAL** $ 5,850.00

SURFACING:

| Size | Roads | Turn Arounds | Two-way Junctions | Culvert Bedding | Landing Tailtrack | Total | Haul & Crush Combined $ | Cost |
|---|---|---|---|---|---|---|---|---|
| 1.5"- 0" | | | | | | | $ - | $ - |
| 6" Jaw Run | | | | | | | $ - | $ - |
| Reclaim Rock | 534 cy | | | | | 534 cy | $ - | $ - |
| | | | | | Total = | 534 cy | | |

**SUB-TOTAL** $ -

**GRAND TOTAL** **$ 5,850.00**

Last West Timber Sale

| Road Segment: **B to B1** | | | | Point to Point | | Sta. to Sta. | | Total Volume (CY) |
|---|---|---|---|---|---|---|---|---|
| | | | | B to B1 | | 0+00 to 1+50 | | |
| **Application** | **Rock Size and Type** | **Location** | **Depth of Rock (in)** | **Volume (CY) Per** | | **Number of** | | |
| Two-way Junction | Reclaim | 0+00 to 0+30 | 10 | Station | 78 | Stations | 0.30 | 23 |
| New Construct | Reclaim | 0+30 to 0+70 | 10 | Station | 78 | Stations | 1.5 | 117 |
| Landing (50' x 50') | Reclaim | 0+70 to 1+50 | 10 | Station | 120 | Landing | 0.5 | 60 |
| Total Rock for Road Segment: | | | | | | | | **200** |

| Road Segment: **C to C1** | | | | Point to Point | | Sta. to Sta. | | Total Volume (CY) |
|---|---|---|---|---|---|---|---|---|
| | | | | C to C1 | | 0+00 to 1+05 | | |
| **Application** | **Rock Size and Type** | **Location** | **Depth of Rock (in)** | **Volume (CY) Per** | | **Number of** | | |
| Two-way Junction | Reclaim | 0+00 to 0+30 | 10 | Station | 78 | Stations | 0.30 | 23 |
| New Construct | Reclaim | 0+30 to 0+25 | 10 | Station | 78 | Stations | 1.05 | 82 |
| Landing (50' x 50') | Reclaim | 0+55 to 1+05 | 10 | Station | 120 | Stations | 0.5 | 60 |
| Total Rock for Road Segment: | | | | | | | | **165** |

| Landing **A** | | | | Point to Point | | Station | | Total Volume (CY) |
|---|---|---|---|---|---|---|---|---|
| | | | | A | | 0+50 | | |
| **Application** | **Rock Size and Type** | **Location** | **Depth of Rock (in)** | **Volume (CY) Per** | | **Number of** | | |
| Landing (Reclaim) | Reclaim | Green Mnt Rd Spur I | 10 | Station | 120 | Stations | 0.50 | 60 |
| Total Rock for Road Segment: | | | | | | | | **60** |

| Landing **D** | | | | Point to Point | | Station | | Total Volume (CY) |
|---|---|---|---|---|---|---|---|---|
| | | | | D | | 138+86 | | |
| **Application** | **Rock Size and Type** | **Location** | **Depth of Rock (in)** | **Volume (CY) Per** | | **Number of** | | |
| Landing (Reclaim) | Reclaim | Green Mountain Road | 10 | Station | 120 | Stations | 0.50 | 60 |
| Total Rock for Road Segment: | | | | | | | | **60** |

| Landing **E** | | | | Point to Point | | Station | | Total Volume (CY) |
|---|---|---|---|---|---|---|---|---|
| | | | | E | | 15+94 | | |
| **Application** | **Rock Size and Type** | **Location** | **Depth of Rock (in)** | **Volume (CY) Per** | | **Number of** | | |
| Landing (Reclaim) | Reclaim | Green Mnt 200 Road | 10 | Station | 120 | Stations | 0.40 | 48 |
| Total Rock for Road Segment: | | | | | | | | **48** |

| Total Rock Needed | 534 cy |
|---|---|

## Last West (Sale Name)

| | | | | | |
|---|---|---|---|---|---|
| **Spur H & I** | (Quarry) | **n/a** | | (Stockpile) | |
| Reclaim | (Rock Type) | D10 | (Truck) | 14-G | |
| **6"-0"** | (Rock Size) | Cat Ex | (Excavator) | D8 | |

**Hauling Time Computation**

| | | | | |
|---|---|---|---|---|
| 50 MPH | | Miles per round trip | 0 | Minutes |
| 40 MPH | | Miles per round trip | 0 | Minutes |
| 35 MPH | | Miles per round trip | 0 | Minutes |
| 30 MPH | | Miles per round trip | 0 | Minutes |
| 25 MPH | 0.5 | Miles per round trip | 1 | Minutes |
| 20 MPH | 0.7 | Miles per round trip | 2 | Minutes |
| 15 MPH | | Miles per round trip | 0 | Minutes |
| 10 MPH | 0.3 | Miles per round trip | 2 | Minutes |
| 5 MPH | | Miles per round trip | 0 | Minutes |
| | **1.5** | **Total Miles per Round Trip** | | |
| Dump or Spread Time per Round Trip | | | 7 | Minutes |
| Total Hauling Cycle Time for this Setting (80% Efficiency) | | | 12 | Minutes |
| Operator Efficiency Correction (80% Efficiency) | | | 15 | Minutes |

**Time Per Cubic Yard**

| | | |
|---|---|---|
| Hauling Only (per cubic yard) | 1.26 | min/cu.yd |
| Delay Time (while loading = loading time per cubic yard) | 0.83 | min/cu.yd |
| Total Time Per Cubic Yard | 2.09 | min/cu.yd |

**Hauling Cost Per Cubic Yard Computation**

| | | |
|---|---|---|
| Cost of Truck Per Hour | $ 65.00 | per Hr. |
| Cost of Truck Operator Pre Hour | $ 70.00 | per Hr. |
| Total Operating Cost Per Hour | $ 135.00 | per Hr. |
| Operating Cost Per Minute | $ 2.25 | per Min. |
| Cost Per Cubic Yard | **$ 4.71** | per Cu. Yd. |
| **Loading Cost Per Cubic Yard** | **$ 2.50** | per Cu. Yd. |

**Spreading Cost Per Cubic Yard**

| | | |
|---|---|---|
| Cost of Grader Per Hour | $ 75.00 | per Hr. |
| Cost of Grader Operator Per Hour | $ 70.00 | per Hr. |
| Cost of Compaction Equip. Per Hour | $ 50.00 | per Hr. |
| Cost of Compaction Equip. Op. Per Hour | $ 70.00 | per Hr. |
| Total Operating Cost Per Hour | $ 265.00 | per Hr. |
| Cost Per Cubic Yard to Place and Compact | **$ 2.58** | Cu. Yd. |
| **Total Cost to Load, Haul and Place** | **$ 9.79** | Cu. Yd. |
| **No Crushing** | **$ -** | |
| **Grand Total Combined** | **$ 9.79** | |

**Rates**

| **Dump Truck** | **Rate ($/Hr.)** | **Capacity (cy)** | **Operator ($/Hr.)** | **Total** |
|---|---|---|---|---|
| B20 | $ 80.00 | 20 | $ 70.00 | $ 150.00 |
| D10 | $ 65.00 | 12 | $ 70.00 | $ 135.00 |
| OH25 | $ 80.00 | 25 | $ 70.00 | $ 150.00 |

| **Grader** | **Rate ($/Hr.)** | **Operator ($/Hr.)** | **Total** |
|---|---|---|---|
| 12-G | $ 65.00 | $ 70.00 | $ 135.00 |
| 14-G | $ 75.00 | $ 70.00 | $ 145.00 |

| **Compaction Equipment** | **Rate ($/Hr.)** | **Operator ($/Hr.)** | **Total** |
|---|---|---|---|
| Vibratory Roller | $ 50.00 | $ 70.00 | $ 120.00 |
| Vib. Grid Roller | $ 50.00 | $ 70.00 | $ 120.00 |
| Hand Held Compactor | $ 20.00 | $ 70.00 | $ 90.00 |

| **Tractors** | **Rate ($/Hr.)** | **Operator ($/Hr.)** | **Total** |
|---|---|---|---|
| D4 | $ 60.00 | $ 70.00 | $ 130.00 |
| D6 | $ 85.00 | $ 70.00 | $ 155.00 |
| D7 | $ 100.00 | $ 70.00 | $ 170.00 |
| D8 | $ 125.00 | $ 70.00 | $ 195.00 |

| **Loader** | **Rate ($/Hr.)** | **Capacity (cy)** | **Operator ($/Hr.)** | **Total** |
|---|---|---|---|---|
| 14G Cat Wheel Loader | $ 60.00 | 3 | $ 50.00 | $ 110.00 |
| Cat Excavator | $ 130.00 | 3 | $ 50.00 | $ 180.00 |

| **Loading Costs** | **Rate (Min/Load)** | **Delay (Min)** | **Total Loading Time (Min)** |
|---|---|---|---|
| Crushed Rock | 5 | 1.25 | 6.25 |
| Reclaim Rock | 5 | 5.00 | 10.00 |
| Rip Rap Rock | 10 | 2.50 | 12.5 |
| Fill Material | 5 | 1.25 | 6.25 |

| **Dump or Spread Time (Min)** | |
|---|---|
| Pile Dump | 1 |
| Truck Spread | 7 |
| Spreading w/Grader | 5 |
| Place Rip rap | 10 |

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## Last West (Sale Name)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Hammond 400** | (Quarry) | **Hammond 400** | | (Stockpile) | Spread | |
| Crushed | (Rock Type) | D10 | (Truck) | 14-G | Vibratory Roller | (Compactor) |
| **1.5"-0"** | (Rock Size) | Cat Ex | (Excavator) | D8 | | |

### Hauling Time Computation

| Speed | Miles | | Time | Unit |
|---|---|---|---|---|
| 50 MPH | | Miles per round trip | 0 | Minutes |
| 40 MPH | | Miles per round trip | 0 | Minutes |
| 35 MPH | | Miles per round trip | 0 | Minutes |
| 30 MPH | 9 | Miles per round trip | 18 | Minutes |
| 25 MPH | 1 | Miles per round trip | 2 | Minutes |
| 20 MPH | | Miles per round trip | 0 | Minutes |
| 15 MPH | | Miles per round trip | 0 | Minutes |
| 10 MPH | 0.8 | Miles per round trip | 5 | Minutes |
| 5 MPH | | Miles per round trip | 0 | Minutes |
| | **10.8** | **Total Miles per Round Trip** | | |
| Dump or Spread Time per Round Trip | | | 0 | Minutes |
| Total Hauling Cycle Time for this Setting (100% Efficiency) | | | 25 | Minutes |
| Operator Efficiency Correction (80% Efficiency) | | | 32 | Minutes |

### Time Per Cubic Yard

| | | |
|---|---|---|
| Hauling Only (per cubic yard) | 2.65 | min/cu.yd |
| Delay Time (while loading = loading time per cubic yard) | 0.83 | min/cu.yd |
| Total Time Per Cubic Yard | 3.48 | min/cu.yd |

### Hauling Cost Per Cubic Yard Computation

| | | |
|---|---|---|
| Cost of Truck Per Hour | $ 65.00 | per Hr. |
| Cost of Truck Operator Pre Hour | $ 70.00 | per Hr. |
| Total Operating Cost Per Hour | $ 135.00 | per Hr. |
| Operating Cost Per Minute | $ 2.25 | per Min. |
| Cost Per Cubic Yard | **$ 7.84** | per Cu. Yd. |
| **Loading Cost Per Cubic Yard** | **$ 1.74** | per Cu. Yd. |
| **Spreading Cost Per Cubic Yard** | | |
| Cost of Grader Per Hour | $ 75.00 | per Hr. |
| Cost of Grader Operator Per Hour | $ 70.00 | per Hr. |
| Cost of Compaction Equip. Per Hour | $ 50.00 | per Hr. |
| Cost of Compaction Equip. Op. Per Hour | $ 70.00 | per Hr. |
| Total Operating Cost Per Hour | $ 265.00 | per Hr. |
| Cost Per Cubic Yard to Place and Compact | **$ 2.58** | Cu. Yd. |
| **Total Cost to Load, Haul and Place** | **$ 12.15** | Cu. Yd. |
| **No Crushing** | **$ -** | |
| **Grand Total Combined** | **$ 12.15** | |

### Rates

| Dump Truck | Rate ($/Hr.) | Capacity (cy) | Operator ($/Hr.) | Total |
|---|---|---|---|---|
| B20 | $ 80.00 | 20 | $ 70.00 | $ 150.00 |
| D10 | $ 65.00 | 12 | $ 70.00 | $ 135.00 |
| OH25 | $ 80.00 | 25 | $ 70.00 | $ 150.00 |

| Grader | Rate ($/Hr.) | Operator ($/Hr.) | Total |
|---|---|---|---|
| 12-G | $ 65.00 | $ 70.00 | $ 135.00 |
| 14-G | $ 75.00 | $ 70.00 | $ 145.00 |

| Compaction Equipment | Rate ($/Hr.) | Operator ($/Hr.) | Total |
|---|---|---|---|
| Vibratory Roller | $ 50.00 | $ 70.00 | $ 120.00 |
| Vib. Grid Roller | $ 50.00 | $ 70.00 | $ 120.00 |
| Hand Held Compactor | $ 20.00 | $ 70.00 | $ 90.00 |

| Tractors | Rate ($/Hr.) | Operator ($/Hr.) | Total |
|---|---|---|---|
| D4 | $ 60.00 | $ 70.00 | $ 130.00 |
| D6 | $ 85.00 | $ 70.00 | $ 155.00 |
| D7 | $ 100.00 | $ 70.00 | $ 170.00 |
| D8 | $ 125.00 | $ 70.00 | $ 195.00 |

| Loader | Rate ($/Hr.) | Capacity (cy) | Operator ($/Hr.) | Total |
|---|---|---|---|---|
| 14G Cat Wheel Loader | $ 60.00 | 3 | $ 70.00 | $ 130.00 |
| Cat Excavator | $ 130.00 | 3 | $ 70.00 | $ 200.00 |

| Loading Costs | Rate (Min/Load) | Delay (Min) | Total Loading Time (Min) |
|---|---|---|---|
| Crushed Rock | 5 | 1.25 | 6.25 |
| Reclaim Rock | 5 | 5.00 | 10.00 |
| Rip Rap Rock | 10 | 2.50 | 12.5 |
| Fill Material | 5 | 1.25 | 6.25 |

| Dump or Spread Time (Min) | |
|---|---|
| Pile Dump | 0.25 |
| Truck Spread | 7 |
| Spreading w/Grader | 5 |
| Place Rip rap | 10 |

## Last West (Sale Name)

| | | | |
|---|---|---|---|
| **Hammond 400** | (Quarry) | **Hammond 400** | (Stockpile) |
| Jaw run | (Rock Type) | D10 | (Truck) |
| **6"-0"** | (Rock Size) | Cat Ex | (Excavator) |

**Hauling Time Computation**

| | | | | |
|---|---|---|---|---|
| 50 MPH | | Miles per round trip | 0 | Minutes |
| 40 MPH | | Miles per round trip | 0 | Minutes |
| 35 MPH | | Miles per round trip | 0 | Minutes |
| 30 MPH | 4 | Miles per round trip | 8 | Minutes |
| 25 MPH | 5 | Miles per round trip | 12 | Minutes |
| 20 MPH | 0.8 | Miles per round trip | 2 | Minutes |
| 15 MPH | 0.5 | Miles per round trip | 2 | Minutes |
| 10 MPH | 0.5 | Miles per round trip | 3 | Minutes |
| 5 MPH | | Miles per round trip | 0 | Minutes |
| | 10.8 | **Total Miles per Round Trip** | | |
| Dump or Spread Time per Round Trip | | | 0 | Minutes |
| Total Hauling Cycle Time for this Setting (100% Efficiency) | | | 28 | Minutes |
| Operator Efficiency Correction (80% Efficiency) | | | 35 | Minutes |

**Time Per Cubic Yard**

| | | |
|---|---|---|
| Hauling Only (per cubic yard) | 2.88 | min/cu.yd |
| Delay Time (while loading = loading time per cubic yard) | 0.83 | min/cu.yd |
| Total Time Per Cubic Yard | 3.71 | min/cu.yd |

| | | |
|---|---|---|
| **Hauling Cost Per Cubic Yard Computation** | | |
| Cost of Truck Per Hour | $ 65.00 | per Hr. |
| Cost of Truck Operator Pre Hour | $ 70.00 | per Hr. |
| Total Operating Cost Per Hour | $ 135.00 | per Hr. |
| Operating Cost Per Minute | $ 2.25 | per Min. |
| Cost Per Cubic Yard | **$ 8.36** | per Cu. Yd. |
| **Loading Cost Per Cubic Yard** | **$ 1.74** | per Cu. Yd. |
| **Spreading Cost Per Cubic Yard** | | |
| Cost of Grader Per Hour | $ 75.00 | per Hr. |
| Cost of Grader Operator Per Hour | $ 70.00 | per Hr. |
| Cost of Compaction Equip. Per Hour | $ 50.00 | per Hr. |
| Cost of Compaction Equip. Op. Per Hour | $ 70.00 | per Hr. |
| Total Operating Cost Per Hour | $ 265.00 | per Hr. |
| Cost Per Cubic Yard to Place and Compact | **$ 2.58** | Cu. Yd. |
| **Total Cost to Load, Haul and Place** | **$ 12.67** | Cu. Yd. |
| **No Crushing** | **$ -** | |
| **Grand Total Combined** | **$ 12.67** | |

**Rates**

| Dump Truck | Rate ($/Hr.) | Capacity (cy) | Operator ($/Hr.) | Total |
|---|---|---|---|---|
| B20 | $ 80.00 | 20 | $ 70.00 | $ 150.00 |
| D10 | $ 65.00 | 12 | $ 70.00 | $ 135.00 |
| OH25 | $ 80.00 | 25 | $ 70.00 | $ 150.00 |

| Grader | Rate ($/Hr.) | Operator ($/Hr.) | Total |
|---|---|---|---|
| 12-G | $ 65.00 | $ 70.00 | $ 135.00 |
| 14-G | $ 75.00 | $ 70.00 | $ 145.00 |

| Compaction Equipment | Rate ($/Hr.) | Operator ($/Hr.) | Total |
|---|---|---|---|
| Vibratory Roller | $ 50.00 | $ 70.00 | $ 120.00 |
| Vib. Grid Roller | $ 50.00 | $ 70.00 | $ 120.00 |
| Hand Held Compactor | $ 20.00 | $ 70.00 | $ 90.00 |

| Tractors | Rate ($/Hr.) | Operator ($/Hr.) | Total |
|---|---|---|---|
| D4 | $ 60.00 | $ 70.00 | $ 130.00 |
| D6 | $ 85.00 | $ 70.00 | $ 155.00 |
| D7 | $ 100.00 | $ 70.00 | $ 170.00 |
| D8 | $ 125.00 | $ 70.00 | $ 195.00 |

| Loader | Rate ($/Hr.) | Capacity (cy) | Operator ($/Hr.) | Total |
|---|---|---|---|---|
| 14G Cat Wheel Loader | $ 60.00 | 3 | $ 70.00 | $ 130.00 |
| Cat Excavator | $ 130.00 | 3 | $ 70.00 | $ 200.00 |

| Loading Costs | Rate (Min/Load) | Delay (Min) | Total Loading Time (Min) |
|---|---|---|---|
| Crushed Rock | 5 | 1.25 | 6.25 |
| Reclaim Rock | 5 | 5.00 | 10.00 |
| Rip Rap Rock | 10 | 2.50 | 12.5 |
| Fill Material | 5 | 1.25 | 6.25 |

| Dump or Spread Time (Min) | |
|---|---|
| Pile Dump | 0.25 |
| Truck Spread | 7 |
| Spreading w/Grader | 5 |
| Place Rip rap | 10 |

James Stuart 02/21/2025

# Last West
(Sale Name)

| On site | EndHual | To nearest waste area | |
|---|---|---|---|
| Waste | (Type) | D10 | (Truck) |
| | (Rock Size) | | (Loader) |
| | (Water Truck Size) | | Gal/cu.yd |

**Hauling Time Computation**

| | | | | |
|---|---|---|---|---|
| 50 MPH | | Miles per round trip | 0 | Minutes |
| 40 MPH | | Miles per round trip | 0 | Minutes |
| 35 MPH | | Miles per round trip | 0 | Minutes |
| 30 MPH | | Miles per round trip | 0 | Minutes |
| 25 MPH | | Miles per round trip | 0 | Minutes |
| 20 MPH | | Miles per round trip | 0 | Minutes |
| 15 MPH | 0.5 | Miles per round trip | 2 | Minutes |
| 10 MPH | | Miles per round trip | 0 | Minutes |
| 5 MPH | | Miles per round trip | 0 | Minutes |
| | **0.5** | **Total Miles per Round Trip** | | |
| Dump or Spread Time per Round Trip | | | 0 | Minutes |
| Total Hauling Cycle Time for this Setting (100% Efficiency) | | | 2.25 | Minutes |
| Operator Efficiency Correction (80% Efficiency) | | | 2.81 | Minutes |

**Time Per Cubic Yard**

| | | |
|---|---|---|
| Hauling Only (per cubic yard) | 0.23 | min/cu.yd |
| Delay Time (while loading = loading time per cubic yard) | 0.52 | min/cu.yd |
| Total Time Per Cubic Yard | 0.76 | min/cu.yd |

**Hauling Cost Per Cubic Yard Computation**

| | | | |
|---|---|---|---|
| Cost of Truck Per Hour | $ | 60.00 | per Hr. |
| Cost of Truck Operator Pre Hour | $ | 70.00 | per Hr. |
| Total Operating Cost Per Hour | $ | 130.00 | per Hr. |
| Operating Cost Per Minute | $ | 2.17 | per Min. |
| Cost Per Cubic Yard | **$** | **1.64** | per Cu. Yd. |
| **Loading Cost Per Cubic Yard** | **$** | **1.74** | per Cu. Yd. |
| **Spreading Cost Per Cubic Yard** | | | |
| Cost of Excavator Per Hour | $ | 130.00 | per Hr. |
| Cost of Excavator Operator Per Hour | $ | 70.00 | per Hr. |
| Cost of Compaction Equip. Per Hour | $ | 50.00 | per Hr. |
| Cost of Compaction Equip. Op. Per Hour | $ | 70.00 | per Hr. |
| Total Operating Cost Per Hour | $ | 320.00 | per Hr. |
| Cost Per Cubic Yard to Place and Compact | $ | 2.22 | Cu. Yd. |
| **Total Cost to Load, Haul, and Place** | **$** | **5.59** | Cu. Yd. |

**Rates**

| Dump Truck | Rate ($/Hr.) | Capacity (cy) | Operator ($/Hr.) | Total |
|---|---|---|---|---|
| B20 | $ 80.00 | 20 | $ 70.00 | $ 150.00 |
| D10 | $ 60.00 | 12 | $ 70.00 | $ 130.00 |
| OH25 | $ 80.00 | 25 | $ 70.00 | $ 150.00 |
| **Grader** | **Rate ($/Hr.)** | | **Operator ($/Hr.)** | **Total** |
| 12-G | $ 55.00 | | $ 70.00 | $ 125.00 |
| 14-G | $ 60.00 | | $ 70.00 | $ 130.00 |
| **Compaction Equipment** | **Rate ($/Hr.)** | | **Operator ($/Hr.)** | **Total** |
| Vibratory Roller | $ 50.00 | | $ 70.00 | $ 120.00 |
| Vib. Grid Roller | $ 50.00 | | $ 70.00 | $ 120.00 |
| Hand Held Compactor | $ 20.00 | | $ 70.00 | $ 90.00 |
| **Tractors** | **Rate ($/Hr.)** | | **Operator ($/Hr.)** | **Total** |
| D4 | $ 35.00 | | $ 70.00 | $ 105.00 |
| D6 | $ 60.00 | | $ 70.00 | $ 130.00 |
| D7 | $ 70.00 | | $ 70.00 | $ 140.00 |
| D8 | $ 110.00 | | $ 70.00 | $ 180.00 |
| **Loader** | **Rate ($/Hr.)** | **Capacity (cy)** | **Operator ($/Hr.)** | **Total** |
| 14G Cat Wheel Loader | $ 60.00 | 3 | $ 70.00 | $ 130.00 |
| Cat 325 Excavator | $ 130.00 | 1.5 | $ 70.00 | $ 200.00 |
| **Loading Costs/min** | | **Load** | **Delay** | **Total** |
| Crushed Rock | | 5 | 1.25 | 6.25 |
| Pit-Run/Jaw-Run Rock | | 5 | 1.25 | 6.25 |
| Rip Rap Rock | | 5 | 1.25 | 6.25 |
| Fill Material | | 5 | 1.25 | 6.25 |
| **Dump or Spread Time (Min)** | | | | |
| Pile Dump | | 0.25 | | |
| Truck Spread | | 0.5 | | |
| Spreading w/dozer | | 5 | | |
| Place with Excavator | | 6 | | |

# CRUISE REPORT
# Last West
# Contract No. NC-341-2025-W00748-01

**1. Locations:**
Portions of Sections 1 & 12, T12S, R1E, W.M., Linn County, Oregon.

**2. Cruise Design:**

The cruise design for the timber sale is as follows:

Unit 1: A desired sampling error of 12% at a 68% confidence level was needed. 31 plots were installed in this area utilizing a 40 BAF. The achieved standard error on the net board foot volume was 5.8%.

**3. Sampling Methods:**

Unit 1 and 2 were cruised in August 2020, the sale contained 15 measure Plots and 16 count Plots. Plots falling on or near existing roads, no-harvest areas, or riparian management areas were offset 1/2 chain. The timber sale unit was cruised with a 40 BAF. The sale was postponed until 2025. Due to changes in the sale shape, 1 count and 1 cruise plot were dropped from the original cruise.

5 measure plots were re-cruised in 2025 to determine the volume growth across the timber sale. The stand had grown 14%.

**4. Timber Description :**

The Timber is primarily 85 year-old Douglas-fir. The stand contains a small amount of Western hemlock, and Western redcedar. For Unit 1 and Unit 2 the average Douglas-fir to be removed is approximately 26 inches DBH. The average volume per acre to be harvested (net) is approximately 62.5 MBF for Units 1 and 2.

**5. Tree Measurement and Grading:**

All grade plot sample trees were measured and graded following Columbia River Log Scale grade rules and favoring 40 foot segments.

a) **Height Standards:**
Total tree heights were measured to the nearest foot. Bole heights were calculated to 25% of DBH.
b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest tenth of an inch.
c) **Form Factors:** Form factors were measured for each grade tree using a form point of 16 feet.

**6. Data Processing:**
a) **Volumes and Statistics:** Cruise, volume estimates and sampling statistics were derived from Super Ace 2008 cruise software. The 2020 gross volume was grown by 14% using the 2025 re-cruise data. Unit 2 R/W volume was added to Unit 1 volume

b) **Deductions:** A 6% volume deduction was used for Douglas-fir and an 8% volume deduction for Western hemlock and Western redcedar for hidden defect and breakage.

c) **Acreage:** Unit 1 has a total net acres of 62
Unit 2 (R/W) has a total net acres of .2

**7. Cruisers:**

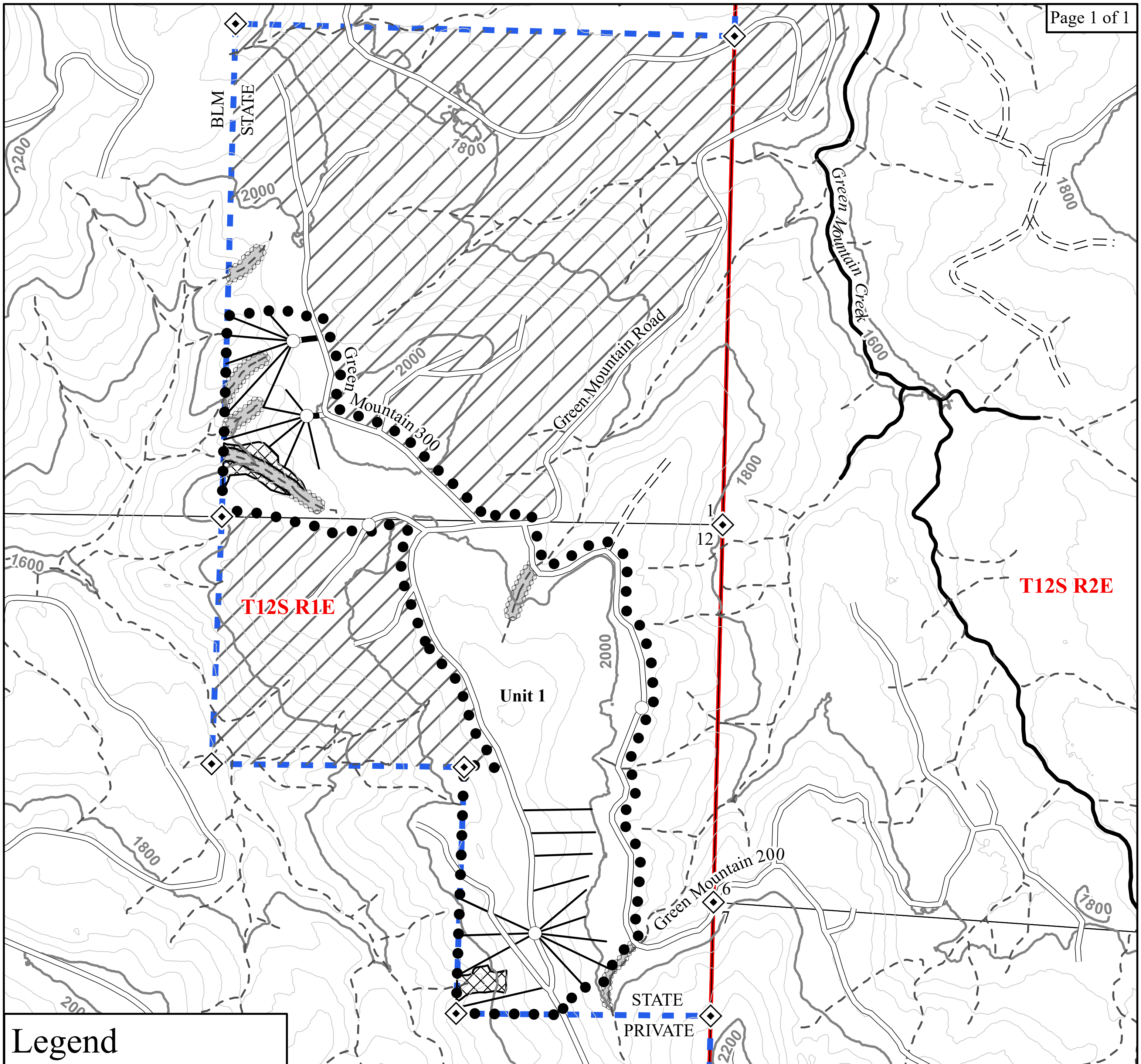
Sale Area cruised by ODF in 2020: Mitchell, Walter, Kaupp, Taylor, Loffelmacher

Sale Area re-cruised by ODF in 2025: Reardon

**8. Total Volume (MBF) by Species and Grade:**

| Unit | Species | 2020 Gross Volume (MBF) | Growth % | 2025 Gross Volume (MBF) | R/W (MBF) | Cruised D & B | Cruised D & B (MBF) | Hidden D & B | Hidden D & B (MBF) | Net Sale Volume |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DF | 3,464 | 14% | 3,949 | 12 | 0.8% | 32 | 6% | 237 | 3692 |
| | WH | 168 | 14% | 192 | <1 | 0.7% | 1 | 8% | 15 | 175 |
| | RC | 22 | 14% | 25 | <1 | 0% | 0 | 8% | 2 | 23 |
| **Total** | | 3,654 | | 4,166 | 12 | .8% | 33 | 6.1% | 254 | **3,890** |

| Unit | Species | Avg. DBH | Total Net. Vol. | Special Mill | 2-Saw | 3-Saw | 4-Saw |
|---|---|---|---|---|---|---|---|
| Units 1&2 | Douglas-fir | 26 | Grade % | 4% | 77% | 16% | 3% |
| | | | 3,692 | 147 | 2,843 | 591 | 111 |
| | Western Hemlock | 26 | Grade % | - | 81% | 16% | 3% |
| | | | 175 | - | 142 | 28 | 5 |
| | Western Red Cedar | 27 | Grade % | - | 83% | - | 17% |
| | | | 23 | - | 19 | - | 4 |
| **Total** | | | **3,890** | **147** | **3,004** | **619** | **120** |




## Legend

- Timber Sale Boundary
- Stream Buffer
- Slope Buffer
- Green Tree Rentention Area
- Reforestation Area
- Santiam State Forest
- Surfaced Road
- Unsurfaced Road
- New Construction
- Fish
- Non-Fish
- Monument
- Landing

# LOGGING PLAN

OF TIMBER SALE CONTRACT NO. NC-341-2025-W00748-01
LAST WEST
PORTIONS OF SECTIONS 1 & 12, T12S, R1E, W.M.
LINN COUNTY, OREGON

| UNIT | CABLE ACRES | GROUND ACRES |
|---|---|---|
| 1 (MC) | 17 | 45 |
| 2 (R/W) | 0 | <1 |
| TOTAL | 17 | 45 |

This product is for informational use and may not have been prepared for or be suitable for legal, engineering or survey purposes.

N
W E
S

1:9,000

0 375 750 1,500 2,250 3,000 Feet

02/24/2025