



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Tule GNA
Sale SW-341-2024-GF8223-01

District: Southwest

Date: September 27, 2023

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$317,915.79	\$0.00	\$317,915.79
		Project Work:	(\$76,084.00)
		Advertised Value:	\$241,831.79



Timber Sale Appraisal Tule GNA Sale SW-341-2024-GF8223-01

District: Southwest

Date: September 27, 2023

Timber Description

Location: T32S, R2W, section 24; T32S R1W, sections 18, 19 Douglas County, Oregon

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	15	0	95
Western Hemlock / Fir	13	0	90

Volume by Grade	2S	3S & 4S 6"-11"	12"+	6" - 11"	Total
Douglas - Fir	307	670	0	0	977
Western Hemlock / Fir	89	194	0	0	283
Incense Cedar	0	0	0	0	0
Total	396	864	0	0	1,260

Comments: SOURCE OF POND VALUES
ODF - Local Pond Values for Incense Cedar, Western hemlock, and other conifer.
Incense Cedar price \$789.16 (Pond Value) – \$539.16 (Logging) = \$250.00 Stumpage
Western Hemlock and other conifer price \$598.29 (Pond) – \$550.89 (Log) = \$47.40 Stumpage

Hardwoods: \$340 per MBF (\$40 per ton * 8.5 tons per MBF stumpage)

PULP PRICE
Pulp (Conifer and Hardwood) = \$1/ton

SEE PROJECT COST SUMMARY:
OTHER COSTS WITH PROFIT AND RISK TO BE ADDED
Project 1: Haul Route Maintenance = \$19,609
Project 2: Road reconstruction & Temporary Road construction = \$33,974
Project 3: Subsoiling, water barring and closeout of temporary roads = \$10,000
Project 4: In-unit slash piling = \$12,500
Total project costs = \$76,084

OTHER COSTS NO PROFIT AND RISK ADDED
Equipment Weed Wash (7 Machines 7 hours x \$50/hour) = \$350
Seeding (4 miles, \$100 per mile) = \$400
Mobilization Cost (7 Machines, 2 hours for each machine) = \$1820

SLASH DISPOSAL = (Landing Piling) \$3,150



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Logging Conditions

Combination#: 1 Douglas - Fir 75.00%
 Western Hemlock / Fir 75.00%

Logging System: Track Skidder **Process:** Harvester Head Delimbing
yarding distance: Long (1,500 ft) **downhill yarding:** No
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 10 **bd. ft / load:** 3300
cost / mbf: \$303.03
machines: Forwarder
 Harvester

Combination#: 2 Douglas - Fir 25.00%
 Western Hemlock / Fir 25.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Manual Falling/Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF
loads / day: 5 **bd. ft / load:** 3300
cost / mbf: \$483.52
machines: Log Loader (A)
 Tower Yarder (Medium)



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Logging Costs

Operating Seasons: 1.00	Profit Risk: 10%
Project Costs: \$76,080.00	Other Costs (P/R): \$0.00
Slash Disposal: \$3,150.00	Other Costs: \$2,570.00

Miles of Road

Road Maintenance: \$0.00

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	3.3
Western Hemlock / Fir	\$0.00	3.0	3.2



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$348.15	\$0.00	\$3.48	\$132.57	\$0.00	\$48.42	\$2.50	\$2.00	\$2.04	\$539.16
Western Hemlock / Fir									
\$348.15	\$0.00	\$3.48	\$143.23	\$0.00	\$49.49	\$2.50	\$2.00	\$2.04	\$550.89

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$850.83	\$311.67	\$0.00
Western Hemlock / Fir	\$0.00	\$596.29	\$47.40	\$0.00



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Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	977	\$311.67	\$304,501.59
Western Hemlock / Fir	283	\$47.40	\$12,848.20

Gross Timber Sale Value

Recovery: \$317,349.79

Prepared By: Chris Rudd

Phone: 541-474-3152

Project Summary

Purchaser would only be reimbursed for projects accomplished to specifications.

Project 1

Haul route road maintenance, 3200-600 Road (1.7 Miles) (Point A to G)	Yards	\$/Yard	\$/Mile	Per Unit Cost	Cost \$
Brushing (light)			\$1,900.00		\$3,230.00
Ditch clearing / clear culverts (50% outslope)			\$2,500.00		\$2,125.00
Grading (Pre Haul)			\$2,500.00		\$4,250.00
Spot Rock	100.00	\$25.00			\$2,500.00
Post Haul Grade			\$1,500.00		\$2,550.00
				Subtotal	\$14,655.00

Haul route road maintenance 3200-640 Road (0.46 Miles) (Point G to I)	Yards	\$/Yard	\$/Mile	Per Unit Cost	Cost \$
Brushing (Heavy)			\$2,640.00		\$1,214.40
Grading			\$2,500.00		\$1,150.00
Ditch clearing / clear culverts			\$2,500.00		\$1,150.00
Spot Rock	30	\$25.00			\$750.00
Post Haul Grade			\$1,500.00		\$690.00
				Subtotal	\$4,954.40

\$19,609.40

Project 2

Road reconstruction, 3200-690 Road (0.56 Miles) (Point B to C)	Yards	\$/Yard	\$/Mile	Per Unit Cost	Cost \$
Grubbing (light)			\$5,280.00		\$2,956.80
Shaping / Re-construction			\$3,100.00		\$1,736.00
Ditching / Clear culverts (60% outslope)			\$2,500.00		\$825.00
Grading			\$2,500.00		\$1,400.00
24" culvert (replace old culvert) (26+25)				\$3,000.00	\$3,000.00
Rolling dip / rock armor (28+20)	50	\$25.00			\$1,250.00
Culvert removal / closeout (Point C) (36" Culvert)				\$6,500.00	\$6,500.00
Spot Rock	40	\$25.00			\$1,000.00
Post Haul Grade			\$1,500.00		\$840.00
				Subtotal	\$19,507.80

Temp Roads 1, 2 & 3. (0.81 Miles)	Yards	\$/Yard	\$/Mile	Per Unit Cost	Cost \$
Temp Road 1 : Point D to 10+20 (0.19 Miles)					
Grubbing (Heavy)			\$6,000.00		\$1,140.00
Shaping / reconstruction			\$3,100.00		\$589.00
24" Culvert			\$3,000.00		\$570.00
Grading			\$2,500.00		\$475.00
Spot Rock (Mouth of temp)	30	\$25.00			\$750.00
Temp Road 2 : Point E to F (0.35 Miles)					
Grubbing (heavy)			\$6,000.00		\$2,100.00
Shaping / reconstruction			\$3,100.00		\$1,085.00
Grading			\$2,500.00		\$875.00
Culvert Placement (36" culvert from Temp 1)				\$3,000.00	\$3,000.00
Spot Rock (Point E / entrance)	30	\$25.00			\$750.00
Temp Road 3 : Point H to 04+80 + Spur 1&2 (0.27 Miles)					
Grubbing (heavy)			\$6,000.00		\$1,620.00
Shaping / reconstruction			\$3,100.00		\$837.00
Grading			\$2,500.00		\$675.00
Subtotal					\$14,466.00
					\$33,973.80

Project 3

Subsoiling, Waterbarring - Temporary Roads, Skid Roads	hours	\$/hour	Subtotal
Landings and main skid roads first and first 200 feet in. Approximately 4 Miles of skid roads. The main skid roads shall be subsoiled to a depth of at least 20". Pull slash back across subsoiled skid road for 60% coverage of exposed mineral soil.	50	\$200.00	\$10,000.00

Project 4

In-Unit Piling	Acres	\$/Acres	Subtotal
In-unit piling of slash across units 1-530 and 3-520 (ground based units)	50	\$250.00	\$12,500.00

Additional Projects No Profit and Risk				
Equipment Weed Wash	Machines	Hours	\$/Hour	Subtotal
All Road Maintenance and Logging Equipment would be cleaned prior to entering the Timber Sale Area and Hauling Vicinity.	7	\$7.00	\$50.00	\$350.00
Seeding	Miles	\$/Mile		Subtotal
Purchaser will be required to seed skid trails, temporary roads and landings. See Exhibit E for Instructions.	4	\$100.00		\$400.00
Landing Piling and Firewood Sorting.	Piles	Hours	\$/Hour	Subtotal
Slash Disposal	21	\$21.00	\$150.00	\$3,150.00
Mobilization Cost	Machines	Hours	\$/Hour	Subtotal
Roseburg to 3200-600	7	2	\$130.00	\$1,820.00
-				
			Subtotal	\$5,720.00

Project Totals	
P1	\$19,507.80
P2	\$14,655.00
P3	\$4,954.40
P4	\$14,466.00
P5	\$10,000.00
P6	\$12,500.00
Additional	\$5,720.00
SUM	\$76,084

\$76,084 = amount credited to purchaser, \$5,720.00 in additional expenses.

TIMBER SALE SUMMARY

1. **Type of Sale:** Tule GNA is a Recovery sale, sealed bid auction of 129.0 net acres of thinning.
2. **Revenue Distribution:** USFS regional agreement 18-GN-11061000-048M2
Project GF8318-70 PCA 02609
3. **Sale Acreage:** For the sale 129.0 net acres were used for the cruise expansion. Acreage was determined with ArcGIS Pro 3.0.3 and GPS traverse.
4. **Volume:** The majority of volume is in Douglas fir with some mixed white fir. The table below describes the volume by grade over the three-unit sale area. Cedar is no cut in the thinning and no pine is present in the units.
5. **Timber Description:** These stands are plantations with mixed conifer of majority Douglas-fir and minor species: True Fir, Incense cedar and Western Hemlock. The average DBH for take trees are Douglas Fir 14" and White Fir/hemlock 13". The cruise report gives a breakdown of log lengths and scaling diameters by species for the combined cruise. Each unit is a thin from below. individual unit prescriptions; **1-530:** $\leq 20"$ Residual BA of 160, **2-540:** $\leq 19"$ Residual BA of 130, **3-520:** $\leq 18"$ Residual BA of 130. In unit 1-530 there are three gaps marked to cut with blue paint, in unit 3-520 there are two gaps marked to cut with blue paint.
6. **Topography and Logging Method:** The sale area is a mix of ground-based logging and skyline / cable logging. There is roughly 95 acres of ground-based logging and 34 acres of skyline. The preferred logging method for the ground-based portions is a harvester or feller buncher able to bunch logs in skid roads working in conjunction with a skidder. For the skyline sections hand falling is required for areas over 35% slope, equipment will be able to fall roughly $\frac{1}{2}$ of the skyline acres. The yarder shall be able to yard over a minimum distance of 1500ft, with one end of the log suspended in the air at all times. The longest expected span in this sale is 1300ft.
7. **Access:** All hauling routes are located on Federal ground. Access is secured. Road surfacing, blading and culvert replacement / removal are all described in in the sale prospectus, maps, and exhibits.
8. **Projects:** See Project Summary: The Tule Summary details the projects which include road improvements and surfacing for \$76,084
9. **Road Maintenance:** Road maintenance costs are included into the project work amount, including pre and post haul grading
10. **Other Costs:** Additional costs were appraised for temporary road closure.
11. **Slash Disposal:** Purchaser will pile slash on landings with an excavator or log loader, sorting out firewood into a separate pile. The appraisal includes \$3,150 for machine piling on the landings, and \$12,500 for 50 acres of in-unit piling along skid roads / 100ft from landings, USFS will burn the slash piles.

OREGON DEPARTMENT of FORESTRY CRUISE REPORT

- 1. Acreage Calculation:** For the Slim Prospect Timber Sale, there are 129.0 net cruise acres in the sale area determined by a combination of GPS traverse waypoints and ArcGIS 10.6 software. Net acres do not include the riparian management areas, regeneration areas within the stand, and non-stocked areas which were not cruised.
- 2. Cruise Method:** A variable plot cruise was conducted on the sale area by ODF during the summer of 2023.
- 3. RIGHT of WAY VOLUMES:** There is currently no right of way volume associated with this sale.
- 4. Sampling Intensity:**
51 Total Plots (26 Measured, 25 Count Plots)

CV (BDFT) 89.9% (take)
SE (BDFT) 12.2% (take)

According to ODF standards, total harvest volume of conifers and hardwoods ("take" trees) is estimated to be 1,260 MBF* $\pm$ 153 MBF at the 68% confidence level and a standard error of 12.2%. Sixty-eight times out of 100 the volume estimate will be between 1,107 MBF and 1,413 MBF.
- 5. Computation Procedures:** Volume was computed using the SuperACE cruise program. Volumes reported are based on the Scribner Log Rule (West).
- 6. Form Factors:** Form factors (a ratio of diameter at 4 and 16 feet) were sampled across the diameter distribution in all strata. Those form factors which were not measured were estimated by SuperACE.
- 7. Height Standards:** Most conifer trees were measured for total height with a laser rangefinder.
- 8. Diameter standards:** Diameters were measured outside bark at breast height to the nearest inch.
- 9. Grading System:** Trees were graded primarily as 34 foot segments lengths and according to the Official Log Scaling and Grading Rules published by the Northwest Log Rules Advisory Group.
- 10. Merchantable top:** Conifer were graded to a merchantable top specified by the official log scaling rules. For all species except pine, 2S segments were graded to a 12" top inside bark, 3S to a 6" top, and 4S to a 5" top (inside bark). Pine 4S logs were graded to a 12" top (inside bark), 5S to a 6" top, and 6S to a 5" top (inside bark).
- 11. Deductions for Cull, Defect and Breakage:** All visible field cull was removed in the cruise computation. Additional volume was deducted for the anticipated amount of hidden cull and breakage during logging. The estimated volume reduction used for this anticipated loss to volume was 10%.
- 12. Conversion Factors:** The sale will be sold and billed using westside scale or long log scale. The conversion from long log to short log for this sale is 1.29. There are 3.97 Board foot/cubic foot long log and 4.73 BF/CF short log scale. Pulp loads do not have board foot in them, but for conversion purposes, we would use 1,500 BF/load long log.
- 13. Cruisers:** Cruising was performed by Bennet Wilson & Nijiel Rocha.

*ODF does not guarantee the volume of this or any other cruise. Prospective purchasers are advised to do their own cruise and sale volume calculations. Additional SuperAce Reports available upon request.

State Timber Sale Contract
Tule GNA
SW- 341-2024-GF8223-01

Reviewed by /s/ *Chris Rudd*, Unit Forester: 8/9/2023

VOLUME SUMMARY

Tule GNA Cruise Table Summary

Volume By Unit														
CRUISE VOLUME PER ACRE						ADJUSTED VOLUME MBF/ACRE*				TOTAL VOLUME MBF				
ies (Tak	Strata	2 Saw	3 Saw	4 Saw	CR	Cruise Vol/Acre	2 Saw	3 Saw	4 Saw	NET ACRES	2 Saw	3 Saw	4 Saw/CR	Total Volume
DF	All	2,481	4,826	583		7,890	2,382	4,633	560	129.0	307,247	597,652	72,199	977,098
WF	All	640	1,226	181		2,047	614	1,177	174	129.0	79,258	151,828	22,415	253,500
WH	All	84	149	9		9	81	143	9	129.0	10,403	18,452	1,115	29,969
Sale Volume						9,946				129.0	396,907	767,932	95,728	1,260,567

*Adjusted 4% for hidden cull and breakage

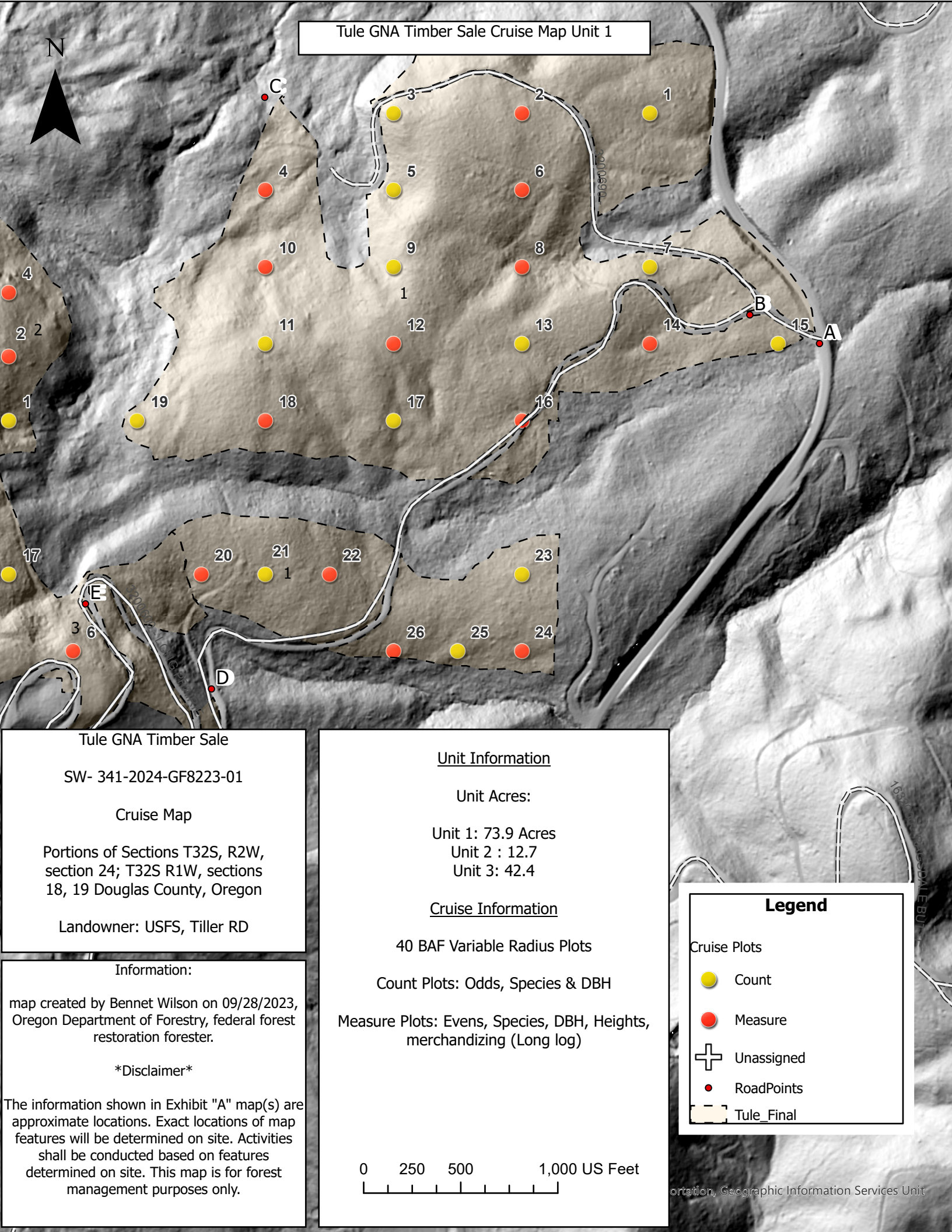
SALE VOLUME BY GRADE MBF					
Species	2 Saw	3 Saw	4 Saw	CR	Total
DF	307,247	597,652	72,199		977,098
WF	79,258	151,828	22,415		253,500
WH	10,403	18,452	1,115		29,969
Sale Volume	396,907	767,932	95,728		1,260,567

Unit	Stand ID	Net Cruise Acres	SE	Volume Error
1	530	73.90	12.16%	153,230
2	540	12.70	Low Range	High Range
3	520	42.40	1,107,337.8	1,413,796.9
Total		129.00		

SALE VOLUME BY GRADE PERCENTAGE					
	2 Saw	3 Saw	4 Saw		Total
DF	24%	47%	6%		78%
WF	6%	12%	2%		20%
WH	1%	1%	0%		2%
Sale Volume	31%	61%	8%	0%	100%

** Volume Estimates by Unit are not as accurate as the total sale volume. Cutout volumes will be more accurate for the total volume than individual units. ODF does not guarantee the volume of this or any other cruise. Prospective purchasers are advised to do their own cruise and sale. These volumes reflect merchantable saw logs. A small amount of pulp logs could be harvested from the sale area, particularly in the sub-merch pine species.

Additional SuperAce Reports are available upon request.



Tule GNA Timber Sale Cruise Map Unit 1



Tule GNA Timber Sale
SW- 341-2024-GF8223-01

Cruise Map

Portions of Sections T32S, R2W,
section 24; T32S R1W, sections
18, 19 Douglas County, Oregon

Landowner: USFS, Tiller RD

Information:
map created by Bennet Wilson on 09/28/2023,
Oregon Department of Forestry, federal forest
restoration forester.

Disclaimer

The information shown in Exhibit "A" map(s) are
approximate locations. Exact locations of map
features will be determined on site. Activities
shall be conducted based on features
determined on site. This map is for forest
management purposes only.

Unit Information

Unit Acres:

Unit 1: 73.9 Acres
Unit 2 : 12.7
Unit 3: 42.4

Cruise Information

40 BAF Variable Radius Plots

Count Plots: Odds, Species & DBH

Measure Plots: Evens, Species, DBH, Heights,
merchandizing (Long log)

Legend

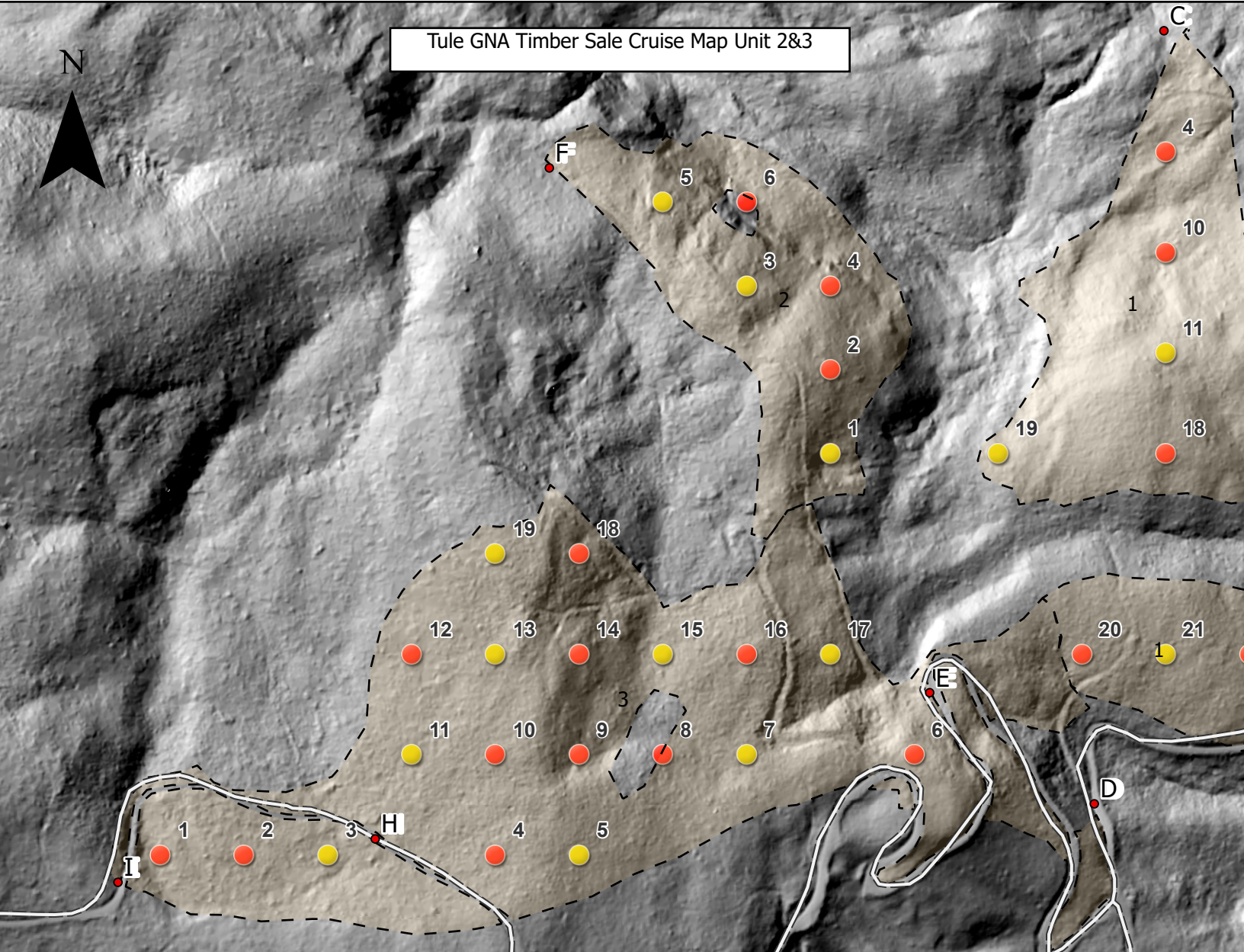
Cruise Plots

- Count
- Measure
- Unassigned
- RoadPoints
- Tule_Final



Tule GNA Timber Sale Cruise Map Unit 2&3

N



Tule GNA Timber Sale

SW- 341-2024-GF8223-01

Cruise Map

Portions of Sections T32S, R2W,
section 24; T32S R1W, sections
18, 19 Douglas County, Oregon

Landowner: USFS, Tiller RD

Information:

map created by Bennet Wilson on 09/28/2023,
Oregon Department of Forestry, federal forest
restoration forester.

Disclaimer

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approximate locations. Exact locations of map
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shall be conducted based on features
determined on site. This map is for forest
management purposes only.

Unit Information

Unit Acres:

Unit 1: 73.9 Acres

Unit 2 : 12.7

Unit 3: 42.4

Cruise Information

40 BAF Variable Radius Plots

Count Plots: Odds, Species & DBH

Measure Plots: Evens, Species, DBH, Heights,
merchandizing (Long log)

Legend

Cruise Plots

● Count

● Measure

✚ Unassigned

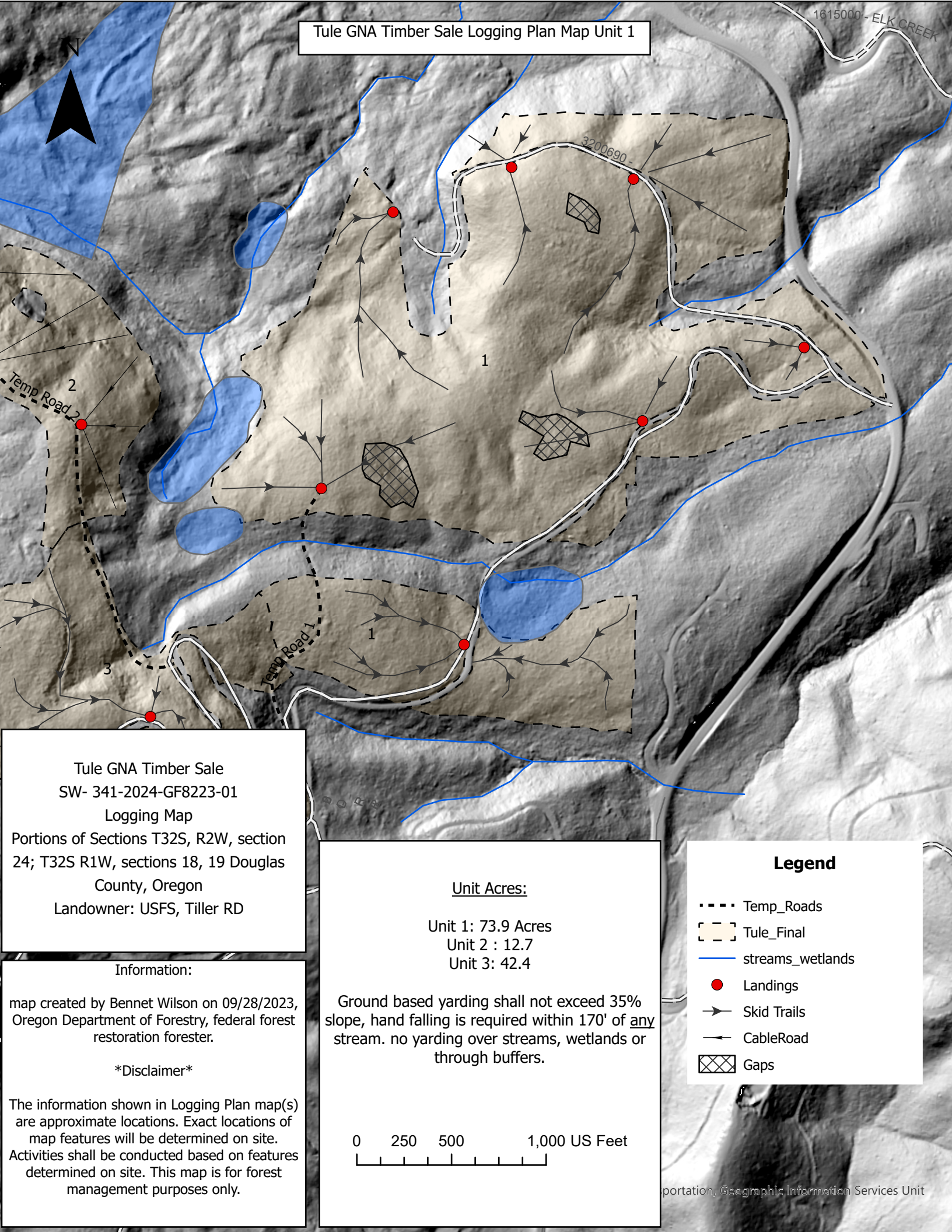
● RoadPoints

■ Tule_Final

0 250 500 1,000 US Feet



Tule GNA Timber Sale Logging Plan Map Unit 1



Tule GNA Timber Sale
SW- 341-2024-GF8223-01

Logging Map

Portions of Sections T32S, R2W, section
24; T32S R1W, sections 18, 19 Douglas
County, Oregon

Landowner: USFS, Tiller RD

Information:

map created by Bennet Wilson on 09/28/2023,
Oregon Department of Forestry, federal forest
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Unit Acres:

Unit 1: 73.9 Acres

Unit 2 : 12.7

Unit 3: 42.4

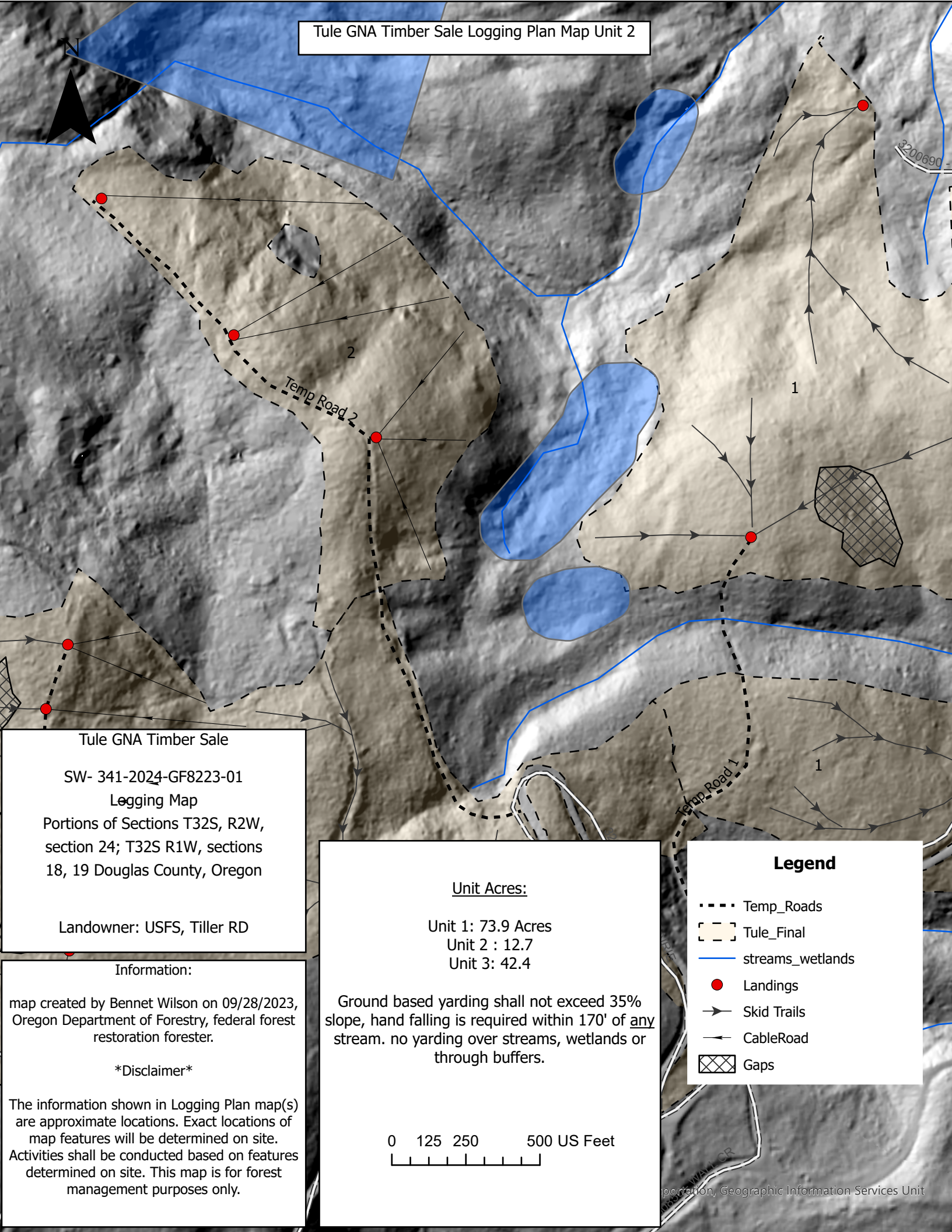
Ground based yarding shall not exceed 35%
slope, hand falling is required within 170' of any
stream. no yarding over streams, wetlands or
through buffers.

0 250 500 1,000 US Feet

Legend

- Temp_Roads
- Tule_Final
- streams_wetlands
- Landings
- Skid Trails
- CableRoad
- Gaps

Tule GNA Timber Sale Logging Plan Map Unit 2



Tule GNA Timber Sale

SW- 341-2024-GF8223-01

Logging Map

Portions of Sections T32S, R2W,
section 24; T32S R1W, sections
18, 19 Douglas County, Oregon

Landowner: USFS, Tiller RD

Information:

map created by Bennet Wilson on 09/28/2023,
Oregon Department of Forestry, federal forest
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Unit Acres:

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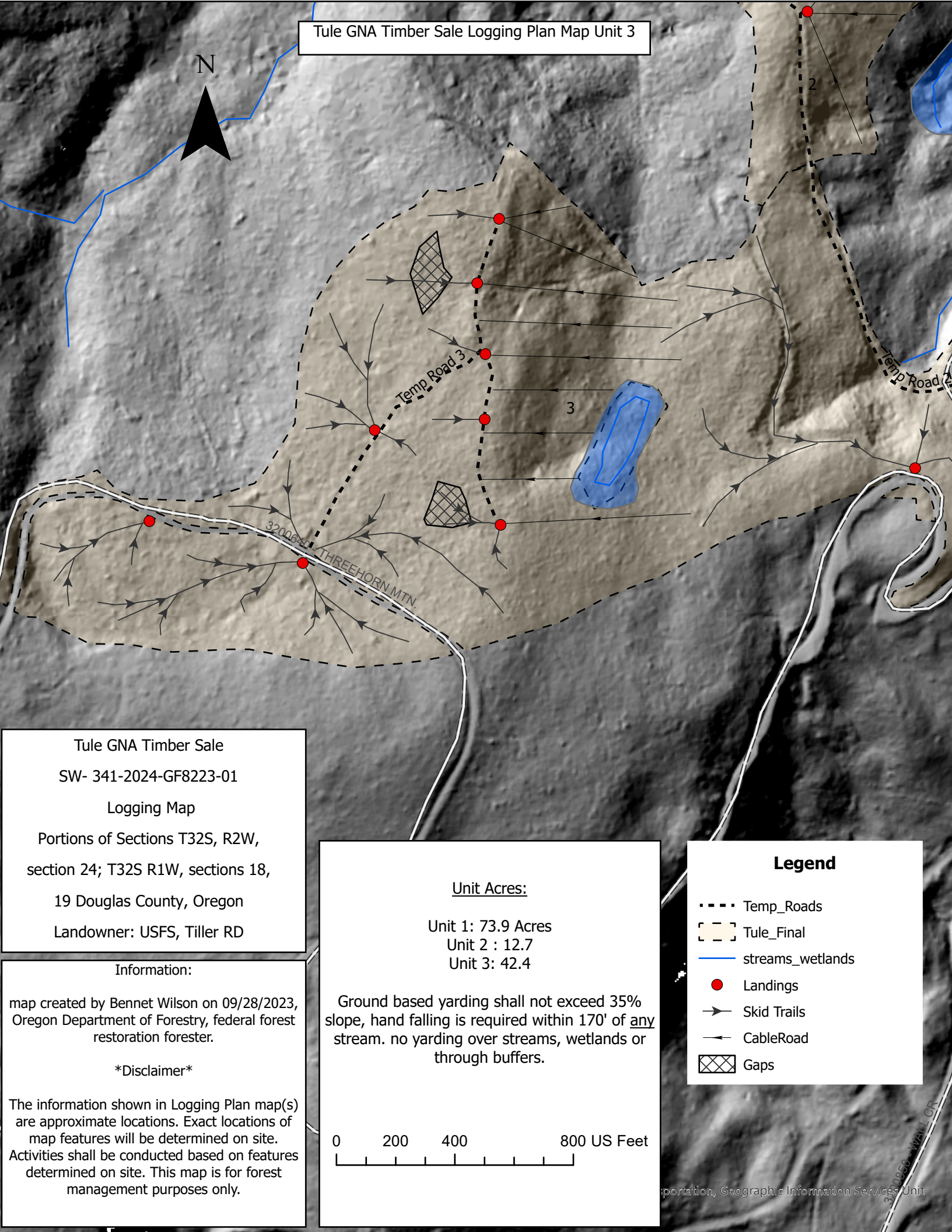
Ground based yarding shall not exceed 35%
slope, hand falling is required within 170' of any
stream. no yarding over streams, wetlands or
through buffers.

0 125 250 500 US Feet

Legend

- Temp_Roads
- Tule_Final
- streams_wetlands
- Landings
- Skid Trails
- CableRoad
- Gaps

Tule GNA Timber Sale Logging Plan Map Unit 3



Tule GNA Timber Sale
SW- 341-2024-GF8223-01

Logging Map

Portions of Sections T32S, R2W,
section 24; T32S R1W, sections 18,
19 Douglas County, Oregon
Landowner: USFS, Tiller RD

Information:

map created by Bennet Wilson on 09/28/2023,
Oregon Department of Forestry, federal forest
restoration forester.

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slope, hand falling is required within 170' of any
stream. no yarding over streams, wetlands or
through buffers.

0 200 400 800 US Feet

Legend

- Temp_Roads
- Tule_Final
- streams_wetlands
- Landings
- Skid Trails
- CableRoad
- Gaps