

**TIMBER NOTICE OF SALE**

**SALE NAME: GOLFER**

**AGREEMENT NO: 30-092649**

**AUCTION:** May 25, 2016 starting at 10:00 a.m.,  
Northwest Region Office, Sedro Woolley, WA

**COUNTY:** Snohomish

**SALE LOCATION:** Sale located approximately 10 miles northeast of Sultan, WA.

**PRODUCTS SOLD  
AND SALE AREA:**

All timber bounded by white timber sale boundary tags, rock pit and the MC-ML, MC-31, MC-37 and MC-39 roads, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #1 (collectively labeled 1A, 1B, 1C, 1D and 1E).

All timber bounded by white timber sale boundary tags and adjacent young stands, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #2 (collectively labeled 2A, 2B and 2C).

All timber bounded by white timber sale boundary tags, adjacent young stands and the BM-ML Road, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #3.

All timber bounded by white timber sale boundary tags and the PT-28 Road, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #4.

All timber bounded by orange right of way tags, except that title to the timber within the right of way tags is not conveyed to the Purchaser unless the road segment is actually constructed.

The above described products on part(s) of Sections 1 all in Township 28 North, Range 8 East, Sections 27, 28, 33, 35 and 36 all in Township 29 North, Range 8 East, W.M., containing 219 acres, more or less.

**CERTIFICATION:** This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BV-SFIS-US09000572)

**ESTIMATED SALE VOLUMES AND QUALITY:**

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Hemlock	15	8	4,951				18		1,673	2,215	2,265	142
Douglas fir	23	8	1,396						1,112	242	40	2
Noble fir	14		1,264						290	644	280	50
Red cedar	15		558							414	144	
Maple	16		28							21		7
Cottonwood	25		3									3
Sale Total			8,200									

**MINIMUM BID:** \$1,683,000.00

**BID METHOD:** Sealed Bids



## TIMBER NOTICE OF SALE

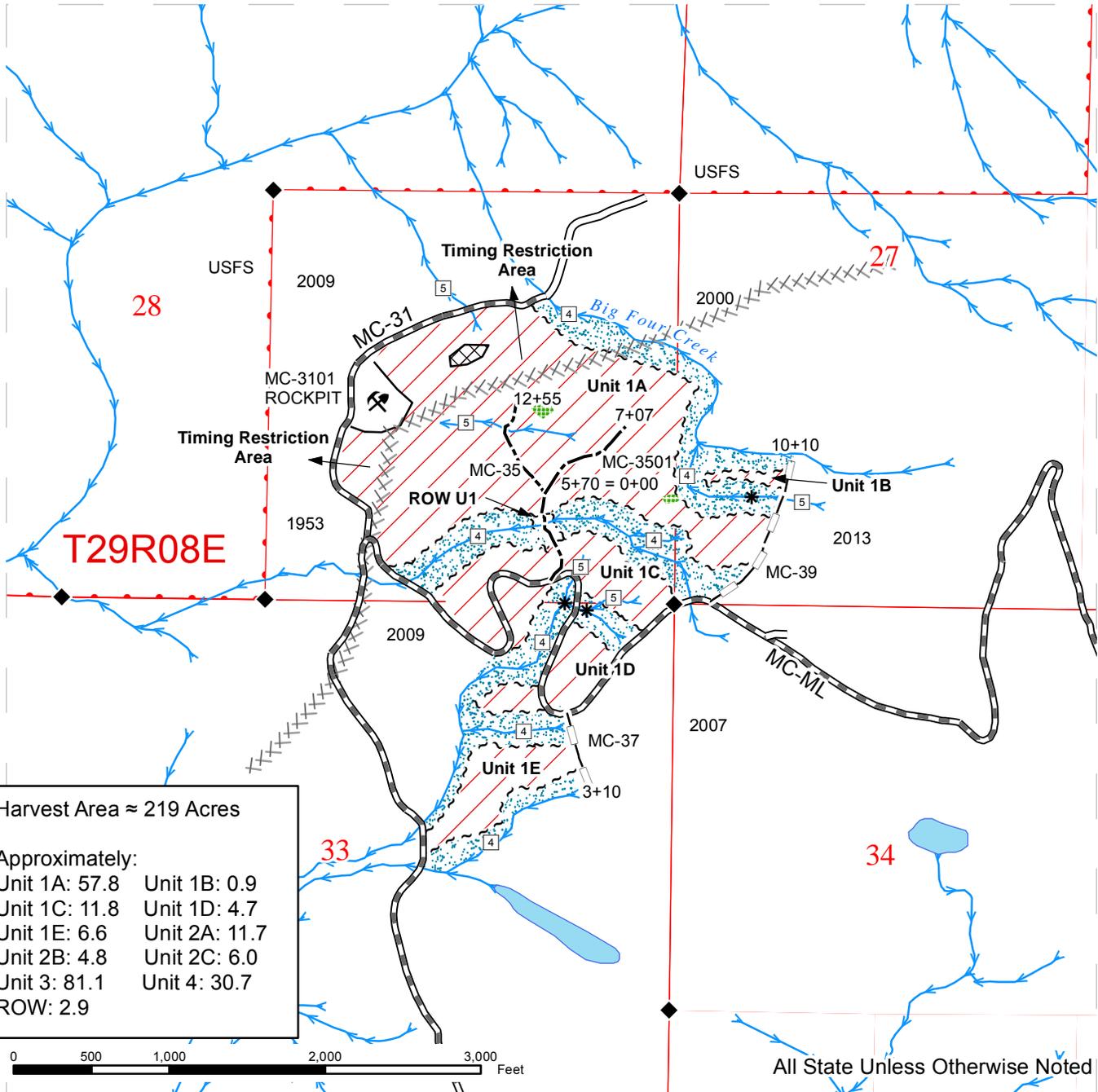
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2. Due to a high number of sensitive wet areas and type 5 streams, no ground-based operations shall be permitted in Units #2 and #3 during the restricted season (November 1 to March 31).
3. HQ DF noted within the sale area. See cruise for further details (approximately 6 mbf of the above listed DF 2S is deemed high quality by the Department).
4. If goshawks or aggressively calling birds are detected in the vicinity of the sale, all operations associated with timber harvesting, road building, or rock pit development shall cease immediately, and the Contract Administrator shall be notified. A DNR Biologist may provide mitigating measures and operations shall re-start according to these specifications at the approval of the Contract Administrator.

# TIMBER SALE MAP

**SALE NAME:** GOLFER  
**AGREEMENT#:** 92649  
**TOWNSHIP(S):** T29R08E, T28R08E  
**TRUST(S):** State Forest Transfer(1), Common School and Indemnity(3), Capitol Grant(7)

**REGION:** Northwest Region  
**COUNTY(S):** SNOHOMISH  
**ELEVATION RGE:** 1168-2912



**Harvest Area ≈ 219 Acres**  
  
 Approximately:  
 Unit 1A: 57.8    Unit 1B: 0.9  
 Unit 1C: 11.8    Unit 1D: 4.7  
 Unit 1E: 6.6    Unit 2A: 11.7  
 Unit 2B: 4.8    Unit 2C: 6.0  
 Unit 3: 81.1    Unit 4: 30.7  
 ROW: 2.9

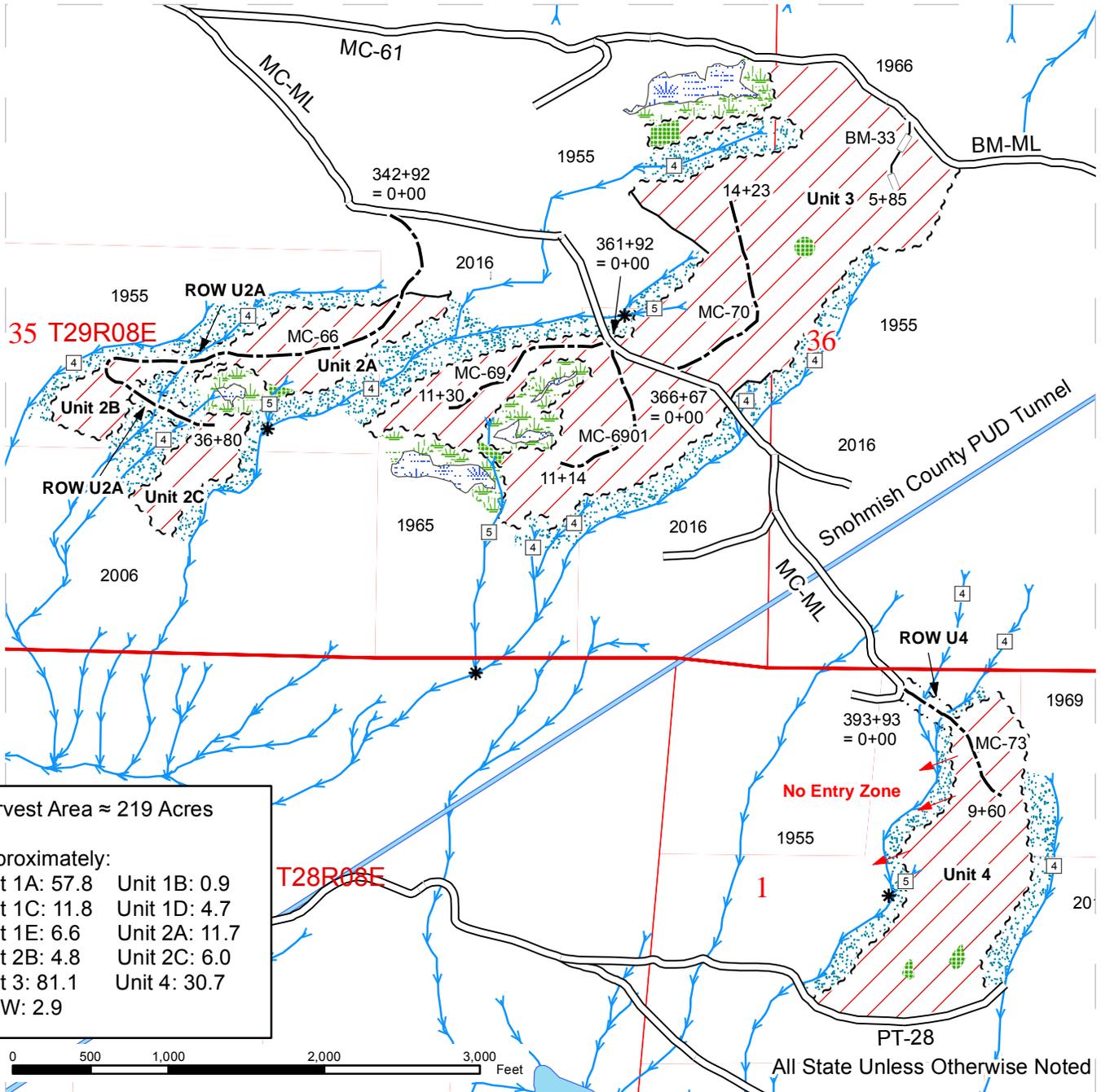
Sale Area	Right of Way Tags	Wetlands
Wetland Mgt Zone	Sale Boundary Tags	Streams
Riparian Mgt Zone	Sale Boundary -- No Tags	Stream Type
Leave Tree Area	Existing Roads	Stream Type Break
Non-Tradeable Leave Tree Area	Optional Construction	Survey Corners
Public Land Survey Sections	Optional Reconstruction	Existing Rock Pit
DNR Managed Lands	Pre-Haul Maintenance	Timing Restriction

All State Unless Otherwise Noted

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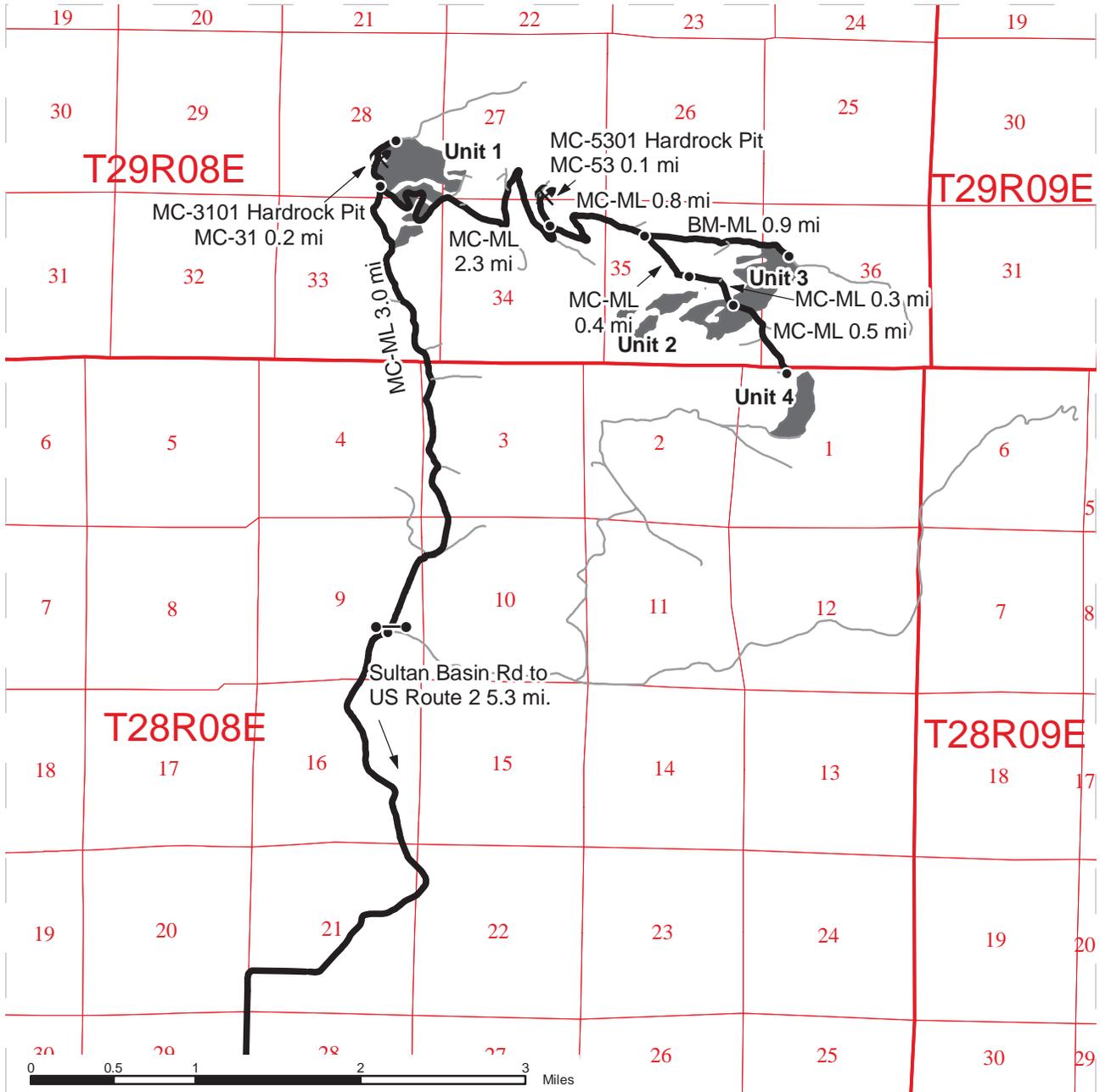
	Sale Area		Right of Way Tags		Wetlands
	Wetland Mgt Zone		Sale Boundary Tags		Streams
	Riparian Mgt Zone		Sale Boundary -- No Tags		Stream Type
	Leave Tree Area		Existing Roads		Stream Type Break
	Non-Tradeable Leave Tree Area		Optional Construction		Survey Corners
	Public Land Survey Sections		Optional Reconstruction		Existing Rock Pit
	DNR Managed Lands		Pre-Haul Maintenance		Timing Restriction



# DRIVING MAP

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- Timber Sale Unit
- Other Route
- Haul Route
- Gate
- X
 Existing Rock Pit
- Distance Indicator

**DRIVING DIRECTIONS:**

Follow US Route 2 east from Sultan 1 mile to Sultan Basin Road. Turn left at traffic light onto Sultan Basin Road. Follow the Sultan Basin Road north 5.3 miles to the Marsh Creek Mainline (MC-ML), turn left. Follow MC-ML for 3.0 miles to access Unit 1. Turn left on the MC-31 to access the MC-3101 hardrock pit. Continue on the MC-ML for 2.3 miles, turn left on the MC-53 to access the MC-5301 hardrock pit. Continue on the MC-ML for 1.2 miles to access the orange flagged line to Unit 2. Continue for 0.3 miles on the MC-ML to access Unit 3. Continue for 0.5 miles to access Unit 4.



**STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES**

**BILL OF SALE AND CONTRACT FOR  
FOREST PRODUCTS**

**Export Restricted Lump Sum AGREEMENT NO. 30-092649**

**SALE NAME: GOLFER**

**THE STATE OF WASHINGTON DEPARTMENT OF NATURAL  
RESOURCES, HEREINAFTER ACTING SOLELY, IN ITS PROPRIETARY  
CAPACITY, STATE, AND PURCHASER, AGREE AS FOLLOWS:**

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

Bill of Sale and Contract for Forest Products: Contract between the Purchaser and the State, which sets forth the procedures and obligations of the Purchaser in exchange for the right to remove forest products from the sale area. The Bill of Sale and Contract for Forest Products may include a Road Plan for any road construction or reconstruction, where applicable.

Contract Administrator: Region Manager's designee responsible for assuring that the contractual obligations of the Purchaser are met.

Forest Product: Any material derived from the forest for commercial use.

Purchaser: The company or individual that has entered a Bill of Sale and Contract for Forest Products with the State for the right to harvest and remove forest products from the timber sale area.

Road Construction: Includes building new and maintaining existing forest roads and associated work that may be optional or required as described in the Road Plan.

State: The Washington State Department of Natural Resources, landowner and seller of Forest Products from the timber sale area. The State is represented by the Region Manager as designated on the contract signature page. Contractual obligations to the State are enforced by the Region Manager or the designated Contract Administrator.

Subcontractor: Individual or company employed by the Purchaser to perform a portion or all of the services required by The Bill of Sale and Contract for Forest Products. The Purchaser is responsible for independently negotiating, procuring and paying for all subcontracted services rendered.

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on May 25, 2016 and the sale was confirmed on \_\_\_\_\_. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber bounded by white timber sale boundary tags, rock pit and the MC-ML, MC-31, MC-37 and MC-39 roads, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #1 (collectively labeled 1A, 1B, 1C, 1D and 1E).

All timber bounded by white timber sale boundary tags and adjacent young stands, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #2 (collectively labeled 2A, 2B and 2C).

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All timber bounded by white timber sale boundary tags and the PT-28 Road, except trees marked with blue paint on the bole and root collar, forest products tagged out by yellow leave tree area tags and cedar snags, preexisting dead and down cedar trees and cedar logs in Unit #4.

All timber bounded by orange right of way tags, except that title to the timber within the right of way tags is not conveyed to the Purchaser unless the road segment is actually constructed.

The above described products, located on approximately 219 acres on part(s) of Section 1 in Township 28 North, Range 8 East, Sections 27, 28, 33, 35, and 36 all in Township 29 North, Range 8 East W.M. in Snohomish County(s) as designated on the sale area and as shown on the attached timber sale map.

All forest products described above from the bole of the tree that meet or exceed 2 inches diameter inside bark on the small end are eligible for removal. Above ground components of a tree that remain as by-products after the manufacture of logs, including but not limited to tree tops, branches, limbs, needles, leaves, stumps, are not eligible for removal under the terms of this contract.

Forest products purchased under a contract that is designated as export restricted shall not be exported until processed. Forest products purchased under a contract that is designated as exportable may be exported prior to processing.

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to the State that they enter this contract based solely upon their own judgment of the value of the forest products, formed after their own examination and inspection of both the timber sale area and the forest products being sold. Purchaser also warrants to the State that they enter this contract without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representations by the State Department of Natural Resources.

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	NW Ground-Based Equip Specifications (Rev11/05/14)

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to March 31, 2019.

G-040 Contract Term Adjustment - No Payment

Purchaser may request an adjustment in the contract term. A claim must be submitted in writing and received by the State within 30 days after the start of interruption or delay. The claim must also indicate the actual or anticipated length of interruption or delay. The State may grant an adjustment without charge only if the cause for contract term adjustment is beyond Purchaser's control. The cause must be one of the following and the adjustment may be granted only if operations or planned operations under this contract are actually interrupted or delayed:

- a. Road and bridge failures which deny access.
- b. Access road closures imposed by road owner.
- c. Excessive suspensions as provided in clause G-220.
- d. Regulatory actions not arising from Purchaser's failure to comply with this contract which will prevent timber harvest for a period less than 6 months.

## G-051 Contract Term Extension - Payment

Extensions of this contract term may be granted only if, in the judgment of the State, Purchaser is acting in good faith and is endeavoring to remove the forest products conveyed. The term of this contract may be extended for a reasonable time by the State if all of the following conditions are satisfied:

- a. A written request for extension of the contract term must be received prior to the expiration date of the contract.
- b. Completion of all required roads and compliance with all contract and regulatory requirements.
- c. For the first extension, not to exceed 1 year, payment of at least 25 percent of the total contract price.

For the second extension, not to exceed 1 year, payment of at least 90 percent of the total contract price.

The payments shall not include the initial deposit which shall be held according to the provisions of RCW 79.15.100.

- d. Payment of an amount based on 12 percent interest per annum on the unpaid portion of the total contract price.

All payments, except the initial deposit, will be deducted from the total contract price to determine the unpaid portion of the contract.

- e. Payment of \$665.00 per acre per annum for the acres on which an operating release has not been issued in the sale area.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

## G-053 Surveys - Sensitive, Threatened, Endangered Species

Whenever the State determines that a survey for sensitive, threatened, or endangered species is prudent, or when Purchaser determines a survey is prudent and the State agrees, Purchaser shall perform such surveys at Purchaser's expense and to the standards required by the State. The survey information shall be supplied to the State.

## G-060 Exclusion of Warranties

The PARTIES AGREE that the IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE and ALL OTHER WARRANTIES EXPRESSED OR IMPLIED ARE EXCLUDED from this transaction and shall not apply to the goods sold. For example, THE FOLLOWING SPECIFIC MATTERS ARE NOT WARRANTED, and are EXCLUDED from this transaction:

- a. The **MERCHANTABILITY** of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The **CONDITION** of the forest products. The forest products will be conveyed "AS IS."
- c. The **ACREAGE** contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The **VOLUME, QUALITY, OR GRADE** of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The **CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE**. These documents have been prepared for the State's appraisal purposes only.
- f. **THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES** or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. **THAT THE FORESTRY OPERATIONS** to be performed under this contract **WILL BE FREE FROM REGULATORY ACTIONS** by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-062 Habitat Conservation Plan

The State has entered into a Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to address state trust land management issues relating to compliance with the Federal Endangered Species Act. The activities to be carried out under this contract are located within the State's HCP area and are subject to the terms and conditions of the HCP, and the Services' Incidental Take Permit Nos. 812521 and 1168 (collectively referred to as ITP), or as amended hereafter by the Services. The ITP authorizes the incidental take of certain federally listed threatened and endangered species, as specified in the ITP

conditions. All HCP materials, including the ITP, are available for review at the State's Regional Offices and the administrative headquarters in Olympia, Washington.

By signing this contract, Purchaser agrees to comply with the terms and conditions of the ITP, and the HCP, which shall become terms of this contract. The State agrees to authorize the lawful activities of the Purchaser carried out pursuant to this contract, PROVIDED the Purchaser remains in compliance with the terms and conditions of both the HCP and ITP. The requirements set forth in this contract are intended to comply with the terms and conditions of the HCP and ITP. Accordingly, non-compliance with the terms and conditions of the HCP and ITP will render the authorization provided in this paragraph void, be deemed a breach of the contract and may subject Purchaser to liability for violation of the Endangered Species Act.

Any modifications to the contract shall be proposed in writing by Purchaser, shall continue to meet the terms and conditions of the HCP and ITP, and shall require the prior written approval of the Region Manager before taking effect.

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.
- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, PRT-812521 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.

- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

Purchaser is responsible for obtaining any permits not already obtained by the State that relate to Purchaser's operation. Forest Practice Application / Hydraulic Project Approval permits obtained by the State shall be transferred to Purchaser. Purchaser is responsible for all permits, amendments and renewals.

G-065 Regulatory Disclaimer

The State disclaims any responsibility for, or liability relating to, regulatory actions by any government agency, including actions pursuant to the Forest Practices Act, Ch. 76.09 RCW that may affect the operability of the timber sale.

G-066 Governmental Regulatory Actions

- a. Risk

Purchaser shall be responsible for any increased operational costs arising from any applicable foreign or domestic governmental regulation or order that does not cause contract performance to become commercially impracticable or that does not substantially frustrate the purpose of the contract. If impracticability or frustration results from Purchaser's failure to comply with this contract, Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

- b. Sale Area

When portions of the sale area become subject to a foreign or domestic governmental regulation or order that will likely prevent timber harvest for a period that will exceed the expiration date of this contract, and Purchaser has complied with this contract, the following shall apply:

- i. RCW 79.15.140 shall govern all adjustments to the contract area.

- c. Adjustment of Price

The State shall adjust the total contract price by subtracting from the total contract price an amount determined in the following manner: The State shall cause the timber sale area subject to governmental regulation or order to be measured. The State shall calculate the percentage of the total sale area subject to the governmental regulation or order. The State shall reduce the total contract price by that calculated percentage. However, variations in

species, value, costs, or other items pertaining to the affected sale area will be analyzed and included in the adjustment if deemed appropriate by the State. The State will further reduce the total contract price by the reasonable cost of unamortized roads Purchaser constructed but was unable to fully use for removing timber. A reduction in total contract price terminates all of the Purchaser's rights to purchase and remove the timber and all other interest in the affected sale area.

G-070 Limitation on Damage

In the event of a breach of any provision of this contract by the State, the exclusive remedy available to Purchaser will be limited to a return of the initial deposit, unapplied payments, and credit for unamortized improvements made by Purchaser. The State shall not be liable for any damages, whether direct, incidental or consequential.

G-080 Scope of State Advice

No advice by any agent, employee, or representative of the State regarding the method or manner of performing shall constitute a representation or warranty that said method, manner or result thereof will conform to the contract or be suitable for Purchaser's purposes under the contract. Purchaser's reliance on any State advice regarding the method or manner of performance shall not relieve Purchaser of any risk or obligation under the contract. Purchaser retains the final responsibility for its operations under this contract and State shall not be liable for any injuries resulting from Purchaser's reliance on any State advice regarding the method or manner of performance.

G-091 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, the added forest products become a part of this contract. The State shall determine the volume added and shall calculate the increase to the total contract price using the rates set forth in clause G-101, G-102, or G-103. If the sale area is reduced, the State shall determine the volume to be reduced. The State shall calculate the reduction to the total contract price using the rates set forth in clause G-101, G-102, or G-103.

G-101 Forest Products Not Designated

Any forest products not designated for removal, which must be removed in the course of operations authorized by the State, shall be approved and designated by the Contract Administrator. Added forest products become a part of this contract and the Scribner log scale volume, as defined by the Northwest Log Rules Advisory Group, shall be determined by the Contract Administrator. Added forest products shall be paid for at the following contract payment rates per Mbf Scribner log scale.

Contract Item	Appraised Price	Overbid Factor	Price	Fees	Contract Payment Rate
Cottonwood	\$50.68	0	\$0.00	\$9.00	\$9.00
Douglas fir	\$201.51	0	\$0.00	\$9.00	\$9.00

Hemlock	\$186.88	0	\$0.00	\$9.00	\$9.00
Maple	\$138.05	0	\$0.00	\$9.00	\$9.00
Noble fir	\$146.31	0	\$0.00	\$9.00	\$9.00
Red cedar	\$515.27	0	\$0.00	\$9.00	\$9.00
Other	\$193.33	0	\$0.00	\$9.00	\$9.00

**G-106 Adding Naturally Damaged Forest Products**

Any forest products not designated for removal that are seriously damaged by disease, insects or wind, or that may contribute seriously to the spread of insect or disease damage may be added to this sale by the State's Contract Administrator. Additions must be in unlogged areas of the sale and added volume shall not exceed an amount equal to 10 percent of the original advertised volume. Added forest products become a part of this contract and shall be paid for at the rate set forth in clause G-101, G-102 or G-103.

**G-111 Title and Risk of Loss**

Title to the forest products under this contract passes to the Purchaser after they are removed from the sale area, if adequate advance payment or payment security has been provided to the State under this contract. Purchaser bears all risk of loss of, or damage to, and has an insurable interest in, the forest products described in this contract from the time the sale is confirmed under RCW 79.15.120. Breach of this contract shall have no effect on this provision.

**G-116 Sustainable Forestry Initiative® (SFI) Certification**

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: BV-SFIS-US09000572.

Purchaser shall have at least one person regularly on-site during active operations that have completed training according to the requirements outlined within the SFI® program Standard. Purchaser shall designate in writing the name(s) of the individual(s) who will be on-site and provide proof of their successful completion of an approved training program prior to active operations.

**G-120 Responsibility for Work**

All work, equipment, and materials necessary to perform this contract shall be the responsibility of Purchaser. Any damage to improvements, except as provided in clause G-121 or unless the State issues an operating release pursuant to clause G-280, shall be repaired promptly to the satisfaction of the State and at Purchaser's expense.

**G-121 Exceptions**

Exceptions to Purchaser's responsibility in clause G-120 shall be limited exclusively to the following. These exceptions shall not apply where road damage occurs due to Purchaser's failure to take reasonable precautions or to exercise sound forest engineering and construction practices.

Road is defined as the road bed, including but not limited to its component parts, such as subgrade, ditches, culverts, bridges, and cattle guards.

For the purposes of this clause, damage will be identified by the State and is defined as:

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;
2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and
3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

The repair work identified by the State shall be promptly completed by Purchaser at an agreed price. The State may elect to accomplish repairs by means of State-provided resources. The State will bear the cost to repair damages caused by a third party. In all other cases, the Purchaser shall bear responsibility for the costs as described below.

For each event, Purchaser shall be solely responsible for the initial \$5,000 in repairs. For repairs in excess of \$5,000, the parties shall share equally the portion of costs between \$5,000 and \$15,000. The State shall be solely responsible for the portion of the cost of repairs that exceed \$15,000.

Nothing contained in clauses G-120 and G-121 shall be construed as relieving Purchaser of responsibility for, or damage resulting from, Purchaser's operations or negligence, nor shall Purchaser be relieved from full responsibility for making good any defective work or materials. Authorization to haul does not warrant that Purchaser built roads are free from material defect and the State may require additional work, at Purchasers expense regardless of cost, to remedy deficiencies at any time.

#### G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims arising out of or resulting from the performance of the contract. "Claim" as used in this contract means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorneys' fees, attributable for bodily injury, sickness, disease or death, or injury to or destruction of tangible property including loss of use resulting therefrom. Purchasers' obligations to indemnify, defend, and hold harmless includes any claim by Purchasers' agents, employees, representatives, or any subcontractor or its employees. Purchaser expressly agrees to indemnify, defend, and hold harmless State for any claim arising out of or incident to Purchasers' or any subcontractors' performance or failure to perform the contract. Purchasers' obligation to indemnify, defend, and hold harmless State shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials. Purchaser waives its immunity under Title 51 RCW to the extent it is

required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

G-150 Insurance

Purchaser shall, at its cost and expense, buy and maintain insurance of the types and amounts listed below. Failure to buy and maintain the required insurance may result in a breach and/or termination of the contract at State's option. State may suspend Purchaser operations until required insurance has been secured.

All insurance and surety bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. If an insurer is not admitted, all insurance policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

The State of Washington, Department of Natural Resources region office of sale origin shall be provided written notice before cancellation or non-renewal of any insurance referred to therein, in accord with the following specifications:

1. Insurers subject to Chapter 48.18 RCW (admitted and regulated by the Insurance Commissioner): The insurer shall give the State 45 days advance notice of cancellation or non-renewal. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.
2. Insurers subject to Chapter 48.15 RCW (surplus lines): The State shall be given 20 days advance notice of cancellation. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.

Before starting work, Purchaser shall furnish State of Washington, Department of Natural Resources with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements specified in the contract. Insurance coverage shall be obtained by the Purchaser prior to operations commencing and continually maintained in full force until all contract obligations have been satisfied or an operating release has been signed by the State.

Purchaser shall include all subcontractors as insured under all required insurance policies, or shall furnish separate certificates of insurance and endorsements for each subcontractor. Subcontractor(s) must comply fully with all insurance requirements stated herein. Failure of subcontractor(s) to comply with insurance requirements does not limit Purchaser's liability or responsibility.

The State of Washington, Department of Natural Resources, its elected and appointed officials, agents and employees shall be named as an additional insured on all general liability, excess, umbrella, and property insurance policies.

All insurance provided in compliance with this contract shall be primary as to any other insurance or self-insurance programs afforded to or maintained by State. Purchaser waives all rights against State for recovery of damages to the extent these damages are covered by general liability or umbrella insurance maintained pursuant to this contract.

By requiring insurance herein, State does not represent that coverage and limits will be adequate to protect Purchaser and such coverage and limits shall not limit Purchaser's liability under the indemnities and reimbursements granted to State in this contract.

The limits of insurance, which may be increased as deemed necessary by State of Washington, Department of Natural Resources, shall not be less than as follows:

Commercial General Liability (CGL) Insurance. Purchaser shall maintain general liability (CGL) insurance, and, if necessary, commercial umbrella insurance with a limit of not less than \$1,000,000.00 per each occurrence. If such CGL insurance contains aggregate limits, the General Aggregate limit shall be at least twice the "each occurrence" limit. CGL insurance shall have products-completed operations aggregate limit of at least two times the "each occurrence" limit. CGL coverage shall include a Logging and Lumbering Endorsement (i.e. Logger's Broad-Form) to cover the events that include, but are not limited to, fire suppression expenses, accidental timber trespasses, and wildfire property damage with limits of not less than \$2,000,000.00 each occurrence.

CGL insurance shall be written on Insurance Services Office (ISO) occurrence form CG 00 01 (or a substitute form providing equivalent coverage). All insurance shall cover liability arising out of premises, operations, independent contractors, products completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another party assumed in a business contract), and contain separation of insured (cross liability) condition.

Employer's Liability "Stop Gap" Insurance. Purchaser shall buy employers liability insurance, and, if necessary, commercial umbrella liability insurance with limits not less than \$1,000,000.00 each accident for bodily injury by accident or \$1,000,000.00 each employee for bodily injury by disease.

Workers' Compensation Coverage. Purchaser shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Purchaser and employees of any subcontractor or sub-subcontractor. Coverage shall include bodily injury (including death) by accident or disease, which exists out of or in connection with the performance of this contract. Except as prohibited by law, Purchaser waives all rights of subrogation against State for recovery of damages to the extent they are covered by workers' compensation, employer's liability, commercial general liability, or commercial umbrella liability insurance.

If Purchaser, subcontractor or sub-subcontractor fails to comply with all State of Washington workers' compensation statutes and regulations and State incurs fines or is required by law to provide benefits to or obtain coverage for such employees, Purchaser shall indemnify State. Indemnity shall include all fines, payment of benefits to Purchaser or subcontractor employees, or their heirs or legal representatives, and the cost of effecting coverage on behalf of such employees.

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit not less than \$1,000,000.00 per accident. Such insurance shall cover liability arising out of "Any Auto". Business auto coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Sedro Woolley, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive, modify, or amend the terms of this contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

Purchaser is required to have a person on site during all operations who is authorized to receive instructions and notices from the State. Purchaser shall inform the State in writing who is authorized to receive instructions and notices from the State, and any limits to this person's authority.

G-170 Assignment and Delegation

No rights or interest in this contract shall be assigned by Purchaser without prior written permission of the State. Any attempted assignment shall be void and ineffective for all purposes unless made in conformity with this paragraph. Purchaser may perform any duty through a delegate, but Purchaser is not thereby relieved of any duty to perform or any liability. Any assignee or delegate shall be bound by the terms of the contract in the same manner as Purchaser.

G-180 Modifications

Waivers, modifications, or amendments of the terms of this contract must be in writing signed by Purchaser and the State.

G-190 Contract Complete

This contract is the final expression of the Parties' agreement. There are no understandings, agreements, or representations, expressed or implied, which are not specified in this contract.

## G-200 Notice

Notices required to be given under the following clauses shall be in writing and shall be delivered to Purchaser's authorized agent or sent by certified mail to Purchaser's post office address:

- G-210 Violation of Contract
- G-220 State Suspends Operations

All other notices required to be given under this contract shall be in writing and delivered to the authorized agent or mailed to the Party's post office address. Purchaser agrees to notify the State of any change of address.

## G-210 Violation of Contract

- a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.
- b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.
- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.
- d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

## G-220 State Suspends Operation

The Contract Administrator may suspend any operation of Purchaser under this contract when the State is suffering, or there is a reasonable expectation the State will suffer environmental, monetary, or other damage if the operation is allowed to continue.

Purchaser shall be in breach of this contract if the operation continues after the suspension notice or if the operation resumes without prior approval and notice from the Contract Administrator.

Purchaser may request a modification of a suspension within 30 days of the start of suspension through the dispute resolution process in clause G-240. If this process results in a finding that the suspension exceeded the time reasonably necessary to stop or prevent damage to the State, Purchaser is entitled to request a contract term adjustment under clause G-040.

If it reasonably appears that the damage that the State is suffering, or can reasonably be expected to suffer if the operation is allowed to continue, will prevent harvest for a period that will exceed 6 months, and Purchaser has complied with this contract, the provisions of clause G-066 shall govern just as if the harvest was prevented by an applicable foreign or domestic governmental regulation or order.

G-230 Unauthorized Activity

Any cutting, removal, or damage of forest products by Purchaser, its employees, agents, or invitees, including independent contractors, in a manner inconsistent with the terms of this contract or State law, is unauthorized. Such activity may subject Purchaser to liability for triple the value of said forest products under RCW 79.02.320 or RCW 79.02.300 and may result in prosecution under RCW 79.02.330 or other applicable statutes.

G-240 Dispute Resolution

The following procedures apply in the event of a dispute regarding interpretation or administration of this contract and the parties agree that these procedures must be followed before a lawsuit can be initiated.

- a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.
- b. The Region Manager will issue a written decision on Purchaser's request within ten business days.
- c. Within ten business days of receipt of the Region Manager's decision, Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.
- d. Unless otherwise agreed, a conference will be held by the Deputy Supervisor - Uplands within 30 calendar days of the receipt of Purchaser's request for review of the Region Manager's written decision. Purchaser and the Region Manager will have an opportunity to present their positions. The Deputy Supervisor - Uplands will issue a decision within a reasonable time of being presented with both Parties' positions.

G-250 Compliance with All Laws

Purchaser shall comply with all applicable statutes, regulations and laws, including, but not limited to; chapter 27.53 RCW, chapter 68.50 RCW, WAC 240-15 and WAC 296-54. Failure to comply may result in forfeiture of this contract.

## G-260 Venue

This contract shall be governed by the laws of the State of Washington. In the event of a lawsuit involving this contract, venue shall be proper only in Thurston County Superior Court.

## G-270 Equipment Left on State Land

All equipment owned or in the possession of Purchaser, its employees, agents, or invitees, including independent contractors, shall be removed from the sale area and other State land by the termination date of this contract. Equipment remaining unclaimed on State land 60 days after the expiration of the contract period is subject to disposition as provided by law. Purchaser shall pay to the State all costs of moving, storing, and disposing of such equipment. The State shall not be responsible for any damages to or loss of the equipment or damage caused by the moving, storing or disposal of the equipment.

## G-280 Operating Release

An operating release is a written document, signed by the State and Purchaser, indicating that Purchaser has been relieved of certain rights or responsibilities with regard to the entire or a portion of the timber sales contract. Purchaser and State may agree to an operating release for this sale, or portion of this sale, prior to the contract expiration, when all contract requirements pertaining to the release area have been satisfactorily completed. Upon issuance of a release, Purchaser's right to cut and remove forest products on the released area will terminate.

## G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; MC-ML, MC-31, MC-35, MC-3501, MC-37, MC-39, MC-53, MC-61, MC-66, MC-69, MC-6901, MC-70, MC-73, BM-ML, BM-33. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

## G-330 Pre-work Conference

Purchaser shall arrange with the Contract Administrator to review this contract and to examine the sale area before beginning any operations. A plan of operations shall be developed and agreed upon by the Contract Administrator and Purchaser before beginning any operations. To the extent that the plan of operations is inconsistent with the contract, the terms of the contract shall prevail. State's acceptance and approval of Purchaser's plan of operations shall not be construed as any statement or warranty that the plan of operations is adequate for Purchaser's purposes or complies with applicable laws.

## G-340 Preservation of Markers

Any legal land subdivision survey corners and witness objects are to be preserved. If such are destroyed or disturbed, the Purchaser shall, at the Purchaser's own expense, re-establish them through a licensed land surveyor in accordance with U.S. General Land Office standards. Corners and/or witness objects that must be disturbed or destroyed in the process of road construction or logging shall be adequately referenced and/or

replaced in accordance with RCW 58.24.040(8). Such references must be approved by the Contract Administrator prior to removal of said corners and/or witness objects.

G-360 Road Use Reservation

The State shall have the right to use, without charge, all existing roads and any road constructed or reconstructed on State lands by Purchaser under this contract. The State may extend such rights to others. If the State grants such rights to others, the State shall require performance or payment, as directed by the State, for their proportionate share of maintenance based on their use.

G-370 Blocking Roads

Purchaser shall not block the MC-ML Road, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

Purchaser agrees to comply with the terms and conditions of the attached:

Easements with:  
Nielsen Brothers, Inc.; #55-002409; dated September 26, 1991.

G-430 Open Fires

Purchaser shall not set, or allow to be set by Purchaser's employees, agents, invitees and independent contractors, any open fire at any time of the year without first obtaining permission, in writing, from the Contract Administrator.

G-450 Encumbrances

This contract and Purchaser's activities are subject to the following:

DATA MISSING

Section P: Payments and Securities

P-011 Initial Deposit

Purchaser paid DATA MISSING initial deposit, which will be maintained pursuant to RCW 79.15.100(3). If the operating authority on this contract expires without Purchaser's payment of the full amount specified in Clause P-020, the initial deposit will be immediately forfeited to the State, and will be offset against Purchaser's remaining balance due. Any excess initial deposit funds not needed to ensure full payment of the contract price, or not needed to complete any remaining obligations of the Purchaser existing after contract expiration, will be refunded to the Purchaser.

P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$219,350.00. The total contract price consists of a \$0.00 contract bid price plus \$219,350.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

THE PURCHASE PRICE SHALL NOT BE AFFECTED BY ANY FACTORS, INCLUDING: the amount of forest products actually present within the contract area, the actual acreage covered by the contract area, the amount or volume of forest products actually cut or removed by purchaser, whether it becomes physically impossible or uneconomic to remove the forest products, and whether the subject forest products have been lost or damaged by fire or any other cause. The only situations Purchaser may not be liable for the full purchase price are governed by clause G-066, concerning governmental regulatory actions taken during the term of the contract.

P-045 Guarantee of Payment

Purchaser will pay for forest products prior to cutting or will guarantee payment by posting an approved payment security. The amount of cash or payment security shall be determined by the State and shall equal or exceed the value of the cutting proposed by Purchaser.

P-050 Billing Procedure

The State will compute and forward to Purchaser statements of charges provided for in the contract. Purchaser shall deliver payment to the State on or before the date shown on the billing statement.

P-080 Payment Account Refund

Advance payments made under P-045 or P-045.2 remaining on account above the value for the charges shall be returned to Purchaser within 30 days following the final report of charges. Refunds not made within the 30 day period will accrue interest at the interest rate, as established by WAC 332-100-030, computed on a daily basis until paid.

P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of \$100,000.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

The State may reduce the performance security after an operating release has been issued if the State determines that adequate security exists for any remaining obligations of Purchaser.

Section H: Harvesting Operations

H-010 Cutting and Yarding Schedule

Falling and Yarding will not be permitted from November 1 to March 31 BY GROUND-BASED EQUIPMENT, however, due to a high number of sensitive wet areas and type 5 streams, no ground-based operations shall be permitted in Units #2 and #3 during the restricted season (November 1 to March 31) WHICH SHALL NOT BE WAIVED, unless authorized in writing by the Contract Administrator.

H-013 Reserve Tree Damage Definition

Reserve trees are trees required and designated for retention within the sale boundary. Purchaser shall protect reserve trees from being cut, damaged, or removed during operations.

Reserve tree damage exists when one or more of the following criteria occur as a result of Purchaser's operation, as determined by the Contract Administrator:

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 200 square inches.
- b. A reserve tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A reserve tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and species within the sale area, as approved by the Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

Removal of designated reserve trees from the sale area is unauthorized, and may invoke the use of the G-230 'Trespass and Unauthorized Activity' clause. Purchaser is required to leave all cut or damaged reserve trees on site.

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 4 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation measures. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

H-035 Fall Trees Into Sale Area

Trees shall be felled into the sale area unless otherwise approved by the Contract Administrator.

## H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for sale area. The plan shall address the falling, yarding and hauling of forest products, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

## H-051 Branding and Painting

Purchaser shall provide a State of Washington registered log brand, acceptable to the State, unless the State agrees to furnish the brand. All purchased timber shall be branded in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

For pulp loads purchased under a contract designated as export restricted, Purchaser shall brand at least 3 logs with legible brands at one end. Also, 10 logs shall be painted at one end with durable red paint.

## H-080 Snags Not to be Felled

Snags not required to be felled for safety reasons may be left standing. Snags felled for safety reasons shall not be removed and must remain where felled.

## H-120 Harvesting Equipment

Forest products sold under this contract shall be felled by chainsaw and yarded by cable; felled by chainsaw or feller-buncher and yarded by cable or shovel on sustained slopes 35% or less, unless authority to use other equipment is granted in writing by the State.

## H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities. Full suspension is required over typed waters where possible, otherwise cribbing shall be in place.

## H-130 Hauling Schedule

The hauling of forest products will not be permitted on any road from November 1 to March 31 unless authorized in writing by the Contract Administrator .

## H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- A. An on-site pre-work meeting shall be scheduled with the Contract Administrator, which shall include the operator and fallers, prior to commencement of any activities on site.
- B. A copy of the timber sale map and contract shall be present on site during active operations.

- C. Trees shall be felled away from stream channels, and any standing water or wet swales when feasible.
- D. Avoid cable yarding in, across, adjacent, or parallel to stream channels where possible. When it is necessary to yard across stream channels, crossings need to be as close to perpendicular as possible and cribbing shall be in place when full suspension is not possible.
- E. Maintain a 30-foot equipment limitation zone on either side of all type-5 streams.
- F. Ground-based equipment crossings over type 5 streams shall be located by Purchaser and approved by Contract Administrator prior to crossing. These crossings shall be as close to perpendicular as possible and may require log cribbing, culvert installation or other Contract Administrator approved methods.
- G. Ground-based yarding shall not exceed 600 feet from any road unless authorized in writing by the Contract Administrator.
- H. No tops or limbs shall be allowed to accumulate on any landings. Tops and limbs shall be redistributed in the unit to the satisfaction of the Contract Administrator.
- I. Leave trees may be exchanged for unmarked trees of similar size and wildlife characteristics upon prior approval by the Contract Administrator.
- J. The gate on the MC-ML must be closed and locked at the end of every day.

Permission to do otherwise must be granted in writing by the Contract Administrator.

#### H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

- A. Wildlife timing restrictions are: no falling, bucking, yarding or operation of heavy equipment April 1 to August 31 from one hour before official sunrise to two hours after official sunrise and one before and after official sunset. Timing restrictions will be applied to the area as depicted on the timber sale map.
- B. No blasting is permitted on the MC-ML road between the MC-71 (MC-ML 375+70) and MC-73 (MC-ML 393+93) roads.
- C. No trees shall be cut, notched or disturbed beyond any designated sale boundary for tailholding purposes outside sale boundaries in Unit 4 marked by "No Entry Zone" on the Timber Sale map.

- D. All reserve trees marked with a double blue ring are non-tradeable.
- E. Leave tree areas marked on the timber sales map as “non-tradeable” is non-tradeable.
- F. If goshawks or aggressively calling birds are detected in the vicinity of the sale, all operations associated with timber harvesting, road building, or rock pit development shall cease immediately, and the Contract Administrator shall be notified. A DNR Biologist may provide mitigating measures and operations shall re-start according to these specifications at the approval of the Contract Administrator.
- G. Due to a high number of sensitive wet areas and type 5 streams, no ground-based operations shall be permitted in Units #2 and #3 during the restricted season (November 1 to March 31).

Permission to do otherwise must be granted in writing by the State.

H-190 Completion of Settings

Operations begun on any setting of the sale area shall be completed before any operation begins on subsequent settings unless authorized in writing by the Contract Administrator.

H-220 Protection of Residual or Adjacent Trees

Unless otherwise specified by this contract, the Contract Administrator shall identify damaged adjacent or leave trees that shall be paid for according to clause G-230.

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 10/21/2015 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on the MC-31, MC-35, MC-3501, MC-37, MC-39, MC-66, MC-69, MC-6901, MC-70, MC-73, BM-33 roads. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on the MC-ML, MC-53, MC-61, BM-ML roads. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the State current Equipment Rate Schedule on file at the region and Olympia offices. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

An Emergency Response Plan (ERP) shall be provided to the Contract Administrator containing but not limited to, valid contact numbers and procedures for medical emergencies, fire, hazardous spills, forest practice violations and any unauthorized or unlawful activity on or in the vicinity of the sale area. The Contract Administrator and the State shall be promptly notified whenever an incident occurs requiring an emergency response.

The ERP must be presented for inspection at the prework meeting and kept readily available to all personnel, including subcontractors, on site during active operations

S-010 Fire Hazardous Conditions

Purchaser acknowledges that operations under this Contract may increase the risk of fire. Purchaser shall conduct all operations under this agreement following the requirements of WAC 332-24-005 and WAC 332-24-405 and further agrees to use the highest degree of care to prevent uncontrolled fires from starting.

In the event of an uncontrolled fire, Purchaser agrees to provide equipment and personnel working at the site to safely and effectively engage in first response fire suppression activity.

Purchaser's failure to effectively engage in fire-safe operations is considered a breach and may result in suspension of operations

S-030 Landing Debris Clean Up

Landing debris shall be disposed of in a manner approved in writing by the Contract Administrator.

S-035 Logging Debris Clean Up

Slash and debris created from harvest activities shall be treated in a manner approved in writing by the Contract Administrator.

S-050 Cessation of Operations for Low Humidity

During the "closed season", when the humidity is 30 percent or lower on the sale area, all operations must cease unless authority to continue is granted by the State in writing.

S-060 Pump Truck or Pump Trailer

Purchaser shall provide a fully functional pump truck or pump trailer equipped to meet the specifications of WAC 332-24-005 and WAC 332-24-405 during the "closed season" or as extended by the State and shall provide trained personnel to operate this equipment on the sale area during all operating periods.

S-100 Stream Cleanout

Slash or debris which enters any stream as a result of operations under this contract and which is identified by the Contract Administrator shall be removed and deposited in a

stable position. Removal of slash or debris shall be accomplished in a manner that avoids damage to the natural stream bed and bank vegetation.

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

Purchaser is responsible for understanding and complying with all applicable local, state, and federal hazardous material/waste laws and regulations for operations conducted under this contract. Such regulations pertain to, but may not be limited to, hazardous material storage, handling and transport, personnel protection, release notification and emergency response, cleanup and waste disposal. Purchaser shall be responsible for restoring the site in the event of a spill.

b. Hazardous Materials Spill Prevention

All operations shall be conducted in a manner that avoids the release of hazardous materials, including petroleum products, into the environment (water, air or land).

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 4 to 6 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills from any piece of equipment at all times throughout active operations. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

Releases of oil or hazardous materials to the environment must be reported according to the State Department of Ecology (ECY). It is the responsibility of the Purchaser to have all emergency contact information readily available and a means of remote communication for purposes of quick notification. In the event of a spill, the Purchaser is responsible for notifying the following:

Appropriate Department of Ecology regional office (contact information below).

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

(Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom counties)

ECY - Southwest Region:

1-360-407-6300

(Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties)

ECY - Central Region:

1-509-575-2490

(Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties)

ECY - Eastern Region:

1-509-329-3400

(Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties)

S-131 Refuse Disposal

As required by RCW 70.93, All Purchaser generated refuse shall be removed from state lands for proper disposal prior to termination of this contract. No refuse shall be burned, buried or abandoned on state forest lands. All refuse shall be transported in a manner such that it is in compliance with RCW 70.93 and all loads or loose materials shall be covered/secured such that these waste materials are properly contained during transport.

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

The following clauses provide for payments by Purchaser to the State for breaches of the terms of this contract other than failure to perform. These payments are agreed to as liquidated damages and not as penalties. They are reasonable estimates of anticipated harm to the State, which will be caused by Purchaser's breach. These liquidated damages provisions are agreed to by the State and Purchaser with the understanding of the difficulty of proving loss and the inconvenience or infeasibility of obtaining an adequate remedy. These liquidated damages provisions provide greater certainty for the Purchaser by allowing the Purchaser to better assess its responsibilities under the contract.

Clause P-020 governs Purchaser's liability in the event Purchaser fails to perform any of the contract requirements other than the below liquidated damage clauses without written approval by the State. Purchaser's failure to pay for all or part of the forest products sold in this contract prior to expiration of the contract term results in substantial injury to the State. Therefore, Purchaser agrees to pay the State the full lump sum contract price in P-020 in the event of failure to perform.

D-041 Reserve Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that

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a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged reserve trees that are not replaced in the sale area.

IN WITNESS WHEREOF, the Parties hereto have entered into this contract.

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

\_\_\_\_\_  
Purchaser

\_\_\_\_\_  
Jean Fike  
Northwest Region Manager

Date: \_\_\_\_\_  
Address:

Date: \_\_\_\_\_

CORPORATE ACKNOWLEDGEMENT

STATE OF \_\_\_\_\_ )

COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally appeared \_\_\_\_\_

\_\_\_\_\_ to me known to be the \_\_\_\_\_ of the corporation that executed the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on oath stated that (he/she was) (they were) authorized to execute said instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

\_\_\_\_\_  
Notary Public in and for the State of

\_\_\_\_\_  
My appointment expires \_\_\_\_\_

**Schedule A**  
**NW Ground-Based Equip Specifications (Rev11/05/14)**

The following types of equipment are considered ground-based equipment: feller-buncher, processor, forwarder, skidder and shovel.

SHOVEL is defined as a low ground pressure track-mounted machine with hydraulic boom and grapple capable of picking up one end of the largest log 25 feet from the center of the machine.

LOG PROCESSOR/DE-LIMBER is defined as a mobile machine with a hydraulic boom capable of simultaneously bucking, delimiting and/or debarking and chipping whole trees while sitting stationary at the landing.

FELLER-BUNCHER/HARVESTER is defined as a track mounted machine with hydraulic boom and cutter head capable of felling, bucking, limbing, and decking logs in one operation.

FORWARDER is defined as a track or rubber tire machine used for transporting logs to a landing by use of a bunk with self loading boom in which logs are carried free of the ground.

RUBBER-TIRED SKIDDER is defined as a skidder mounted on rubber tires used to drag logs to a landing. Logs are generally pulled in groups of six or less, with one end on the ground.

TRACKED SKIDDER is defined as any tracked tractor or skidder, fixed or articulated, used to drag logs to landings. Logs are generally pulled in groups of six or less, with one end on the ground.

Harvester shall not deviate from the requirements set forth in this Schedule without prior written approval from the Contract Administrator.

**FOR ALL YARDING:**

Equipment will remain at least 30 feet from all water courses or areas of wet/soft soils, except as necessary to cross at approved locations. Water course crossing structures must be approved by the Contract Administrator.

Logging debris created by the operation will be removed from water courses concurrently with yarding.

**WHEN SHOVEL YARDING IS AUTHORIZED:**

S1. When yarding and loading operations are occurring simultaneously, an additional shovel will be required for loading to avoid extra trips to the landing.

S2. Shovel yarding will not be allowed to create ruts or soil puddling. Shovel routes should be dispersed to prevent creation of definable trails.

S3. Within shovel logged areas, to facilitate proper reforestation, logging debris will be dispersed as necessary to create clear, plantable spots at approximately a 11 foot x 11 foot spacing. Planting spots will be created concurrently with yarding.

LOG PROCESSORS will be allowed within the sale area only under one of the following conditions:

1. No tops or limbs will be allowed to accumulate on any landings, and all tops and limbs will be re-distributed into the unit, to the satisfaction of the Contract Administrator, and will provide for plantable spots every 11 feet by 11 feet.
2. Harvester must provide a written slash treatment plan, acceptable to the Contract Administrator, to address the additional slash accumulation. The Slash Treatment Plan will be a part of the Plan of Operations.



## WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

### FOREST EXCISE TAX ROAD SUMMARY SHEET

**Region:**

**Timber Sale Name:**

**Application Number:**

#### EXCISE TAX APPLICABLE ACTIVITIES

**Construction:** **linear feet**  
*Road to be constructed (optional and required) but not abandoned*

**Reconstruction:** **linear feet**  
*Road to be reconstructed (optional and required) but not abandoned*

**Abandonment:** **linear feet**  
*Abandonment of existing roads not reconstructed under the contract*

**Decommission:** **linear feet**  
*Road to be made undriveable but not officially abandoned.*

**Pre-Haul Maintenance:** **linear feet**  
*Existing road to receive maintenance work (specifically required by the contract) prior to haul*

#### EXCISE TAX EXEMPT ACTIVITIES

**Temporary Optional Construction:** **linear feet**  
*Optional roads to be constructed and then abandoned*

**Temporary Optional Reconstruction:** **linear feet**  
*Optional roads to be reconstructed and then abandoned*

**New Abandonment:** **linear feet**  
*Abandonment of roads constructed or reconstructed under the contract*

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contract. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.

(Revised 6/13)

# Cruise Narrative

<b>Sale Name:</b> Golfer	<b>Region:</b> Northwest
<b>App. #:</b> 30-092649	<b>District:</b> Cascade
<b>Lead Cruiser:</b> K. Bailey	<b>Completion date:</b> 12/22/14
<b>Other Cruisers:</b> B. Frank, E. Carlson	

**Unit acreage specifications:**

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1A	57.8	YES	
1B	0.9	YES	
1C	11.8	YES	
1D	4.7	YES	
1E	6.6	YES	
2A	11.7	YES	
2B	4.8	YES	
2C	6.0	YES	
3	81.1	YES	
4	30.7	YES	
ROW U1	.05	YES	
ROW U2A	1.0	YES	
ROW U2B	0.8	YES	
ROW U4	0.6	YES	
Total	219.0	YES	

**Unit cruise specifications:**

Unit #	Sample type (VP, FP, ITS,100%)	Expansion factor (BAF, full/half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (Cru./Tally)	Total number of plots
1A	VP	46.94	4.5'	250' x 250'	1:1	40
1B	VP	54.44	4.5'	147' x 147'	Cruise All	2
1C	VP	46.94	4.5'	208' x 208'	1:1	12
1D	VP	54.44	4.5'	200' x 200'	Cruise All	6
1E	VP	46.94	4.5'	200' x 200'	Cruise All	6
2A	VP	46.94	4.5'	200' x 200'	1:1	12
2B	VP	46.94	4.5'	200' x 200'	Cruise All	5
2C	VP	40	4.5'	208' x 208'	Cruise All	6
3	VP	46.94	4.5'	250' x 250'	1:1	57
4	VP	54.44	4.5'	250' x 250'	1:1	21
ROW U1	VP	46.94	4.5'	210' spacing	Cruise All	2
ROW 2A	VP	46.94	4.5'	208' spacing	Cruise All	2

ROW 2B	VP	46.94	4.5'	229' spacing	Cruise All	2
ROW U4	VP	54.44	4.5'	177' spacing	Cruise All	2

**Sale/Cruise Description:**

<b>Minor species cruise intensity:</b>	Cruised on appropriate plots.					
<b>Minimum cruise spec:</b>	40% Of Form- Factor at 16 feet D.O.B or 5 inch Top, and merchantable top.					
<b>Avg. ring count by sp:</b>	<b>DF =</b>	8	<b>WH =</b>	8	<b>SS =</b>	NA
<b>Leave/take tree description:</b>	Leave trees are bounded by yellow tags an pink flashers as well as clumped and scattered blue painted trees.					
<b>Sort Description:</b>	<p><b>HA</b>– Logs meeting the following criteria: Surface characteristics for a high quality A sort will have sound tight knots not to exceed 1 ½" in diameter, numbering not more than an average of one per foot of log length. May include logs with not more than two larger knots. Knots and knot indicators ½" in diameter and smaller shall not be a determining factor. Logs will have a growth ring count of 6 or more rings per inch in the outer third top end of the log. (min dia 12".)</p> <p><b>R</b> – Logs meeting the following criteria: Gross diameter of 12 inches or greater, excessive knots greater than 2 ½ inches with recovery less than 65% of the net scale.</p>					

**Field observations:**

<p>Golfer timber sale consists of 10 VRH units and 4 small right-of-ways.</p> <p>There are two distinct portions of this sale. Units 1A, 1B, 1C, 1D, and 1E are located lower on the ridge and are all fairly similar stands. While units 2A, 2B, 2C, and 3 are higher up towards the top of the ridge and fairly similar as well. Unit 4 is located below unit 3 and is somewhat similar to the lower units.</p> <p>The lower units mainly consisted of WH, RC, and DF with minor amounts of NF. The WH in these units averaged around 16"@DBH with bole heights in the mid 80's. The RC averaged about 14"@DBH with bole heights in the mid 60's. The DF was a bit larger and averaged about 23"@DBH with an average bole of 96'.</p> <p>The timber in these units was for the most part a nice domestic log with some high quality scattered around the units. Defects were fairly minimal and consisted of spike knots, hook and sweep.</p> <p>Stand composition of the upper units consisted of WH, NF with minor amounts of RC and DF.</p> <p>The WH and NF were very similar in size class. They both averaged about 13.5"@DBH with around 65' of bole.</p> <p>The quality of the timber in these units was an average domestic log. Defects for these units were hook, spike knots, frost check and some butt rot.</p> <p>Unit 4 was comprised of WH and DF with some NF up towards the top. The WH in this unit averaged 16"@DBH with 62' of bole. DF averaged 23.7"@DBH with 100' of bole. The NF averaged 22"@DBH with 86' of bole.</p> <p>The timber in these units was a nice domestic log with some scattered high quality. Defects were similar to the other units; spike knots, hook, sweep, frost check and some rot.</p> <p>The majority of this sale should provide for good ground based logging methods, although there are areas where cable logging methods shall be necessary.</p> <p>For the most part this sale is well roaded, although there is some new road construction designed; mostly just spurs to access the interior of the units.</p> <p>Access is good off of the MC-ML road system. An F-1 gated key is required.</p>
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Grants: 01, 03, 07

Prepared by: K.Bailey

Title: Timber Cruiser

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
<div style="border: 1px solid black; padding: 5px;">           T29N R08E S28 Ty0U1A            THRU            T29N R08E S28 TyRWU4         </div>				Project: <b>GOLFER</b>										Page <b>1</b>							
				Acres <b>219.00</b>										Date <b>12/22/2015</b>			Time <b>1:46:22PM</b>				
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99					
WH	CU	CU			100.0	44											2	8		0.00	37.1
WH	HA	2S		2		451	451	99			100						40	13	241	1.44	1.9
WH	D	SM				81	81	18									40	16	400	2.14	.2
WH	D	2S		32	3.7	7,460	7,185	1,574			78	22	1	3	14	82	38	13	239	1.58	30.1
WH	D	3S		45	3.3	10,700	10,343	2,265	19	81				0	34	66	37	8	96	0.72	107.9
WH	D	4S		18	.8	3,926	3,895	853	98	2			14	28	21	37	28	5	31	0.32	125.6
WH	D	UT		3		647	647	142	58	18	9	15	35	39	16	10	23	6	37	0.38	17.4
<b>WH Totals</b>				60	3.0	23,308	22,602	4,951	27	38	27	8	4	7	24	65	29	7	71	0.66	320.2
DF	CU	CU			100.0	7											1	12		0.00	3.6
DF	HA	2S				27	27	6			100						40	13	240	1.50	.1
DF	D	2S		79	3.5	5,232	5,048	1,106			30	70	1	1	1	97	39	16	427	2.31	11.8
DF	D	3S		17	.8	1,113	1,104	242	14	86				7	27	66	36	9	109	0.81	10.2
DF	D	4S		3		184	184	40	77	23			35	35		30	24	6	30	0.38	6.0
DF	D	UT		1		9	9	2	90	10			100				13	6	16	0.32	.6
<b>DF Totals</b>				17	3.0	6,572	6,373	1,396	5	16	24	56	2	3	5	90	31	11	197	1.45	32.3
RC	CU	CU			100.0	13											3	8		0.00	3.5
RC	D	3S		74	3.4	1,956	1,891	414	11	35	36	18	0	8		92	35	10	134	1.14	14.1
RC	D	4S		25		643	643	141	99	1			14	14	36	36	29	5	32	0.34	19.8
RC	D	UT		1		14	14	3	50	50			50	50			18	6	24	0.43	.6
<b>RC Totals</b>				7	3.0	2,627	2,548	558	34	27	27	13	4	10	9	77	28	7	67	0.70	38.0
BM	D	3S		74		95	95	21		100						100	40	11	180	1.21	.5
BM	D	UT		26		32	32	7	100					34	66		31	5	36	0.40	.9
<b>BM Totals</b>				0		126	126	28	25	75				8	17	75	34	7	90	0.76	1.4
NF	CU	CU			100.0	24											1	8		0.00	14.0
NF	D	2S		22	4.5	1,385	1,323	290			81	19			17	83	38	13	241	1.61	5.5
NF	D	3S		51	5.3	3,107	2,942	644	21	79			0		60	40	35	8	84	0.67	34.9
NF	D	4S		23	.2	1,281	1,279	280	99	1			20	50	5	26	26	5	28	0.29	45.1
NF	D	UT		4	.7	229	227	50	45	20	20	15	9	63	23	4	24	6	43	0.42	5.2
<b>NF Totals</b>				15	4.2	6,026	5,770	1,264	34	41	19	5	5	13	36	46	26	7	55	0.57	104.8
CW	D	UT		100		11	11	3	10	90			10			90	27	9	100	1.83	.1
<b>CW Totals</b>				0		11	11	3	10	90			10			90	27	9	100	1.83	.1
<b>Totals</b>					3.2	38,671	37,431	8,200	25	34	25	16	4	8	22	67	28	8	75	0.70	496.8

PROJECT STATISTICS											PAGE	1	
PROJECT GOLFER											DATE	12/22/2015	
TC PSTATS	TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
	29N	08E	28	GOLFER	OU1A	THR	219.00	175	1,056	S	W		
	29N	08E	28	GOLFER	RWU4								
							ESTIMATED		PERCENT				
							TREES	TOTAL	SAMPLE				
							PER PLOT	TREES	TREES				
	TOTAL			175	1056		6.0						
	CRUISE			105	634		6.0	51,534	1.2				
	DBH COUNT												
	REFOREST												
	COUNT			66	420		6.4						
	BLANKS			4									
	100 %												
STAND SUMMARY													
		SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET		
		TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC		
	WHEMLOCK	376	150.7	14.6	71	46.0	176.2	23,308	22,602	6,054	6,042		
	WR CEDAR	80	21.8	14.5	63	6.6	25.1	2,627	2,548	766	763		
	NOBLE F	101	51.0	13.9	66	14.5	53.9	6,026	5,770	1,556	1,550		
	DOUG FIR	74	10.9	23.3	97	6.7	32.2	6,572	6,373	1,435	1,433		
	BL MAPLE	2	.9	15.6	58	0.3	1.2	126	126	36	36		
	COTWOOD	1	.1	25.0	56	0.0	.2	11	11	6	6		
	<b>TOTAL</b>	<i>634</i>	<i>235.3</i>	<i>15.0</i>	<i>70</i>	<i>74.6</i>	<i>288.8</i>	<i>38,671</i>	<i>37,431</i>	<i>9,852</i>	<i>9,831</i>		
CONFIDENCE LIMITS OF THE SAMPLE													
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR													
CL	68.1	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.				
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15			
WHEMLOCK		73.9	3.8	212	220	229							
WR CEDAR		87.7	10.1	199	221	244							
NOBLE F		81.2	8.2	175	191	206							
DOUG FIR		62.7	7.4	823	889	955							
BL MAPLE		107.5	100.6		125	251							
COTWOOD													
<b>TOTAL</b>		<i>111.4</i>	<i>4.5</i>	<i>279</i>	<i>292</i>	<i>305</i>		<i>495</i>	<i>124</i>	<i>55</i>			
CL	68.1	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.				
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15			
WHEMLOCK		64.1	3.3	56	58	60							
WR CEDAR		86.6	9.9	63	70	77							
NOBLE F		73.4	7.4	48	51	55							
DOUG FIR		51.9	6.2	180	192	204							
BL MAPLE		99.4	93.1	2	36	70							
COTWOOD													
<b>TOTAL</b>		<i>90.3</i>	<i>3.6</i>	<i>71</i>	<i>74</i>	<i>77</i>		<i>325</i>	<i>81</i>	<i>36</i>			
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.				
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15			
WHEMLOCK		76.9	5.8	142	151	159							
WR CEDAR		209.5	15.8	18	22	25							
NOBLE F		172.2	13.0	44	51	58							
DOUG FIR		195.5	14.8	9	11	12							
BL MAPLE		790.4	59.7	0	1	1							
COTWOOD		1322.9	99.9	0	0	0							
<b>TOTAL</b>		<i>59.0</i>	<i>4.5</i>	<i>225</i>	<i>235</i>	<i>246</i>		<i>139</i>	<i>35</i>	<i>15</i>			
CL	68.1	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.				
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15			
WHEMLOCK		65.8	5.0	167	176	185							
WR CEDAR		202.8	15.3	21	25	29							
NOBLE F		164.7	12.4	47	54	61							
DOUG FIR		194.7	14.7	27	32	37							

**PROJECT STATISTICS****PROJECT GOLFERS**

DATE 12/22/2015

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER		OU1A	THR	219.00	175	1,056	S	W
29N	08E	28	GOLFER		RWU4						
CL	68.1		COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
BL MAPLE			827.1	62.5	0	1	2				
COTWOOD			1322.9	99.9	0	0	0				
<b>TOTAL</b>			<b>46.4</b>	<b>3.5</b>	<b>279</b>	<b>289</b>	<b>299</b>	<b>86</b>	<b>22</b>	<b>10</b>	
CL	68.1		COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK			73.1	5.5	21,354	22,602	23,850				
WR CEDAR			208.4	15.7	2,147	2,548	2,949				
NOBLE F			162.8	12.3	5,061	5,770	6,480				
DOUG FIR			207.8	15.7	5,373	6,373	7,373				
BL MAPLE			906.4	68.5	40	126	213				
COTWOOD			1322.9	99.9	0	11	23				
<b>TOTAL</b>			<b>56.1</b>	<b>4.2</b>	<b>35,846</b>	<b>37,431</b>	<b>39,016</b>	<b>125</b>	<b>31</b>	<b>14</b>	
CL	68.1		COEFF	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK			69.4	5.2	5,725	6,042	6,359				
WR CEDAR			205.8	15.5	645	763	882				
NOBLE F			163.0	12.3	1,360	1,550	1,741				
DOUG FIR			203.2	15.3	1,213	1,433	1,653				
BL MAPLE			889.6	67.2	12	36	61				
COTWOOD			1322.9	99.9	0	6	11				
<b>TOTAL</b>			<b>51.2</b>	<b>3.9</b>	<b>9,451</b>	<b>9,831</b>	<b>10,211</b>	<b>105</b>	<b>26</b>	<b>12</b>	
CL	68.1		COEFF	TONS/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK			69.6	5.3	184	194	204				
WR CEDAR			206.0	15.6	15	18	21				
NOBLE F			163.1	12.3	39	45	50				
DOUG FIR			203.4	15.4	35	41	47				
BL MAPLE			889.6	67.2	0	1	2				
COTWOOD			1322.9	99.9	0	0	0				
<b>TOTAL</b>			<b>51.8</b>	<b>3.9</b>	<b>287</b>	<b>298</b>	<b>310</b>	<b>107</b>	<b>27</b>	<b>12</b>	
CL	68.1		COEFF	V BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0		VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK					121	128	135				
WR CEDAR			133.1	10.1	85	101	117				
NOBLE F			92.8	7.0	94	107	120				
DOUG FIR			166.2	12.5	167	198	229				
BL MAPLE			407.9	30.8	34	108	183				
COTWOOD			1322.9	99.9	0	59	117				
<b>TOTAL</b>			<b>54.9</b>	<b>4.1</b>	<b>124</b>	<b>130</b>	<b>135</b>	<b>120</b>	<b>30</b>	<b>13</b>	

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1								
		Project: GOLFER										Date 12/22/2015								
												Time 1:46:23PM								
T29N R08E S28 T0U1A										T29N R08E S28 T0U1A										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
29N	08E	28	GOLFER	0U1A	57.80	40	116	S	W											
S So Gr T rt ad	%	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre			
		Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd		CF/ Lf		
WH	CU	CU		100.0	138											3	7		0.00	51.2
WH	HA	2S	4		1,339	1,339	77			100						40	13	231	1.40	5.8
WH	DM	SM	1		307	307	18			100						40	16	400	2.14	.8
WH	DM	2S	38	3.1	10,943	10,601	613			60	40	1	2	12	84	38	14	278	1.72	38.2
WH	DM	3S	41	2.0	11,792	11,551	668	10	90				1	20	80	38	9	112	0.76	102.8
WH	DM	4S	13		3,534	3,534	204	97	3			16	19	15	50	29	5	34	0.32	103.7
WH	DM	UT	3		735	735	42	41	10		49	30	37		33	25	8	70	0.61	10.5
<b>WH</b>	<b>Totals</b>		65	2.5	28,788	28,066	1,622	17	38	27	18	3	5	15	78	29	8	90	0.77	313.0
DF	CU	CU		100.0	21											2	13		0.00	3.3
DF	DM	2S	81	3.9	8,395	8,070	466			21	79				100	40	17	475	2.47	17.0
DF	DM	3S	16	1.2	1,563	1,543	89	9	91				10	30	60	35	9	112	0.83	13.8
DF	DM	4S	3		254	254	15	62	38			20	59		22	23	6	30	0.37	8.5
<b>DF</b>	<b>Totals</b>		23	3.6	10,233	9,867	570	3	15	17	64	1	3	5	92	32	12	231	1.57	42.7
RC	CU	CU		100.0	29											10	7		0.00	2.1
RC	DM	3S	72	2.7	3,251	3,164	183	6	25	47	22			7	93	35	11	161	1.26	19.7
RC	DM	4S	27		1,146	1,146	66	100				12		58	30	30	5	33	0.35	34.7
RC	DM	UT	1		27	27	2		100					100		22	8	40	0.71	.7
<b>RC</b>	<b>Totals</b>		10	2.6	4,455	4,338	251	31	19	34	16	3	6	15	76	31	7	76	0.71	57.1
BM	DM	3S	81		359	359	21		100						100	40	11	180	1.21	2.0
BM	DM	UT	19		80	80	5	100							100	33	5	40	0.40	2.0
<b>BM</b>	<b>Totals</b>		1		438	438	25	18	82						18	37	8	110	0.84	4.0
NF	DM	2S	92		682	682	39			30	70				100	40	15	330	1.84	2.1
NF	DM	4S	8		52	52	3		100						100	28	8	50	0.57	1.0
<b>NF</b>	<b>Totals</b>		2		733	733	42		7	28	65				7	36	12	237	1.51	3.1
<b>Type Totals</b>				2.7	44,647	43,443	2,511	15	31	25	29	3	4	12	81	30	8	103	0.86	419.9

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1									
		Project: GOLFER										Date 12/22/2015									
												Time 1:46:23PM									
T29N R08E S28 T0U1B										T29N R08E S28 T0U1B											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
29N	08E	28	GOLFER	0U1B	.90	2	14	S	W												
S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf		
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft			
WH	CU	CU														4	13		0.00		25.5
WH	DM	2S	11	3.4	3,282	3,169	3			100					100	40	14	280	1.74		11.3
WH	DM	3S	67	.9	18,920	18,748	17	29	71						100	40	8	102	0.70		183.8
WH	DM	4S	18		4,923	4,923	4	100				24	28	14	34	27	5	29	0.28		172.5
WH	DM	UT	4		1,036	1,036	1			100		100				12	12	60	1.28		17.3
<b>WH</b>	<b>Totals</b>		53	1.0	28,162	27,876	25	37	48	15		8	5	2	85	31	7	68	0.59		410.3
NF	CU	CU														6			0.00		12.5
NF	DM	2S	23		2,994	2,994	3			100					100	40	13	240	1.55		12.5
NF	DM	3S	29		3,842	3,842	3	19	81						100	40	8	116	0.82		33.1
NF	DM	4S	3		412	412	0	100				100				19	6	20	0.37		20.6
NF	DM	UT	45	6.7	6,187	5,774	5			100			100			30	16	280	2.02		20.6
<b>NF</b>	<b>Totals</b>		25	3.1	13,436	13,023	12	9	24	23	44	3	44		52	29	10	131	1.15		99.3
RC	CU	CU														8			0.00		7.4
RC	DM	3S	56	2.3	3,248	3,175	3		19	81					100	36	12	215	1.85		14.8
RC	DM	4S	44		2,465	2,465	2	100							100	40	5	40	0.29		61.6
<b>RC</b>	<b>Totals</b>		11	1.3	5,713	5,639	5	44	10	46					100	36	6	67	0.57		83.8
DF	DM	2S	90	4.2	6,111	5,856	5			38	62				100	40	17	460	2.36		12.7
DF	DM	3S	10		637	637	1			100					100	36	9	100	0.83		6.4
<b>DF</b>	<b>Totals</b>		12	3.8	6,748	6,493	6		10	34	56				100	39	14	340	1.89		19.1
<b>Type Totals</b>				1.9	54,058	53,031	48	26	33	18	23	5	14	1	80	31	8	87	0.72		612.4









T	TSPCSTGR	Species, Sort Grade - Board Foot Volumes (Type)										Page	1								
												Date		12/22/2015							
												Time		1:46:23PM							
T29N R08E S28 T0U2B										T29N R08E S28 T0U2B											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
29N	08E	28	GOLFER	0U2B	4.80	5	25	S	W												
S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf		
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft			
WH	CU	CU														5			0.00		14.2
WH	DM	2S	54	8.2	5,956	5,467	26		100						100	40	13	224	1.85		24.4
WH	DM	3S	13	13.3	1,549	1,344	6	16	84					16	84	38	8	83	0.90		16.3
WH	DM	4S	15	11.8	1,662	1,466	7	96	4			34	15	11	40	28	6	28	0.53		51.6
WH	DM	UT	18		1,756	1,756	8	100					8	92		32	5	31	0.30		57.3
<b>WH</b>	<b>Totals</b>		54	8.1	10,922	10,033	48	34	12	54		5	4	20	72	30	7	61	0.76		163.8
RC	DM	3S	71	7.8	3,192	2,942	14	29	55	16			16	84		36	8	98	1.08		30.1
RC	DM	4S	27		1,138	1,138	5	100				11	14	75		29	5	32	0.30		35.2
RC	DM	UT	2		57	57	0	100				100				16	7	30	0.75		1.9
<b>RC</b>	<b>Totals</b>		22	5.7	4,388	4,138	20	50	39	11		5	15	21	60	32	7	62	0.70		67.1
NF	DM	3S	85	10.9	2,193	1,955	9		100					63	37	35	11	137	1.32		14.3
NF	DM	4S	15		334	334	2	100					57	43		26	5	23	0.40		14.3
<b>NF</b>	<b>Totals</b>		12	9.4	2,527	2,289	11	15	85				8	60	31	30	8	80	0.92		28.6
DF	HA	2S	44		937	937	4		100					100		40	13	240	1.55		3.9
DF	DM	2S	40		861	861	4		100					100		40	12	200	1.38		4.3
DF	DM	4S	16		328	328	2	100				100				29	6	40	0.52		8.2
<b>DF</b>	<b>Totals</b>		11		2,126	2,126	10	15	85				15	85		35	9	130	1.06		16.4
<b>Type Totals</b>				6.9	19,963	18,585	89	33	26	42		4	8	23	66	31	7	67	0.78		275.9

T	TSPCSTGR	Species, Sort Grade - Board Foot Volumes (Type)										Page	1								
												Date	12/22/2015								
												Time	1:46:23PM								
T29N R08E S28 T0U2C										T29N R08E S28 T0U2C											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
29N	08E	28	GOLFER	0U2C	6.00	6	34	S	W												
S So Gr T rt ad	%	Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre		
			Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf			
							5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft				
WH	CU	CU													3	14		0.00		15.0	
WH	DM	2S	23	4.9	3,105	2,952	18			100				100	40	13	219	1.66		13.5	
WH	DM	3S	52	5.1	6,881	6,528	39	24	76				28	72	37	8	87	0.73		75.2	
WH	DM	4S	25		3,023	3,023	18	100			24	52	24		24	5	25	0.28		120.8	
<b>WH</b>	<b>Totals</b>		58	3.9	13,010	12,503	75	37	39	24	6	13	20	61	28	7	56	0.60		224.5	
RC	CU	CU													1	10		0.00		35.6	
RC	DM	3S	73	12.0	3,913	3,441	21	15	60	12	12	2	12	85	35	9	98	1.03		35.2	
RC	DM	4S	27		1,250	1,250	8	100			17	24	59		27	5	29	0.37		42.8	
<b>RC</b>	<b>Totals</b>		22	9.1	5,163	4,691	28	38	44	9	9	6	15	78	22	8	41	0.70		113.6	
DF	CU	CU													3	21		0.00		2.3	
DF	DM	2S	85	5.2	3,161	2,998	18			73	27			29	71	37	14	267	1.82	11.2	
DF	DM	3S	13		452	452	3	100					31	69	37	6	59	0.64		7.6	
DF	DM	4S	2		54	54	0		100		100				16	8	30	0.57		1.8	
<b>DF</b>	<b>Totals</b>		16	4.4	3,667	3,504	21	13	2	63	23	2		29	70	32	12	153	1.30	23.0	
NF	DM	3S	83		716	716	4		100					100	40	10	150	0.89		4.8	
NF	DM	4S	17		143	143	1	100				100			26	5	30	0.34		4.8	
<b>NF</b>	<b>Totals</b>		4		859	859	5	17	83			17		83	33	8	90	0.67		9.5	
<b>Type Totals</b>				5.0	22,699	21,558	129	32	36	26	6	5	11	17	67	26	8	58	0.68		370.6





T29N R08E S28 TROW1										T29N R08E S28 TROW1				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
29N	08E	28	GOLFER	ROW1	.50	2	15	S	W					

S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre			
								Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf				
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft	Lf				
RC	CU	CU																					
RC	DM	3S	73	1.0	11,526	11,407	6	22	42	36			16		84	2	14			0.00			34.9
RC	DM	4S	26		4,088	4,088	2	100					17	68	15	26	5		29	0.25			143.2
RC	DM	UT	1		81	81	0	100					100			9	6		10	0.27			8.1
<b>RC</b>	<b>Totals</b>		28	.8	15,695	15,576	8	43	31	27			5	29	66	26	8		52	0.54			302.3
WH	CU	CU																		0.00			7.5
WH	HA	2S	13		2,861	2,861	1			100					100	40	13		240	1.45			11.9
WH	DM	2S	56	1.1	12,110	11,983	6			47	53				100	40	14		282	1.60			42.6
WH	DM	3S	23		4,795	4,795	2			100				44	56	35	9		115	0.82			41.7
WH	DM	4S	8		1,611	1,611	1	84	16				33	30	37	23	6		29	0.39			55.5
<b>WH</b>	<b>Totals</b>		38	.6	21,377	21,249	11	6	24	40	30		3	2	10	85	31	10	133	1.04			159.2
DF	HA	2S	14		2,861	2,861	1			100					100	40	13		240	1.34			11.9
DF	DM	2S	74	3.4	14,944	14,436	7			8	92				100	40	17		497	2.63			29.0
DF	DM	3S	9	2.2	1,802	1,762	1			100				17	83	31	9		88	0.80			20.1
DF	DM	4S	3		493	493	0	100					48	52		20	6		27	0.41			18.3
<b>DF</b>	<b>Totals</b>		35	2.7	20,100	19,552	10	3	9	21	68		1	3	8	88	33	12	247	1.65			79.3
<b>Type Totals</b>				1.4	57,172	56,378	28	15	21	30	35		3	10	6	81	29	9	104	0.89			540.8



<b>T29N R08E S28 TRW2B</b>										<b>T29N R08E S28 TRW2B</b>				
<b>Twp</b>	<b>Rge</b>	<b>Sec</b>	<b>Tract</b>	<b>Type</b>	<b>Acres</b>	<b>Plots</b>	<b>Sample Trees</b>	<b>CuFt</b>	<b>BdFt</b>					
<b>29N</b>	<b>08E</b>	<b>28</b>	<b>GOLFER</b>	<b>RW2B</b>	<b>.80</b>	<b>2</b>	<b>10</b>	<b>S</b>	<b>W</b>					

S T	So rt	Gr ad	%	Bd. Ft. per Acre				Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre				
									Net BdFt	Def%	Gross	Net	Log Scale Dia.				Log Length					Ln Ft	Dia In	Bd Ft	CF/ Lf
													5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99					
WH	CU	CU																							
WH	DM	2S	26	8.3	6,587	6,043	5				70	30			30		70			3	18		0.00	42.1	
WH	DM	3S	39	9.1	9,617	8,743	7	7	93						3	67	31			34	9	89	0.78	98.2	
WH	DM	4S	26		5,688	5,688	5	100						4	40	15	41			31	6	37	0.35	154.5	
WH	DM	UT	9		1,976	1,976	2		100						100					24	10	90	0.81	22.0	
<b>WH</b>	<b>Totals</b>		84	5.9	23,868	22,450	18	28	45	19	8			1	28	30	41			28	9	66	0.65	339.1	
NF	DM	2S	95		4,073	4,073	3			23	77				23	77				36	15	345	2.16	11.8	
NF	DM	4S	5		177	177	0		100					100						17	8	30	0.57	5.9	
<b>NF</b>	<b>Totals</b>		16		4,250	4,250	3		4	22	74			4		22	74			30	13	240	1.86	17.7	
<b>Type Totals</b>				5.0	28,118	26,700	21	24	38	19	19			1	24	29	46			28	9	75	0.72	356.8	

<b>T29N R08E S28 TRWU4</b>										<b>T29N R08E S28 TRWU4</b>				
<b>Twp</b>	<b>Rge</b>	<b>Sec</b>	<b>Tract</b>	<b>Type</b>	<b>Acres</b>	<b>Plots</b>	<b>Sample Trees</b>	<b>CuFt</b>	<b>BdFt</b>					
29N	08E	28	GOLFER	RWU4	.60	2	10	S	W					

Spp	So	Gr	%	Bd. Ft. per Acre				Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre					
									Net	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/Lf	
														5-7	8-11	12-15	16+	12-20	21-30	31-35						36-99
WH	CU	CU																								
WH	DM	2S	62	3.6	13,291	12,819	8				57	43			43	10	46			3	20		0.00	23.0		
WH	DM	3S	30	1.7	6,158	6,054	4	60	40							40	60			37	8	76	0.56	79.4		
WH	DM	4S	8	3.8	1,697	1,633	1	88	12					31	69				20	6	22	0.29	73.3			
<b>WH</b>	<b>Totals</b>		50	3.0	21,145	20,506	12	25	13	35	27			2	33	18	47			28	10	90	0.81	226.7		
NF	CU	CU																		1	12		0.00	26.1		
NF	DM	2S	69	4.4	15,001	14,346	9			59	41					8	92			39	14	270	1.75	53.2		
NF	DM	3S	9		1,753	1,753	1	45	55				17				83			35	8	71	0.74	24.6		
NF	DM	4S	4		848	848	1	65	35				35				65			30	6	40	0.49	21.2		
NF	DM	UT	18		3,561	3,561	2				100						100			40	19	600	3.28	5.9		
<b>NF</b>	<b>Totals</b>		50	3.1	21,164	20,508	12	7	6	42	46			3		6	91			29	11	156	1.39	131.1		
<b>Type</b>	<b>Totals</b>			3.1	42,309	41,015	25	16	9	38	36			3	16	12	69			28	10	115	1.03	357.8		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U1A	57.80	40	229	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		40	229	5.7						
CRUISE		20	116	5.8	10,127		1.1			
DBH COUNT										
REFOREST										
COUNT		19	112	5.9						
BLANKS		1								
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	79	120.9	16.3	85	43.3	174.9	28,788	28,066	6,984	6,945
DOUG FIR	21	13.8	24.6	103	9.2	45.8	10,233	9,867	2,162	2,157
WR CEDAR	14	37.5	14.2	61	10.9	41.1	4,455	4,338	1,254	1,246
BL MAPLE	1	2.0	18.0	75	0.8	3.5	438	438	123	123
NOBLE F	1	1.0	25.0	112	0.7	3.5	733	733	168	168
<b>TOTAL</b>	<b>116</b>	<b>175.2</b>	<b>16.8</b>	<b>81</b>	<b>65.6</b>	<b>268.7</b>	<b>44,647</b>	<b>43,443</b>	<b>10,690</b>	<b>10,639</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	60.9	6.9		312	335	358				
DOUG FIR	59.8	13.4		868	1,002	1,136				
WR CEDAR	94.4	26.2		170	231	291				
BL MAPLE										
NOBLE F										
<b>TOTAL</b>	<b>92.0</b>	<b>8.6</b>		<b>408</b>	<b>447</b>	<b>485</b>	<b>338</b>	<b>84</b>	<b>38</b>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	55.0	6.2		76	81	86				
DOUG FIR	51.9	11.6		187	211	236				
WR CEDAR	83.3	23.1		48	63	77				
BL MAPLE										
NOBLE F										
<b>TOTAL</b>	<b>78.2</b>	<b>7.3</b>		<b>96</b>	<b>103</b>	<b>111</b>	<b>244</b>	<b>61</b>	<b>27</b>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	81.6	12.9		105	121	136				
DOUG FIR	133.3	21.1		11	14	17				
WR CEDAR	166.3	26.3		28	37	47				
BL MAPLE	466.5	73.7		1	2	3				
NOBLE F	466.5	73.7		0	1	2				
<b>TOTAL</b>	<b>58.3</b>	<b>9.2</b>		<b>159</b>	<b>175</b>	<b>191</b>	<b>136</b>	<b>34</b>	<b>15</b>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	65.2	10.3		157	175	193				
DOUG FIR	142.2	22.5		35	46	56				
WR CEDAR	164.1	25.9		30	41	52				
BL MAPLE	466.5	73.7		1	4	6				
NOBLE F	466.5	73.7		1	4	6				
<b>TOTAL</b>	<b>44.0</b>	<b>7.0</b>		<b>250</b>	<b>269</b>	<b>287</b>	<b>77</b>	<b>19</b>	<b>9</b>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U1A	57.80	40	229	S	W	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		64.7	10.2	25,198	28,066	30,935				
DOUG FIR		155.8	24.6	7,439	9,867	12,295				
WR CEDAR		164.2	25.9	3,212	4,338	5,463				
BL MAPLE		466.5	73.7	115	438	761				
NOBLE F		466.5	73.7	193	733	1,274				
<b>TOTAL</b>		<b>46.8</b>	<b>7.4</b>	<b>40,231</b>	<b>43,443</b>	<b>46,655</b>	<b>87</b>	<b>22</b>	<b>10</b>	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		64.7	10.2	6,236	6,945	7,655				
DOUG FIR		150.8	23.8	1,643	2,157	2,671				
WR CEDAR		163.7	25.9	924	1,246	1,568				
BL MAPLE		466.5	73.7	32	123	213				
NOBLE F		466.5	73.7	44	168	292				
<b>TOTAL</b>		<b>45.1</b>	<b>7.1</b>	<b>9,882</b>	<b>10,639</b>	<b>11,397</b>	<b>81</b>	<b>20</b>	<b>9</b>	
CL:	68.1 %	COEFF	TONS/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		64.8	10.2	201	223	246				
DOUG FIR		151.1	23.9	47	62	76				
WR CEDAR		163.7	25.9	22	29	37				
BL MAPLE		466.5	73.7	1	3	6				
NOBLE F		466.5	73.7	1	5	8				
<b>TOTAL</b>		<b>45.0</b>	<b>7.1</b>	<b>300</b>	<b>323</b>	<b>346</b>	<b>81</b>	<b>20</b>	<b>9</b>	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK				144	161	177				
DOUG FIR		116.1	18.3	163	216	269				
WR CEDAR		34.5	5.4	78	106	133				
BL MAPLE		188.0	29.7	33	124	216				
NOBLE F		188.0	29.7	55	208	362				
<b>TOTAL</b>		<b>192.1</b>	<b>30.3</b>	<b>150</b>	<b>162</b>	<b>174</b>	<b>1,473</b>	<b>368</b>	<b>164</b>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER		DATE	12/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U1B	0.90	2	14	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		2	14	7.0						
CRUISE		2	14	7.0	263		5.3			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	8	183.8	14.7	76	56.7	217.8	28,162	27,876	7,454	7,454
NOBLE F	3	33.1	21.3	89	17.7	81.7	13,436	13,023	3,248	3,248
WR CEDAR	2	69.0	12.0	80	15.7	54.4	5,713	5,639	1,698	1,698
DOUG FIR	1	6.4	28.0	120	5.1	27.2	6,748	6,493	1,393	1,393
<b>TOTAL</b>	<b>14</b>	<b>292.2</b>	<b>15.5</b>	<b>79</b>	<b>96.9</b>	<b>381.1</b>	<b>54,058</b>	<b>53,031</b>	<b>13,794</b>	<b>13,794</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	46.5	17.5	144	175	206					
NOBLE F			600	600	600					
WR CEDAR	117.3	109.9		235	493					
DOUG FIR										
<b>TOTAL</b>	<b>78.2</b>	<b>22.5</b>	<b>244</b>	<b>315</b>	<b>386</b>	<b>264</b>	<b>66</b>	<b>29</b>		
CL: 68.1 %	COEFF	<b>SAMPLE TREES - CF</b>				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	47.7	18.0	39	47	56					
NOBLE F			149	149	149					
WR CEDAR	118.9	111.3		73	153					
DOUG FIR										
<b>TOTAL</b>	<b>66.7</b>	<b>19.2</b>	<b>64</b>	<b>80</b>	<b>95</b>	<b>192</b>	<b>48</b>	<b>21</b>		
CL: 68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	96.0	89.9	19	184	349					
NOBLE F	141.4	132.4		33	77					
WR CEDAR	111.2	104.1		69	141					
DOUG FIR	141.4	132.4		6	15					
<b>TOTAL</b>	<b>15.0</b>	<b>14.1</b>	<b>251</b>	<b>292</b>	<b>333</b>	<b>16</b>	<b>4</b>	<b>2</b>		
CL: 68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	106.1	99.3	1	218	434					
NOBLE F	141.4	132.4		82	190					
WR CEDAR			54	54	54					
DOUG FIR	141.4	132.4		27	63					
<b>TOTAL</b>	<b>20.2</b>	<b>18.9</b>	<b>309</b>	<b>381</b>	<b>453</b>	<b>29</b>	<b>7</b>	<b>3</b>		
CL: 68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	105.5	98.8	347	27,876	55,405					
NOBLE F	141.4	132.4		13,023	30,269					
WR CEDAR	17.8	16.7	4,699	5,639	6,579					
DOUG FIR	141.4	132.4		6,493	15,091					
<b>TOTAL</b>	<b>5.3</b>	<b>4.9</b>	<b>50,406</b>	<b>53,031</b>	<b>55,656</b>	<b>2</b>	<b>0</b>	<b>0</b>		

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
29N	08E	28	GOLFER	0U1B	0.90		2	14	S	W
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		106.1	99.4	45	7,454	14,863				
NOBLE F		141.4	132.4		3,248	7,549				
WR CEDAR		22.8	21.3	1,336	1,698	2,060				
DOUG FIR		141.4	132.4		1,393	3,238				
<b>TOTAL</b>		<i>12.6</i>	<i>11.8</i>	<i>12,169</i>	<i>13,794</i>	<i>15,418</i>	<i>11</i>	<i>3</i>	<i>1</i>	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		106.1	99.4	1	239	476				
NOBLE F		141.4	132.4		93	216				
WR CEDAR		22.8	21.3	31	40	48				
DOUG FIR		141.4	132.4		40	92				
<b>TOTAL</b>		<i>18.1</i>	<i>17.0</i>	<i>341</i>	<i>411</i>	<i>481</i>	<i>23</i>	<i>6</i>	<i>3</i>	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		105.5	98.8	2	128	254				
NOBLE F		141.4	132.4		159	371				
WR CEDAR		17.8	16.7	86	104	121				
DOUG FIR		141.4	132.4		239	554				
<b>TOTAL</b>		<i>5.3</i>	<i>4.9</i>	<i>132</i>	<i>139</i>	<i>146</i>	<i>2</i>	<i>0</i>	<i>0</i>	

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	GOLFER		DATE	12/22/2015			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
29N	08E	28	GOLFER	0U1C	11.80	12	70	S	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
				PLOTS	TREES	TREES	TREES				
TOTAL		12	70	5.8							
CRUISE		6	36	6.0	2,392		1.5				
DBH COUNT											
REFOREST											
COUNT		5	34	6.8							
BLANKS		1									
100 %											
<b>STAND SUMMARY</b>											
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET	
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC	
WHEMLOCK	20	111.1	16.1	82	39.0	156.5	23,639	22,888	5,966	5,963	
WR CEDAR	9	63.6	13.4	70	17.1	62.6	7,478	7,422	1,995	1,995	
DOUG FIR	7	28.0	18.9	78	12.6	54.8	7,502	7,310	1,951	1,951	
<b>TOTAL</b>	<b>36</b>	<b>202.7</b>	<b>15.7</b>	<b>78</b>	<b>69.0</b>	<b>273.8</b>	<b>38,620</b>	<b>37,619</b>	<b>9,912</b>	<b>9,909</b>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.	INF. POP.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
WHEMLOCK	37.0	8.7	235	258	280						
WR CEDAR	85.7	32.3	158	234	309						
DOUG FIR	13.0	6.5	440	470	500						
<b>TOTAL</b>	<b>51.4</b>	<b>9.1</b>	<b>259</b>	<b>285</b>	<b>311</b>	<b>106</b>	<b>26</b>	<b>12</b>			
CL: 68.1 %	COEFF	SAMPLE TREES - CF					# OF TREES REQ.	INF. POP.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
WHEMLOCK	33.2	7.8	62	67	72						
WR CEDAR	74.6	28.1	44	61	78						
DOUG FIR			121	121	121						
<b>TOTAL</b>	<b>43.2</b>	<b>7.6</b>	<b>68</b>	<b>74</b>	<b>79</b>	<b>75</b>	<b>19</b>	<b>8</b>			
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.	INF. POP.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
WHEMLOCK	72.8	21.9	87	111	135						
WR CEDAR	79.6	24.0	48	64	79						
DOUG FIR	109.8	33.0	19	28	37						
<b>TOTAL</b>	<b>50.0</b>	<b>15.1</b>	<b>172</b>	<b>203</b>	<b>233</b>	<b>109</b>	<b>27</b>	<b>12</b>			
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.	INF. POP.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
WHEMLOCK	70.5	21.2	123	156	190						
WR CEDAR	86.6	26.1	46	63	79						
DOUG FIR	114.6	34.5	36	55	74						
<b>TOTAL</b>	<b>50.6</b>	<b>15.2</b>	<b>232</b>	<b>274</b>	<b>316</b>	<b>111</b>	<b>28</b>	<b>12</b>			
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.	INF. POP.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
WHEMLOCK	71.6	21.6	17,955	22,888	27,821						
WR CEDAR	88.5	26.7	5,443	7,422	9,400						
DOUG FIR	112.0	33.7	4,845	7,310	9,775						
<b>TOTAL</b>	<b>51.4</b>	<b>15.5</b>	<b>31,800</b>	<b>37,619</b>	<b>43,439</b>	<b>115</b>	<b>29</b>	<b>13</b>			
CL: 68.1 %	COEFF	NET CUFT FT/ACRE					# OF PLOTS REQ.	INF. POP.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
WHEMLOCK	70.6	21.2	4,696	5,963	7,230						
WR CEDAR	90.4	27.2	1,452	1,995	2,537						
DOUG FIR	113.6	34.2	1,284	1,951	2,618						
<b>TOTAL</b>	<b>51.0</b>	<b>15.3</b>	<b>8,388</b>	<b>9,909</b>	<b>11,429</b>	<b>113</b>	<b>28</b>	<b>13</b>			

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U1C	11.80	12	70	S	W	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		70.5	21.2	150	191	231				
WR CEDAR		90.4	27.2	34	47	60				
DOUG FIR		113.6	34.2	37	56	75				
<b>TOTAL</b>		52.5	15.8	247	293	340	120	30	13	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK				115	146	178				
WR CEDAR		34.5	10.4	87	119	150				
DOUG FIR		50.2	15.1	88	133	178				
<b>TOTAL</b>		201.8	60.8	116	137	159	1,772	443	197	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER		DATE	12/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0UID	4.70	6	36	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		6	36	6.0						
CRUISE		6	36	6.0	1,120	3.2				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WR CEDAR	22	129.8	16.8	68	48.7	199.6	18,867	17,989	6,354	6,318
WHEMLOCK	11	100.4	13.5	74	27.2	99.8	14,894	14,744	3,634	3,634
DOUG FIR	2	5.6	24.5	99	3.7	18.1	3,218	3,107	777	777
COTWOOD	1	2.7	25.0	56	1.8	9.1	532	532	263	263
<b>TOTAL</b>	<b>36</b>	<b>238.4</b>	<b>15.8</b>	<b>71</b>	<b>82.0</b>	<b>326.6</b>	<b>37,511</b>	<b>36,372</b>	<b>11,028</b>	<b>10,992</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	86.4	19.3		234	290	346				
WHEMLOCK	65.3	20.6		191	240	289				
DOUG FIR	45.6	42.7		347	605	863				
COTWOOD										
<b>TOTAL</b>	<b>79.6</b>	<b>13.4</b>		<b>251</b>	<b>290</b>	<b>329</b>	<b>253</b>	<b>63</b>	<b>28</b>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	84.2	18.8		83	102	122				
WHEMLOCK	66.1	20.9		47	59	72				
DOUG FIR	37.3	34.9		97	149	201				
COTWOOD										
<b>TOTAL</b>	<b>81.3</b>	<b>13.7</b>		<b>79</b>	<b>91</b>	<b>104</b>	<b>264</b>	<b>66</b>	<b>29</b>	
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	46.9	20.9		103	130	157				
WHEMLOCK	96.7	43.1		57	100	144				
DOUG FIR	161.3	71.8		2	6	10				
COTWOOD	244.9	109.1			3	6				
<b>TOTAL</b>	<b>55.9</b>	<b>24.9</b>		<b>179</b>	<b>238</b>	<b>298</b>	<b>149</b>	<b>37</b>	<b>17</b>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	28.2	12.5		175	200	225				
WHEMLOCK	105.9	47.1		53	100	147				
DOUG FIR	154.9	69.0		6	18	31				
COTWOOD	244.9	109.1			9	19				
<b>TOTAL</b>	<b>36.5</b>	<b>16.3</b>		<b>274</b>	<b>327</b>	<b>380</b>	<b>63</b>	<b>16</b>	<b>7</b>	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	44.6	19.9		14,412	17,989	21,565				
WHEMLOCK	110.5	49.2		7,487	14,744	22,001				
DOUG FIR	155.9	69.4		950	3,107	5,264				
COTWOOD	244.9	109.1			532	1,113				
<b>TOTAL</b>	<b>52.7</b>	<b>23.5</b>		<b>27,830</b>	<b>36,372</b>	<b>44,913</b>	<b>132</b>	<b>33</b>	<b>15</b>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
29N	08E	28	GOLFER	0U1D	4.70		6	36	S	W
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR		37.3	16.6	5,268	6,318	7,368				
WHEMLOCK		110.8	49.3	1,840	3,634	5,427				
DOUG FIR		155.0	69.0	241	777	1,314				
COTWOOD		244.9	109.1		263	549				
<b>TOTAL</b>		<i>42.8</i>	<i>19.0</i>	<i>8,899</i>	<i>10,992</i>	<i>13,084</i>	<i>87</i>	<i>22</i>	<i>10</i>	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR		37.6	16.7	124	149	174				
WHEMLOCK		110.8	49.3	59	116	174				
DOUG FIR		155.0	69.0	7	22	37				
COTWOOD		244.9	109.1		6	13				
<b>TOTAL</b>		<i>47.2</i>	<i>21.0</i>	<i>232</i>	<i>294</i>	<i>356</i>	<i>106</i>	<i>27</i>	<i>12</i>	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR		44.6	19.9	72	90	108				
WHEMLOCK		110.5	49.2	75	148	220				
DOUG FIR		155.9	69.4	52	171	290				
COTWOOD		244.9	109.1		59	123				
<b>TOTAL</b>		<i>52.7</i>	<i>23.5</i>	<i>85</i>	<i>111</i>	<i>138</i>	<i>132</i>	<i>33</i>	<i>15</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER		DATE	12/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U1E	6.60	6	38	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		6	38	6.3						
CRUISE		6	38	6.3	1,254		3.0			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	17	79.7	17.5	90	31.8	133.0	23,293	22,655	5,656	5,631
DOUG FIR	11	30.9	22.6	99	18.1	86.1	21,585	21,066	4,222	4,215
WR CEDAR	9	67.5	13.8	60	18.9	70.4	7,988	7,809	2,171	2,172
BL MAPLE	1	11.9	11.0	32	2.4	7.8	356	356	127	127
<b>TOTAL</b>	<b>38</b>	<b>190.0</b>	<b>16.9</b>	<b>77</b>	<b>72.2</b>	<b>297.3</b>	<b>53,221</b>	<b>51,885</b>	<b>12,177</b>	<b>12,145</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	50.6	13.0		348	401	453				
DOUG FIR	29.3	9.8		1,482	1,642	1,802				
WR CEDAR	78.9	29.8		140	200	260				
BL MAPLE										
<b>TOTAL</b>	<b>97.0</b>	<b>16.4</b>		<b>584</b>	<b>699</b>	<b>813</b>	<b>376</b>	<b>94</b>	<b>42</b>	
CL:	68.1 %	COEFF	<b>SAMPLE TREES - CF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	44.3	11.4		87	98	109				
DOUG FIR	23.8	7.9		297	323	349				
WR CEDAR	79.8	30.1		39	55	72				
BL MAPLE										
<b>TOTAL</b>	<b>83.2</b>	<b>14.0</b>		<b>129</b>	<b>150</b>	<b>171</b>	<b>276</b>	<b>69</b>	<b>31</b>	
CL:	68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	44.0	19.6		64	80	95				
DOUG FIR	145.8	64.9		11	31	51				
WR CEDAR	73.3	32.6		45	68	90				
BL MAPLE	244.9	109.1			12	25				
<b>TOTAL</b>	<b>34.6</b>	<b>15.4</b>		<b>161</b>	<b>190</b>	<b>219</b>	<b>57</b>	<b>14</b>	<b>6</b>	
CL:	68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	52.0	23.1		102	133	164				
DOUG FIR	53.6	23.9		66	86	107				
WR CEDAR	55.8	24.8		53	70	88				
BL MAPLE	244.9	109.1			8	16				
<b>TOTAL</b>	<b>8.2</b>	<b>3.6</b>		<b>286</b>	<b>297</b>	<b>308</b>	<b>3</b>	<b>1</b>	<b>0</b>	
CL:	68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	57.7	25.7		16,837	22,655	28,473				
DOUG FIR	47.7	21.3		16,587	21,066	25,544				
WR CEDAR	62.9	28.0		5,623	7,809	9,995				
BL MAPLE	244.9	109.1			356	744				
<b>TOTAL</b>	<b>18.4</b>	<b>8.2</b>		<b>47,641</b>	<b>51,885</b>	<b>56,130</b>	<b>16</b>	<b>4</b>	<b>2</b>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
29N	08E	28	GOLFER	0U1E	6.60		6	38	S	W
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		56.2	25.0	4,223	5,631	7,040				
DOUG FIR		48.7	21.7	3,301	4,215	5,129				
WR CEDAR		60.2	26.8	1,589	2,172	2,754				
BL MAPLE		244.9	109.1		127	266				
<b>TOTAL</b>		<b>16.6</b>	<b>7.4</b>	<b>11,248</b>	<b>12,145</b>	<b>13,043</b>	<b>13</b>	<b>3</b>	<b>1</b>	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		56.0	24.9	136	181	226				
DOUG FIR		48.4	21.6	94	120	146				
WR CEDAR		60.2	26.8	37	51	65				
BL MAPLE		244.9	109.1		3	7				
<b>TOTAL</b>		<b>19.5</b>	<b>8.7</b>	<b>325</b>	<b>356</b>	<b>387</b>	<b>18</b>	<b>5</b>	<b>2</b>	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		57.7	25.7	127	170	214				
DOUG FIR		47.7	21.3	193	245	297				
WR CEDAR		62.9	28.0	80	111	142				
BL MAPLE		244.9	109.1		45	95				
<b>TOTAL</b>		<b>18.4</b>	<b>8.2</b>	<b>160</b>	<b>175</b>	<b>189</b>	<b>16</b>	<b>4</b>	<b>2</b>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U2A	11.70	12	81	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		12	81	6.8						
CRUISE		6	39	6.5	4,126		9			
DBH COUNT										
REFOREST										
COUNT		6	42	7.0						
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	26	213.3	13.1	62	55.1	199.5	21,764	21,353	5,981	5,981
NOBLE F	13	139.3	12.0	64	31.6	109.5	13,006	12,667	3,296	3,296
<b>TOTAL</b>	<b>39</b>	<b>352.6</b>	<b>12.7</b>	<b>63</b>	<b>86.8</b>	<b>309.1</b>	<b>34,770</b>	<b>34,021</b>	<b>9,277</b>	<b>9,278</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	63.5	12.7	122	140	157					
NOBLE F	71.5	20.6	114	144	174					
<b>TOTAL</b>	<b>65.4</b>	<b>10.5</b>	<b>126</b>	<b>141</b>	<b>156</b>	<b>171</b>	<b>43</b>	<b>19</b>		
CL: 68.1 %	COEFF	<b>SAMPLE TREES - CF</b>				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	59.9	12.0	35	39	44					
NOBLE F	77.0	22.2	31	40	48					
<b>TOTAL</b>	<b>65.1</b>	<b>10.4</b>	<b>35</b>	<b>39</b>	<b>44</b>	<b>169</b>	<b>42</b>	<b>19</b>		
CL: 68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	52.4	15.8	180	213	247					
NOBLE F	72.0	21.7	109	139	169					
<b>TOTAL</b>	<b>31.7</b>	<b>9.5</b>	<b>319</b>	<b>353</b>	<b>386</b>	<b>44</b>	<b>11</b>	<b>5</b>		
CL: 68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	51.3	15.4	169	200	230					
NOBLE F	66.7	20.1	88	110	132					
<b>TOTAL</b>	<b>29.3</b>	<b>8.8</b>	<b>282</b>	<b>309</b>	<b>336</b>	<b>37</b>	<b>9</b>	<b>4</b>		
CL: 68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	48.6	14.6	18,231	21,353	24,475					
NOBLE F	67.5	20.3	10,093	12,667	15,242					
<b>TOTAL</b>	<b>30.3</b>	<b>9.1</b>	<b>30,921</b>	<b>34,021</b>	<b>37,121</b>	<b>40</b>	<b>10</b>	<b>4</b>		
CL: 68.1 %	COEFF	<b>NET CUFT FT/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	48.9	14.7	5,100	5,981	6,863					
NOBLE F	68.8	20.7	2,613	3,296	3,979					
<b>TOTAL</b>	<b>30.2</b>	<b>9.1</b>	<b>8,435</b>	<b>9,278</b>	<b>10,121</b>	<b>40</b>	<b>10</b>	<b>4</b>		
CL: 68.1 %	COEFF	<b>TONS/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	48.9	14.7	163	191	220					
NOBLE F	68.8	20.7	75	94	114					
<b>TOTAL</b>	<b>30.5</b>	<b>9.2</b>	<b>260</b>	<b>286</b>	<b>312</b>	<b>40</b>	<b>10</b>	<b>4</b>		
CL: 68.1 %	COEFF	<b>V-BAR/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U2A	11.70	12	81	S	W	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK				91	107	123				
NOBLE F				92	116	139				
<b>TOTAL</b>		<i>194.3</i>	<i>58.5</i>	<i>100</i>	<i>110</i>	<i>120</i>	<i>1,644</i>	<i>411</i>	<i>183</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER		DATE	12/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U2B	4.80	5	25	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		5	25	5.0						
CRUISE		5	25	5.0	898		2.8			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	14	113.2	14.6	64	34.4	131.4	10,922	10,033	3,685	3,684
WR CEDAR	6	51.3	14.2	60	15.0	56.3	4,388	4,138	1,485	1,484
NOBLE F	3	14.3	19.0	63	6.5	28.2	2,527	2,289	800	802
DOUG FIR	2	8.2	20.5	71	4.1	18.8	2,126	2,126	606	606
<b>TOTAL</b>	<b>25</b>	<b>187.0</b>	<b>15.2</b>	<b>63</b>	<b>60.3</b>	<b>234.7</b>	<b>19,963</b>	<b>18,585</b>	<b>6,575</b>	<b>6,577</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	71.9	19.9		129	161	193				
WR CEDAR	63.3	28.2		95	132	169				
NOBLE F				240	240	240				
DOUG FIR	10.9	10.2		234	260	286				
<b>TOTAL</b>	<b>56.4</b>	<b>11.7</b>		<b>149</b>	<b>168</b>	<b>188</b>	<b>132</b>	<b>33</b>	<b>15</b>	
CL:	68.1 %	COEFF	<b>SAMPLE TREES - CF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	59.5	16.5		50	60	70				
WR CEDAR	76.1	33.9		36	54	73				
NOBLE F				84	84	84				
DOUG FIR	9.1	8.5		68	74	80				
<b>TOTAL</b>	<b>50.4</b>	<b>10.5</b>		<b>55</b>	<b>62</b>	<b>68</b>	<b>106</b>	<b>26</b>	<b>12</b>	
CL:	68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	126.3	62.7		42	113	184				
WR CEDAR	142.8	70.9		15	51	88				
NOBLE F	149.1	74.1		4	14	25				
DOUG FIR	137.2	68.2		3	8	14				
<b>TOTAL</b>	<b>55.1</b>	<b>27.4</b>		<b>136</b>	<b>187</b>	<b>238</b>	<b>150</b>	<b>38</b>	<b>17</b>	
CL:	68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	77.4	38.5		81	131	182				
WR CEDAR	91.3	45.4		31	56	82				
NOBLE F	149.1	74.1		7	28	49				
DOUG FIR	136.9	68.0		6	19	32				
<b>TOTAL</b>	<b>28.3</b>	<b>14.1</b>		<b>202</b>	<b>235</b>	<b>268</b>	<b>40</b>	<b>10</b>	<b>4</b>	
CL:	68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	81.8	40.7		5,954	10,033	14,111				
WR CEDAR	94.9	47.2		2,187	4,138	6,090				
NOBLE F	143.9	71.5		652	2,289	3,925				
DOUG FIR	137.0	68.1		678	2,126	3,573				
<b>TOTAL</b>	<b>17.0</b>	<b>8.4</b>		<b>17,020</b>	<b>18,585</b>	<b>20,151</b>	<b>14</b>	<b>4</b>	<b>2</b>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
29N	08E	28	GOLFER	0U2B	4.80		5	25	S	W
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		71.2	35.4	2,381	3,684	4,988				
WR CEDAR		92.1	45.8	805	1,484	2,164				
NOBLE F		142.3	70.7	235	802	1,369				
DOUG FIR		137.0	68.1	194	606	1,018				
<b>TOTAL</b>		25.6	12.7	5,740	6,577	7,413	32	8	4	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		71.2	35.4	76	118	160				
WR CEDAR		92.2	45.8	19	35	51				
NOBLE F		142.4	70.8	7	23	39				
DOUG FIR		137.0	68.1	6	17	29				
<b>TOTAL</b>		30.3	15.0	164	193	222	45	11	5	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		81.8	40.7	45	76	107				
WR CEDAR		94.9	47.2	39	73	108				
NOBLE F		143.9	71.5	23	81	139				
DOUG FIR		137.0	68.1	36	113	190				
<b>TOTAL</b>		17.0	8.4	73	79	86	14	4	2	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER		DATE	12/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U2C	6.00	6	34	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		6	34	5.7						
CRUISE		6	34	5.7	1,143		3.0			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	19	123.9	13.7	63	34.2	126.7	13,010	12,503	3,728	3,729
WR CEDAR	10	52.5	15.3	55	17.1	66.7	5,163	4,691	1,708	1,702
DOUG FIR	4	9.4	22.8	79	5.6	26.7	3,667	3,504	947	947
NOBLE F	1	4.8	16.0	68	1.7	6.7	859	859	212	212
<b>TOTAL</b>	<b>34</b>	<b>190.5</b>	<b>14.8</b>	<b>62</b>	<b>59.0</b>	<b>226.7</b>	<b>22,699</b>	<b>21,558</b>	<b>6,595</b>	<b>6,590</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	56.2	13.2		126	145	165				
WR CEDAR	72.9	25.7		111	150	189				
DOUG FIR	41.5	23.7		300	393	485				
NOBLE F										
<b>TOTAL</b>	<b>70.9</b>	<b>12.3</b>		<b>156</b>	<b>178</b>	<b>199</b>	<b>200</b>	<b>50</b>	<b>22</b>	
CL:	68.1 %	COEFF	<b>SAMPLE TREES - CF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	61.1	14.4		39	45	52				
WR CEDAR	53.8	19.0		42	52	62				
DOUG FIR	32.1	18.4		86	105	124				
NOBLE F										
<b>TOTAL</b>	<b>61.3</b>	<b>10.7</b>		<b>48</b>	<b>54</b>	<b>60</b>	<b>150</b>	<b>38</b>	<b>17</b>	
CL:	68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	84.4	37.6		77	124	170				
WR CEDAR	87.1	38.8		32	52	73				
DOUG FIR	194.1	86.4		1	9	18				
NOBLE F	244.9	109.1			5	10				
<b>TOTAL</b>	<b>36.7</b>	<b>16.3</b>		<b>159</b>	<b>191</b>	<b>222</b>	<b>64</b>	<b>16</b>	<b>7</b>	
CL:	68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	61.3	27.3		92	127	161				
WR CEDAR	82.0	36.5		42	67	91				
DOUG FIR	181.7	80.9		5	27	48				
NOBLE F	244.9	109.1			7	14				
<b>TOTAL</b>	<b>30.9</b>	<b>13.8</b>		<b>195</b>	<b>227</b>	<b>258</b>	<b>45</b>	<b>11</b>	<b>5</b>	
CL:	68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	62.6	27.9		9,016	12,503	15,990				
WR CEDAR	83.6	37.2		2,944	4,691	6,438				
DOUG FIR	168.5	75.0		874	3,504	6,134				
NOBLE F	244.9	109.1			859	1,797				
<b>TOTAL</b>	<b>38.5</b>	<b>17.1</b>		<b>17,862</b>	<b>21,558</b>	<b>25,254</b>	<b>71</b>	<b>18</b>	<b>8</b>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
29N	08E	28	GOLFER	0U2C	6.00		6	34	S	W
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		61.6	27.4	2,705	3,729	4,752				
WR CEDAR		88.2	39.3	1,033	1,702	2,370				
DOUG FIR		174.1	77.5	213	947	1,682				
NOBLE F		244.9	109.1		212	442				
<b>TOTAL</b>		<b>34.6</b>	<b>15.4</b>	<b>5,574</b>	<b>6,590</b>	<b>7,605</b>		<b>57</b>	<b>14</b>	<b>6</b>
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		61.6	27.4	87	119	152				
WR CEDAR		88.4	39.3	24	40	56				
DOUG FIR		174.1	77.5	6	27	48				
NOBLE F		244.9	109.1		6	13				
<b>TOTAL</b>		<b>36.6</b>	<b>16.3</b>	<b>161</b>	<b>192</b>	<b>224</b>		<b>64</b>	<b>16</b>	<b>7</b>
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		62.6	27.9	71	99	126				
WR CEDAR		83.6	37.2	44	70	97				
DOUG FIR		168.5	75.0	33	131	230				
NOBLE F		244.9	109.1		129	270				
<b>TOTAL</b>		<b>38.5</b>	<b>17.1</b>	<b>79</b>	<b>95</b>	<b>111</b>		<b>71</b>	<b>18</b>	<b>8</b>

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER		DATE	12/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U3	81.10	57	370	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		57	370	6.5						
CRUISE		29	188	6.5	24,370		.8			
DBH COUNT										
REFOREST										
COUNT		27	181	6.7						
BLANKS		1								
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	118	187.9	13.6	63	51.2	188.6	19,932	19,219	5,497	5,496
NOBLE F	68	111.3	13.7	65	30.7	113.6	11,923	11,394	3,110	3,095
WR CEDAR	2	1.3	18.9	69	0.6	2.5	286	280	81	81
<b>TOTAL</b>	<b>188</b>	<b>300.5</b>	<b>13.6</b>	<b>64</b>	<b>82.5</b>	<b>304.7</b>	<b>32,141</b>	<b>30,893</b>	<b>8,687</b>	<b>8,672</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	61.6	5.7		131	139	147				
NOBLE F	53.4	6.5		124	133	141				
WR CEDAR	22.0	20.6		179	225	271				
<b>TOTAL</b>	<b>58.5</b>	<b>4.3</b>		<b>132</b>	<b>137</b>	<b>143</b>	<b>137</b>	<b>34</b>	<b>15</b>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	59.8	5.5		38	40	42				
NOBLE F	55.8	6.8		34	37	39				
WR CEDAR	20.3	19.0		53	65	77				
<b>TOTAL</b>	<b>58.3</b>	<b>4.3</b>		<b>38</b>	<b>39</b>	<b>41</b>	<b>136</b>	<b>34</b>	<b>15</b>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	60.2	8.0		173	188	203				
NOBLE F	85.5	11.3		99	111	124				
WR CEDAR	558.7	73.9		0	1	2				
<b>TOTAL</b>	<b>42.3</b>	<b>5.6</b>		<b>284</b>	<b>300</b>	<b>317</b>	<b>72</b>	<b>18</b>	<b>8</b>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	51.8	6.9		176	189	202				
NOBLE F	85.1	11.3		101	114	126				
WR CEDAR	558.7	73.9		1	2	4				
<b>TOTAL</b>	<b>36.7</b>	<b>4.9</b>		<b>290</b>	<b>305</b>	<b>320</b>	<b>54</b>	<b>13</b>	<b>6</b>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	57.3	7.6		17,761	19,219	20,678				
NOBLE F	86.9	11.5		10,084	11,394	12,704				
WR CEDAR	558.7	73.9		73	280	487				
<b>TOTAL</b>	<b>42.0</b>	<b>5.6</b>		<b>29,175</b>	<b>30,893</b>	<b>32,611</b>	<b>70</b>	<b>18</b>	<b>8</b>	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.	INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	55.1	7.3		5,096	5,496	5,897				
NOBLE F	86.6	11.5		2,740	3,095	3,450				
WR CEDAR	558.7	73.9		21	81	141				
<b>TOTAL</b>	<b>40.0</b>	<b>5.3</b>		<b>8,213</b>	<b>8,672</b>	<b>9,132</b>	<b>64</b>	<b>16</b>	<b>7</b>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U3	81.10	57	370	S	W	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		55.1	7.3	163	176	189				
NOBLE F		86.7	11.5	79	89	99				
WR CEDAR		558.7	73.9	0	2	3				
<b>TOTAL</b>		<b>40.2</b>	<b>5.3</b>	<b>253</b>	<b>267</b>	<b>281</b>	<b>64</b>	<b>16</b>	<b>7</b>	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK				94	102	110				
NOBLE F				89	100	112				
WR CEDAR		497.7	65.9	30	113	197				
<b>TOTAL</b>		<b>189.8</b>	<b>25.1</b>	<b>96</b>	<b>101</b>	<b>107</b>	<b>1,439</b>	<b>360</b>	<b>160</b>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER		DATE	12/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U4	30.70	21	114	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL		21	114	5.4						
CRUISE		11	63	5.7	5,220		1.2			
DBH COUNT										
REFOREST										
COUNT		9	51	5.7						
BLANKS		1								
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	37	131.8	15.9	82	45.5	181.5	27,720	26,873	7,138	7,133
DOUG FIR	22	29.5	23.7	100	18.6	90.7	18,024	17,545	3,995	3,995
NOBLE F	4	8.7	22.1	86	5.0	23.3	3,500	3,276	870	871
<b>TOTAL</b>	<b>63</b>	<b>170.0</b>	<b>17.9</b>	<b>86</b>	<b>69.9</b>	<b>295.5</b>	<b>49,244</b>	<b>47,694</b>	<b>12,004</b>	<b>11,999</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	48.7	8.0		221	241	260				
DOUG FIR	42.3	9.2		628	692	756				
NOBLE F	31.8	18.2		317	388	458				
<b>TOTAL</b>	<b>70.8</b>	<b>8.9</b>		<b>371</b>	<b>408</b>	<b>444</b>	<b>200</b>	<b>50</b>	<b>22</b>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	42.8	7.0		59	64	68				
DOUG FIR	37.1	8.1		143	156	169				
NOBLE F	26.0	14.9		87	102	118				
<b>TOTAL</b>	<b>60.2</b>	<b>7.6</b>		<b>91</b>	<b>98</b>	<b>106</b>	<b>145</b>	<b>36</b>	<b>16</b>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	55.5	12.4		115	132	148				
DOUG FIR	90.9	20.3		24	30	36				
NOBLE F	239.9	53.6		4	9	13				
<b>TOTAL</b>	<b>43.2</b>	<b>9.6</b>		<b>154</b>	<b>170</b>	<b>186</b>	<b>78</b>	<b>20</b>	<b>9</b>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	51.4	11.5		161	181	202				
DOUG FIR	91.7	20.5		72	91	109				
NOBLE F	239.9	53.6		11	23	36				
<b>TOTAL</b>	<b>35.2</b>	<b>7.9</b>		<b>272</b>	<b>296</b>	<b>319</b>	<b>52</b>	<b>13</b>	<b>6</b>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	52.1	11.7		23,742	26,873	30,004				
DOUG FIR	95.6	21.4		13,794	17,545	21,295				
NOBLE F	239.9	53.6		1,519	3,276	5,033				
<b>TOTAL</b>	<b>37.1</b>	<b>8.3</b>		<b>43,744</b>	<b>47,694</b>	<b>51,644</b>	<b>58</b>	<b>14</b>	<b>6</b>	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK	50.8	11.4		6,323	7,133	7,943				
DOUG FIR	95.4	21.3		3,143	3,995	4,847				
NOBLE F	239.9	53.6		404	871	1,337				
<b>TOTAL</b>	<b>36.2</b>	<b>8.1</b>		<b>11,029</b>	<b>11,999</b>	<b>12,969</b>	<b>55</b>	<b>14</b>	<b>6</b>	

TC TSTATS				STATISTICS			PAGE	2		
				PROJECT	GOLFER		DATE	12/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	0U4	30.70	21	114	S	W	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		50.8	11.4	202	228	254				
DOUG FIR		95.4	21.3	90	114	138				
NOBLE F		239.9	53.6	12	25	38				
<b>TOTAL</b>		<i>36.0</i>	<i>8.1</i>	<i>338</i>	<i>367</i>	<i>397</i>	<i>54</i>	<i>14</i>	<i>6</i>	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK				131	148	165				
DOUG FIR		56.6	12.7	152	193	235				
NOBLE F		181.8	40.6	65	140	216				
<b>TOTAL</b>		<i>165.6</i>	<i>37.0</i>	<i>148</i>	<i>161</i>	<i>175</i>	<i>1,150</i>	<i>288</i>	<i>128</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER		DATE	12/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	ROW1	0.50	2	15	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		2	15	7.5						
CRUISE		2	15	7.5	123	12.2				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WR CEDAR	6	163.2	12.6	67	39.7	140.8	15,695	15,576	4,241	4,241
WHEMLOCK	5	55.5	19.7	92	26.5	117.3	21,377	21,249	5,128	5,128
DOUG FIR	4	26.4	25.5	103	18.6	93.9	20,100	19,552	4,350	4,349
<b>TOTAL</b>	<b>15</b>	<b>245.2</b>	<b>16.2</b>	<b>77</b>	<b>87.4</b>	<b>352.0</b>	<b>57,172</b>	<b>56,378</b>	<b>13,719</b>	<b>13,717</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	72.6	32.3		109	162	214				
WHEMLOCK	50.0	24.8		335	446	557				
DOUG FIR	57.0	32.6		635	943	1,250				
<b>TOTAL</b>	<b>92.8</b>	<b>24.8</b>		<b>350</b>	<b>465</b>	<b>580</b>	<b>368</b>	<b>92</b>	<b>41</b>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	74.2	33.0		30	45	60				
WHEMLOCK	46.5	23.1		82	107	131				
DOUG FIR	49.1	28.0		147	205	262				
<b>TOTAL</b>	<b>80.7</b>	<b>21.6</b>		<b>85</b>	<b>108</b>	<b>131</b>	<b>279</b>	<b>70</b>	<b>31</b>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	36.7	34.4		107	163	219				
WHEMLOCK	71.0	66.4		19	56	92				
DOUG FIR	141.4	132.4			26	61				
<b>TOTAL</b>	<b>55.8</b>	<b>52.2</b>		<b>117</b>	<b>245</b>	<b>373</b>	<b>218</b>	<b>55</b>	<b>24</b>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	47.1	44.1		79	141	203				
WHEMLOCK	28.3	26.5		86	117	148				
DOUG FIR	141.4	132.4			94	218				
<b>TOTAL</b>	<b>28.3</b>	<b>26.5</b>		<b>259</b>	<b>352</b>	<b>445</b>	<b>56</b>	<b>14</b>	<b>6</b>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	59.6	55.8		6,885	15,576	24,268				
WHEMLOCK	15.2	14.2		18,227	21,249	24,272				
DOUG FIR	141.4	132.4			19,552	45,444				
<b>TOTAL</b>	<b>38.3</b>	<b>35.9</b>		<b>36,155</b>	<b>56,378</b>	<b>76,601</b>	<b>103</b>	<b>26</b>	<b>11</b>	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR	69.2	64.8		1,492	4,241	6,989				
WHEMLOCK	20.7	19.4		4,135	5,128	6,121				
DOUG FIR	141.4	132.4			4,349	10,107				
<b>TOTAL</b>	<b>31.2</b>	<b>29.2</b>		<b>9,714</b>	<b>13,717</b>	<b>17,720</b>	<b>68</b>	<b>17</b>	<b>8</b>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	ROW1	0.50	2	15	S	W	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		TONS/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR		69.2	64.8	35	100	164				
WHEMLOCK		20.7	19.4	132	164	196				
DOUG FIR		141.4	132.4		124	288				
<b>TOTAL</b>		36.2	33.9	256	388	519	92	23	10	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WR CEDAR		59.6	55.8	49	111	172				
WHEMLOCK		15.2	14.2	155	181	207				
DOUG FIR		141.4	132.4		208	484				
<b>TOTAL</b>		38.3	35.9	103	160	218	103	26	11	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	RW2A	1.00	2	10	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		2	10	5.0						
CRUISE		2	10	5.0	279	3.6				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
SAMPLE TREES		TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK		8	260.1	11.5	60	55.4	187.8	17,491	16,034	5,052
NOBLE F		2	18.6	21.5	69	10.1	46.9	5,133	4,946	1,475
<b>TOTAL</b>		<i>10</i>	<i>278.8</i>	<i>12.4</i>	<i>61</i>	<i>66.6</i>	<i>234.7</i>	<i>22,623</i>	<i>20,980</i>	<i>6,527</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		82.9	31.3	79	115	151				
NOBLE F		2.7	2.5	258	265	272				
<b>TOTAL</b>		<i>72.6</i>	<i>24.1</i>	<i>110</i>	<i>145</i>	<i>180</i>	<i>233</i>	<i>58</i>	<i>26</i>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		89.0	33.6	26	39	52				
NOBLE F		1.5	1.4	78	79	80				
<b>TOTAL</b>		<i>74.4</i>	<i>24.8</i>	<i>35</i>	<i>47</i>	<i>59</i>	<i>245</i>	<i>61</i>	<i>27</i>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		2.4	2.2	254	260	266				
NOBLE F		141.4	132.4	19	43					
<b>TOTAL</b>		<i>11.7</i>	<i>11.0</i>	<i>248</i>	<i>279</i>	<i>309</i>	<i>10</i>	<i>2</i>	<i>1</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		35.4	33.1	126	188	250				
NOBLE F		141.4	132.4	47	109					
<b>TOTAL</b>		<i>.0</i>	<i>.0</i>	<i>235</i>	<i>235</i>	<i>235</i>	<i>0</i>	<i>0</i>	<i>0</i>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		52.4	49.1	8,165	16,034	23,903				
NOBLE F		141.4	132.4	4,946	11,496					
<b>TOTAL</b>		<i>6.7</i>	<i>6.3</i>	<i>19,661</i>	<i>20,980</i>	<i>22,299</i>	<i>3</i>	<i>1</i>	<i>0</i>	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		50.1	46.9	2,682	5,051	7,420				
NOBLE F		141.4	132.4	1,475	3,428					
<b>TOTAL</b>		<i>6.8</i>	<i>6.4</i>	<i>6,109</i>	<i>6,525</i>	<i>6,941</i>	<i>3</i>	<i>1</i>	<i>0</i>	
CL:	68.1 %	COEFF	TONS/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		50.1	46.9	86	162	238				
NOBLE F		141.4	132.4	42	98					
<b>TOTAL</b>		<i>10.4</i>	<i>9.8</i>	<i>184</i>	<i>204</i>	<i>224</i>	<i>8</i>	<i>2</i>	<i>1</i>	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	RW2A	1.00	2	10	S	W	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		52.4	49.1	43	85	127				
NOBLE F		141.4	132.4		105	245				
TOTAL		6.7	6.3	84	89	95	3	1	0	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER		DATE	12/22/2015		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	RW2B	0.80	2	10	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		2	10	5.0						
CRUISE		2	10	5.0	141		7.1			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
WHEMLOCK	9	170.0	15.1	65	54.4	211.2	23,868	22,450	6,302	6,305
NOBLE F	1	5.9	27.0	92	4.5	23.5	4,250	4,250	976	976
<b>TOTAL</b>	<i>10</i>	<i>175.9</i>	<i>15.6</i>	<i>66</i>	<i>59.3</i>	<i>234.7</i>	<i>28,118</i>	<i>26,700</i>	<i>7,278</i>	<i>7,281</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10			15
WHEMLOCK	63.6	22.4	148	191	234					
NOBLE F										
<b>TOTAL</b>	<i>83.1</i>	<i>27.6</i>	<i>177</i>	<i>244</i>	<i>311</i>	<i>306</i>	<i>76</i>			<i>34</i>
CL: 68.1 %	COEFF	<b>SAMPLE TREES - CF</b>				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10			15
WHEMLOCK	61.8	21.8	42	53	65					
NOBLE F										
<b>TOTAL</b>	<i>72.9</i>	<i>24.3</i>	<i>49</i>	<i>65</i>	<i>80</i>	<i>236</i>	<i>59</i>			<i>26</i>
CL: 68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10			15
WHEMLOCK	122.0	114.3		170	364					
NOBLE F	141.4	132.4		6	14					
<b>TOTAL</b>	<i>122.7</i>	<i>114.9</i>		<i>176</i>	<i>378</i>	<i>1,055</i>	<i>264</i>			<i>117</i>
CL: 68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10			15
WHEMLOCK	78.6	73.6	56	211	367					
NOBLE F	141.4	132.4		23	55					
<b>TOTAL</b>	<i>84.9</i>	<i>79.5</i>	<i>48</i>	<i>235</i>	<i>421</i>	<i>505</i>	<i>126</i>			<i>56</i>
CL: 68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10			15
WHEMLOCK	89.5	83.8	3,636	22,450	41,264					
NOBLE F	141.4	132.4		4,250	9,878					
<b>TOTAL</b>	<i>97.8</i>	<i>91.5</i>	<i>2,258</i>	<i>26,700</i>	<i>51,142</i>	<i>670</i>	<i>168</i>			<i>74</i>
CL: 68.1 %	COEFF	<b>NET CUFT FT/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10			15
WHEMLOCK	88.3	82.7	1,090	6,305	11,521					
NOBLE F	141.4	132.4		976	2,269					
<b>TOTAL</b>	<i>95.5</i>	<i>89.4</i>	<i>773</i>	<i>7,281</i>	<i>13,790</i>	<i>639</i>	<i>160</i>			<i>71</i>
CL: 68.1 %	COEFF	<b>TONS/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10			15
WHEMLOCK	88.2	82.6	35	202	368					
NOBLE F	141.4	132.4		28	65					
<b>TOTAL</b>	<i>94.7</i>	<i>88.6</i>	<i>26</i>	<i>230</i>	<i>433</i>	<i>628</i>	<i>157</i>			<i>70</i>
CL: 68.1 %	COEFF	<b>V-BAR/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10			15

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	RW2B	0.80	2	10	S	W	
CL:	68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		89.5	83.8	17	106	195				
NOBLE F		141.4	132.4		181	421				
<b>TOTAL</b>		97.8	91.5	10	114	218	670	168	74	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	RWU4	0.60	2	10	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		2	10	5.0						
CRUISE		2	10	5.0	79	12.7				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
WHEMLOCK	5	85.8	17.1	89	33.0	136.1	21,145	20,506	5,061	5,062
NOBLE F	5	45.8	23.3	88	28.2	136.1	21,164	20,508	5,345	5,343
<b>TOTAL</b>	<i>10</i>	<i>131.6</i>	<i>19.5</i>	<i>89</i>	<i>61.7</i>	<i>272.2</i>	<i>42,309</i>	<i>41,015</i>	<i>10,406</i>	<i>10,405</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	59.8	29.7	249	354	459					
NOBLE F	49.5	24.6	386	512	638					
<b>TOTAL</b>	<i>54.3</i>	<i>18.1</i>	<i>355</i>	<i>433</i>	<i>511</i>	<i>131</i>	<i>33</i>	<i>15</i>		
CL: 68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	52.3	26.0	63	85	107					
NOBLE F	39.1	19.4	105	130	155					
<b>TOTAL</b>	<i>47.3</i>	<i>15.8</i>	<i>90</i>	<i>107</i>	<i>124</i>	<i>99</i>	<i>25</i>	<i>11</i>		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	35.7	33.4	57	86	114					
NOBLE F	95.9	89.8	5	46	87					
<b>TOTAL</b>	<i>56.6</i>	<i>53.0</i>	<i>62</i>	<i>132</i>	<i>201</i>	<i>225</i>	<i>56</i>	<i>25</i>		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	28.3	26.5	100	136	172					
NOBLE F	84.9	79.5	28	136	244					
<b>TOTAL</b>	<i>28.3</i>	<i>26.5</i>	<i>200</i>	<i>272</i>	<i>344</i>	<i>56</i>	<i>14</i>	<i>6</i>		
CL: 68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	38.6	36.1	13,096	20,506	27,917					
NOBLE F	79.3	74.3	5,277	20,508	35,739					
<b>TOTAL</b>	<i>20.4</i>	<i>19.1</i>	<i>33,195</i>	<i>41,015</i>	<i>48,835</i>	<i>29</i>	<i>7</i>	<i>3</i>		
CL: 68.1 %	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	30.4	28.5	3,619	5,062	6,504					
NOBLE F	81.2	76.0	1,281	5,343	9,406					
<b>TOTAL</b>	<i>26.9</i>	<i>25.2</i>	<i>7,785</i>	<i>10,405</i>	<i>13,025</i>	<i>51</i>	<i>13</i>	<i>6</i>		
CL: 68.1 %	COEFF	TONS/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		
WHEMLOCK	30.4	28.5	116	162	208					
NOBLE F	81.1	75.9	37	153	269					
<b>TOTAL</b>	<i>23.8</i>	<i>22.3</i>	<i>245</i>	<i>315</i>	<i>385</i>	<i>40</i>	<i>10</i>	<i>4</i>		
CL: 68.1 %	COEFF	V-BAR/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	GOLFER			DATE	12/22/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
29N	08E	28	GOLFER	RWU4	0.60	2	10	S	W	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
WHEMLOCK		38.6	36.1	96	151	205				
NOBLE F		79.3	74.3	39	151	263				
<b>TOTAL</b>		<i>20.4</i>	<i>19.1</i>	<i>122</i>	<i>151</i>	<i>179</i>	29	7	3	

**Species Summary - Trees, Logs, Tons, CCF, MBF**

T29N R08E S28 Ty0U1	57.8
T29N R08E S28 Ty0U1	.9
T29N R08E S28 TyRWU	.6

**Project GOLFER**  
**Acres 219.00**

**Page No 1**  
**Date: 12/22/2015**  
**Time 1:46:27PM**

Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
WHEMLOCK	33,003	62,288	42,427	40.09	21.24	0.67	13,258	13,232	5,105	4,950
DOUG FIR	2,380	6,289	8,954	131.87	49.90	1.47	3,142	3,138	1,439	1,396
NOBLE F	11,165	19,876	9,761	30.41	17.08	0.58	3,407	3,395	1,320	1,264
WR CEDAR	4,780	7,592	3,943	34.96	22.01	0.71	1,678	1,671	575	558
BL MAPLE	193	309	211	41.08	25.75	0.75	79	79	28	28
COTWOOD	13	25	30	98.71	49.36	1.83	12	12	3	3
<b>Totals</b>	51,534	96,378	65,325	41.78	22.34	0.71	21,576	21,529	8,469	8,197

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/ LF	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log		Gross	Net	Gross	Net
C	51,328	96,044	65,084	41.77	22.32	0.71	21,485	21,437	8,439	8,167
H	206	334	241	44.58	27.52	0.81	92	92	30	30
<b>Totals</b>	51,534	96,378	65,325	41.78	22.34	0.71	21,576	21,529	8,469	8,197

## PRE-CRUISE NARRATIVE

Sale Name: <b>Golfer</b>	Region: <b>Northwest</b>
Agreement #: <b>30-092649</b>	District: <b>Cascade</b>
Contact Forester: Jeremy Westra Phone / Location: Sedro Woolley: 360-856-3500	County(s): Snohomish
Alternate Contact: Jason Teller Phone / Location: Granite Falls: 360-770-4436	Other information:

Type of Sale: Lump Sum	
Harvest System: Ground based	80%
Harvest System: Uphill Cable	20%

### UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit #  Harvest R/W or RMZ WMZ	Legal Description (Enter only one legal for each unit) <b>Sec/Twp/Rng</b>	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination  (List method and error of closure if applicable)
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1A	S28, T29, R08E	1/3	58.4		0.6			57.8	GPS (Garmin)
1B	S27, T29, R08E	1	0.9					0.9	GPS (Garmin)
1C	S28, T29, R08E	1/3	13.8			2.0		11.8	GPS (Garmin)
1D	S33, T29, R08E	1	5.1			0.4		4.7	GPS (Garmin)
1E	S33, T29, R08E	1	6.6					6.6	GPS (Garmin)
2A	S35, T29, R08E	1/3	11.8		0.1			11.7	GPS (Garmin)
2B	S35, T29, R08E	1/3	4.8					4.8	GPS (Garmin)
2C	S35, T29, R08E	1/3	6.0					6.0	GPS (Garmin)
3	S35, T29, R08E	3/7	85.5		1.3	1.8	*1.3	81.1	GPS (Garmin)
4	S01, T28, R08E	7	31.1		0.4			30.7	GPS (Garmin)
ROW U1	S28, T29, R08E	3	0.5					0.5	GPS (Garmin)
ROW U2A	S35, T29, R08E	1	1.0					1.0	GPS (Garmin)

ROW U2B	S35, T29, R08E	1	0.8					0.8	GPS (Garmin)
ROW U4	S01, T28, R08E	7	0.6					0.6	GPS (Garmin)
<b>TOTAL ACRES</b>			226.9		2.4	4.2	1.3	219.0	

**HARVEST PLAN AND SPECIAL CONDITIONS:**

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1A	Variable Retention Harvest (VRH): Take all trees bounded by white "Timber Sale Boundary" tags, the MC-3101 hardrock pit, the MC-ML, MC-31 and MC-39 roads. Leave trees marked with yellow "Leave Tree Area" tags or individual trees with blue paint.	NA	310 scattered trees 157 clumped trees 467 total
1B	Variable Retention Harvest (VRH): Take all trees bounded by white "Timber Sale Boundary" tags and the MC-39 road. Leave trees marked with yellow "Leave Tree Area" tags or individual trees with blue paint.	NA	7 scattered trees
1C	Variable Retention Harvest (VRH): Take all trees bounded by white "Timber Sale Boundary" tags and the MC-ML road. Leave trees marked with yellow "Leave Tree Area" tags or individual trees with blue paint.	NA	94 scattered trees
1D	Variable Retention Harvest (VRH): Take all trees bounded by white "Timber Sale Boundary" tags and the MC-ML road. Leave trees marked with yellow "Leave Tree Area" tags or individual trees with blue paint.	NA	38 scattered trees
1E	Variable Retention Harvest (VRH): Take all trees bounded by white "Timber Sale Boundary" tags, the MC-ML and MC-37 roads. Leave trees marked with yellow "Leave Tree Area" tags or individual trees with blue paint.	NA	53 scattered trees

2A	Variable Retention Harvest (VRH): Take all trees bounded by white "Timber Sale Boundary" tags and young stand boundary. Leave trees marked with yellow "Leave Tree Area" tags or individual trees with blue paint.	NA	56 scattered trees 38 clumped trees 94 total
2B	Variable Retention Harvest (VRH): Take all trees bounded by white "Timber Sale Boundary" tags. Leave trees marked with yellow "Leave Tree Area" tags or individual trees with blue paint.	NA	38 scattered trees
2C	Variable Retention Harvest (VRH): Take all trees bounded by white "Timber Sale Boundary" tags. Leave trees marked with yellow "Leave Tree Area" tags or individual trees with blue paint.	NA	48 scattered trees
3	Variable Retention Harvest (VRH): Take all trees bounded by white "Timber Sale Boundary" tags, young stand boundary and the BM-ML road. Leave trees marked with yellow "Leave Tree Area" tags or individual trees with blue paint.	NA	340 scattered trees 319 clumped trees 659 total
4	Variable Retention Harvest (VRH): Take all trees bounded by white "Timber Sale Boundary" tags and the PT-28 road. Leave trees marked with yellow "Leave Tree Area" tags or individual trees with blue paint.	NA	149 scattered trees 100 clumped trees 249 total
ROW U1	Take all trees bounded by orange "Right of Way" tags.	NA	NA
ROW U2A	Take all trees bounded by orange "Right of Way" tags.	NA	NA
ROW U2B	Take all trees bounded by orange "Right of Way" tags.	NA	NA
ROW U4	Take all trees bounded by orange "Right of Way" tags.	NA	NA

**OTHER PRE-CRUISE INFORMATION:**

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1A	DF/WH 1960 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See attached pre-cruise and vicinity maps.

1B	DF/WH 30 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
1C	DF/WH 400 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
1D	DF/WH 160 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
1E	DF/WH 220 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
2A	WH/SF 275 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
2B	WH/SF 110 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
2C	WH/SF 145 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
3	WH/SF 1970 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
4	DF/WH 1420 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
ROW U1	DF/WH 15 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
ROW U2A	WH/SF 30 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
ROW U2B	WH/SF 25 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
ROW U4	WH/SF 15 MBF	Access off Marsh Creek Mainline (MC-ML) via Sultan Basin Road. F-1 key needed at gate.	See above.
TOTAL MBF	6775 MBF		

**REMARKS:**

Directions:

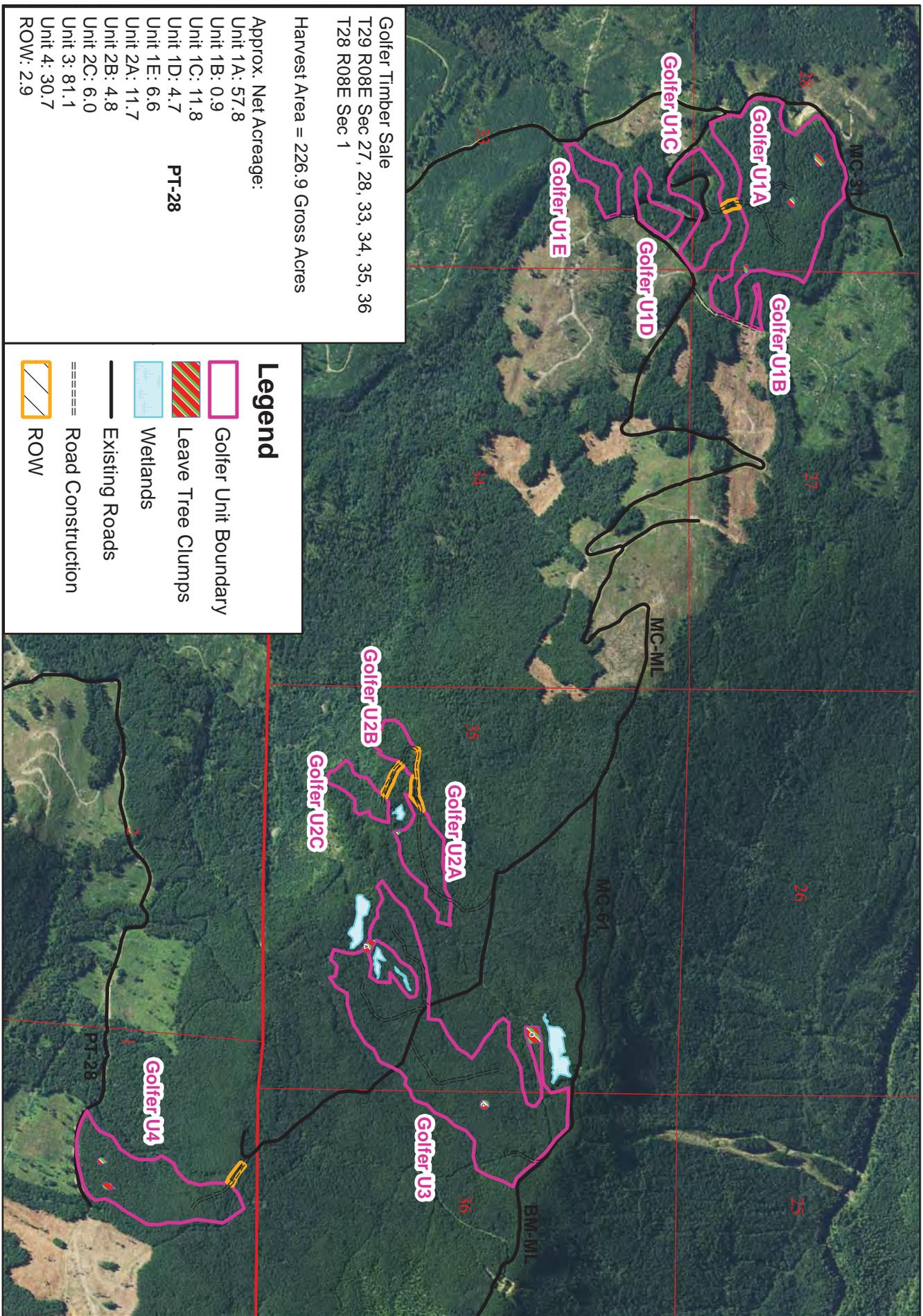
Follow US Route 2 east from Sultan 1 mile to Sultan Basin Road. Turn left at traffic light onto Sultan Basin Road. Follow the Sultan Basin Road north 5.3 miles to the Marsh Creek Mainline (MC-ML), turn left. Follow MC-ML for 3.0 miles to access Unit 1. Turn left on the MC-31 to access the MC-3101 hardrock pit. Continue for 2.3 miles on the MC-ML to the MC-53 road, turn left to access the MC-5301 hardrock pit. Continue on the MC-ML for 1.2 miles to access the orange flagged line to Unit 2. Continue for 0.3 miles on the MC-ML to access Unit 3. Continue for 0.5 miles to access Unit 4.

Right of Way Determination: Right of way boundaries walked with handheld Garmin GPS unit.

\*Unit 3: 1.3 acres of Unit 3 were cut in a trespass of the Nice Marmot sale. See area marked on traverse map. This acreage is deducted from the gross acreage of Unit 3.

Prepared By: Jeremy Westra Date: 10/7/2015	Title: Presales Forester	CC:
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# Golfer Timber Sale



Golfer Timber Sale  
 T29 R08E Sec 27, 28, 33, 34, 35, 36  
 T28 R08E Sec 1

Harvest Area = 226.9 Gross Acres

Approx. Net Acreage:

- Unit 1A: 57.8
- Unit 1B: 0.9
- Unit 1C: 11.8
- Unit 1D: 4.7
- Unit 1E: 6.6
- Unit 2A: 11.7
- Unit 2B: 4.8
- Unit 2C: 6.0
- Unit 3: 81.1
- Unit 4: 30.7
- ROW: 2.9

PT-28

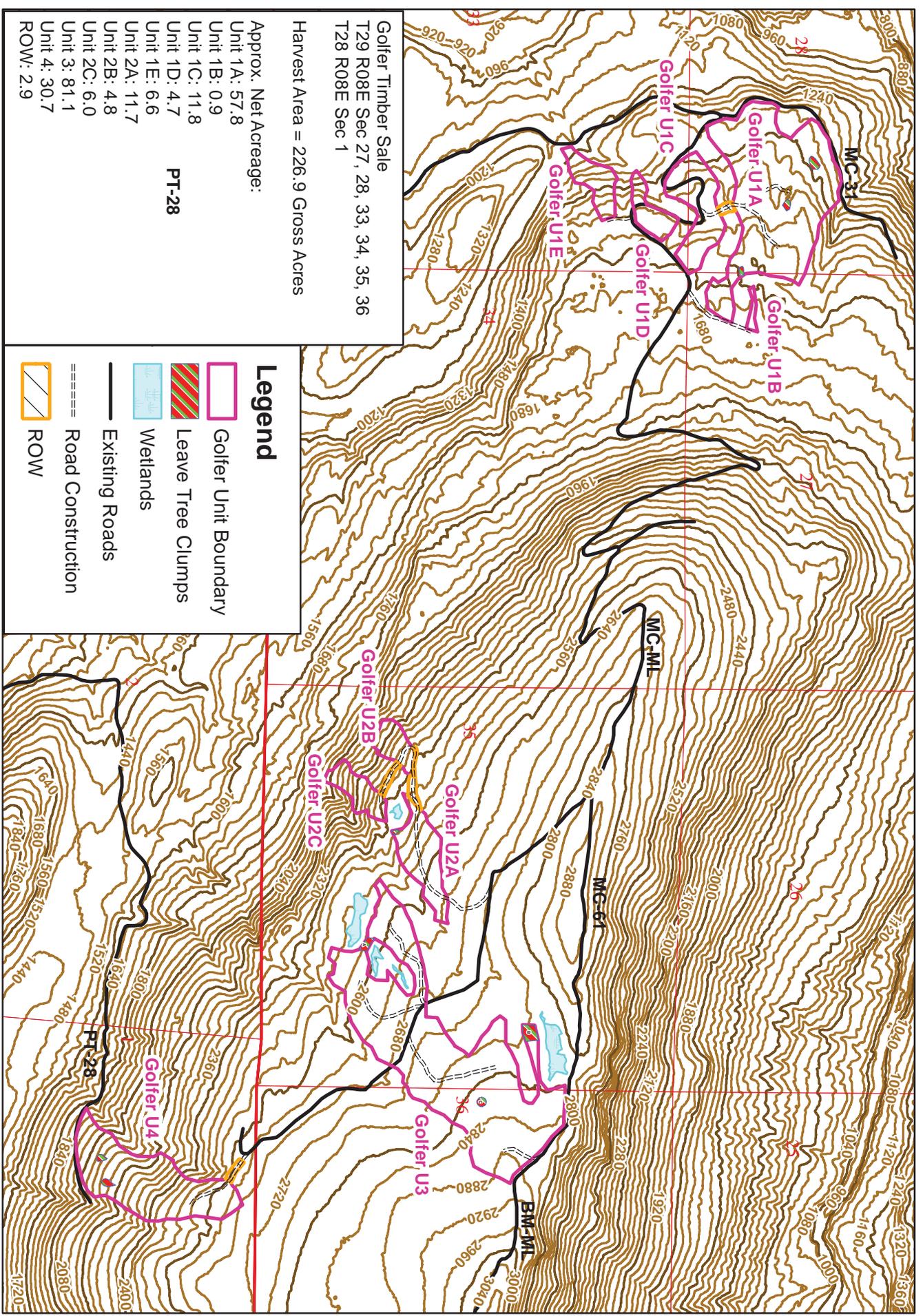
### Legend

- Golfer Unit Boundary
- Leave Tree Clumps
- Wetlands
- Existing Roads
- Road Construction
- ROW

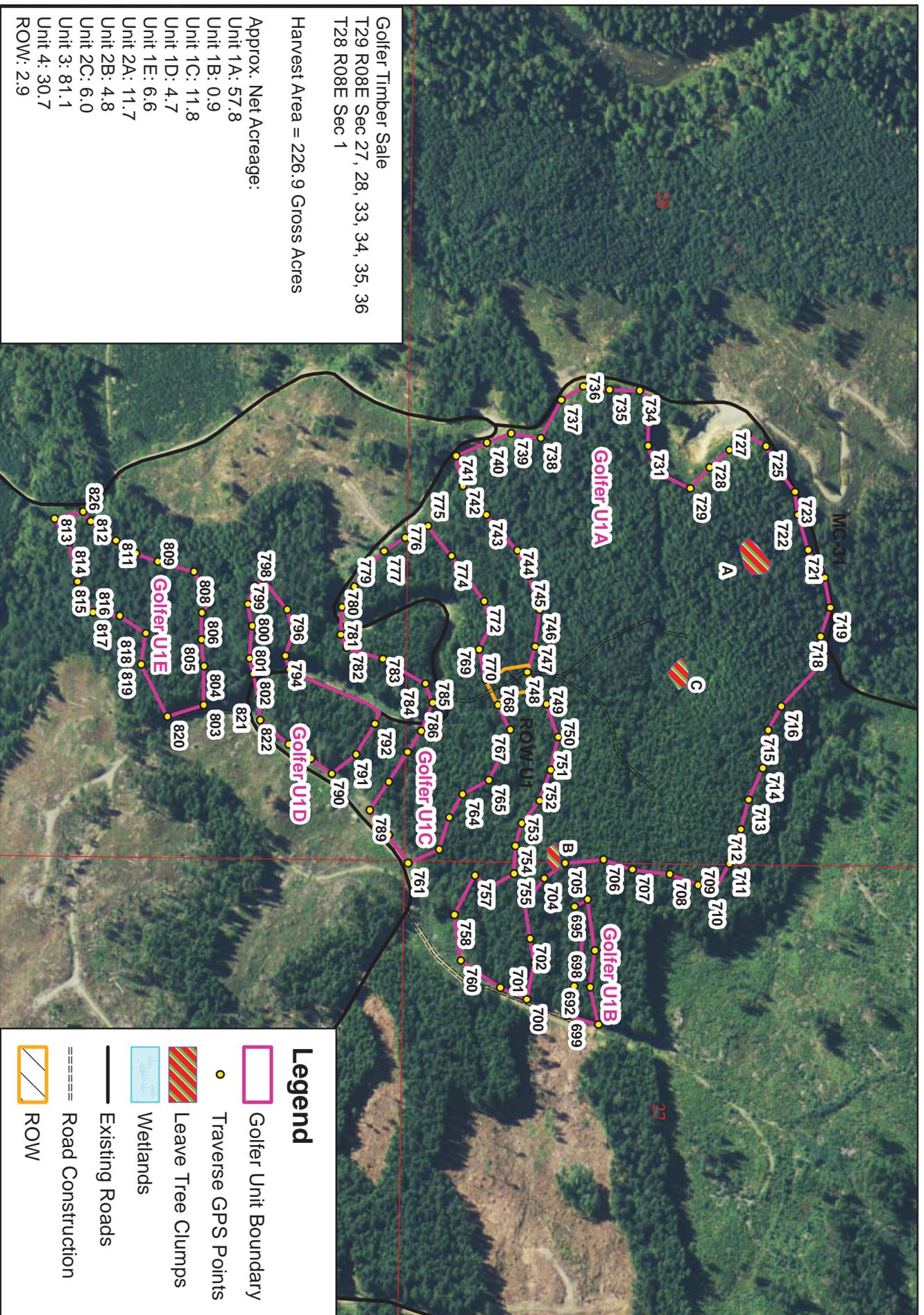


1 inch = 1,650 feet

# Golfer Timber Sale

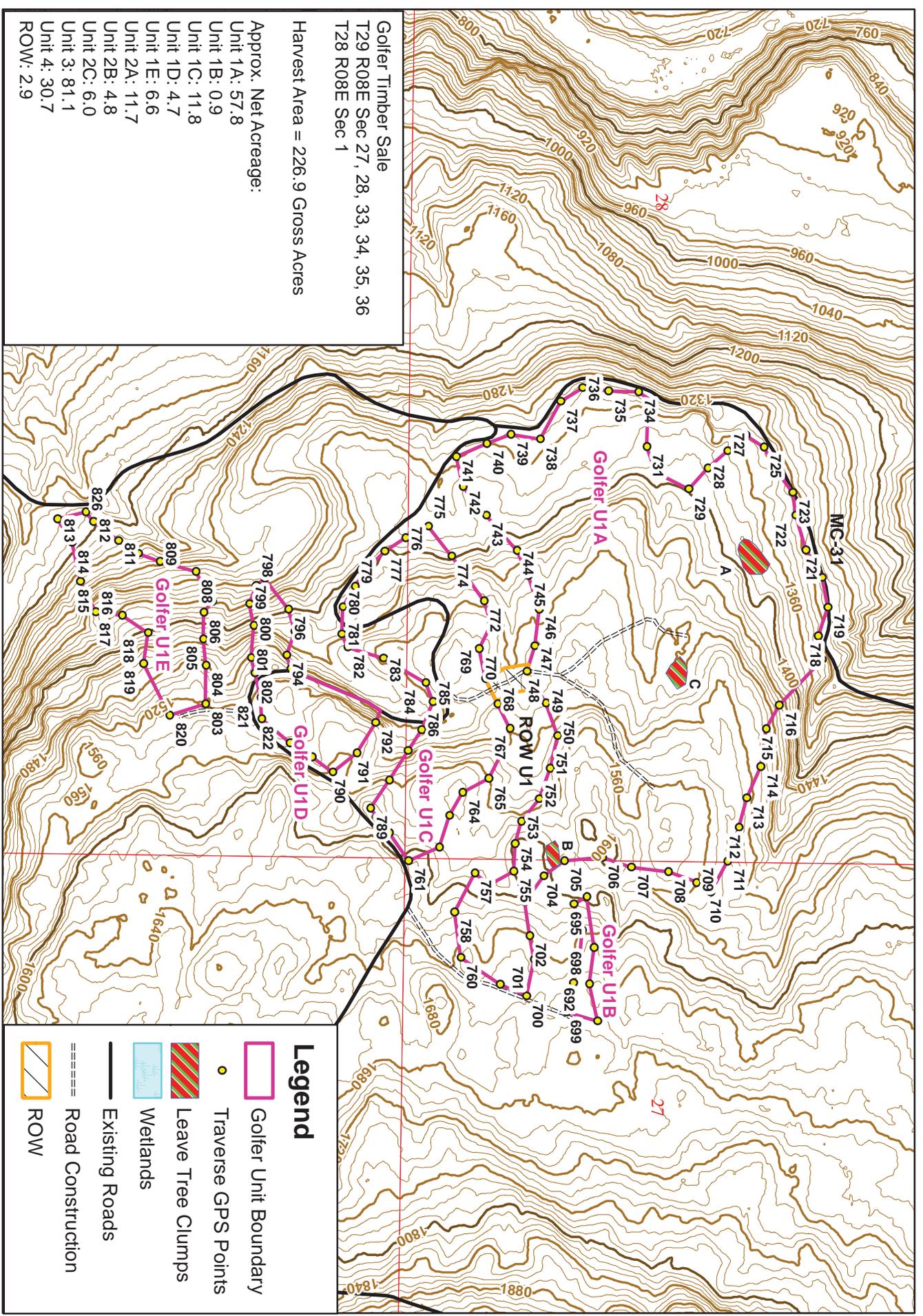


# Golfer Timber Sale



1 inch = 600 feet

# Golfer Timber Sale



Golfer Timber Sale  
 T29 R08E Sec 27, 28, 33, 34, 35, 36  
 T28 R08E Sec 1

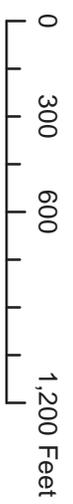
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- Unit 3: 81.1
- Unit 4: 30.7
- ROW: 2.9

## Legend

- Golfer Unit Boundary
- Traverse GPS Points
- Leave Tree Clumps
- Wetlands
- Existing Roads
- Road Construction
- ROW



1 inch = 600 feet



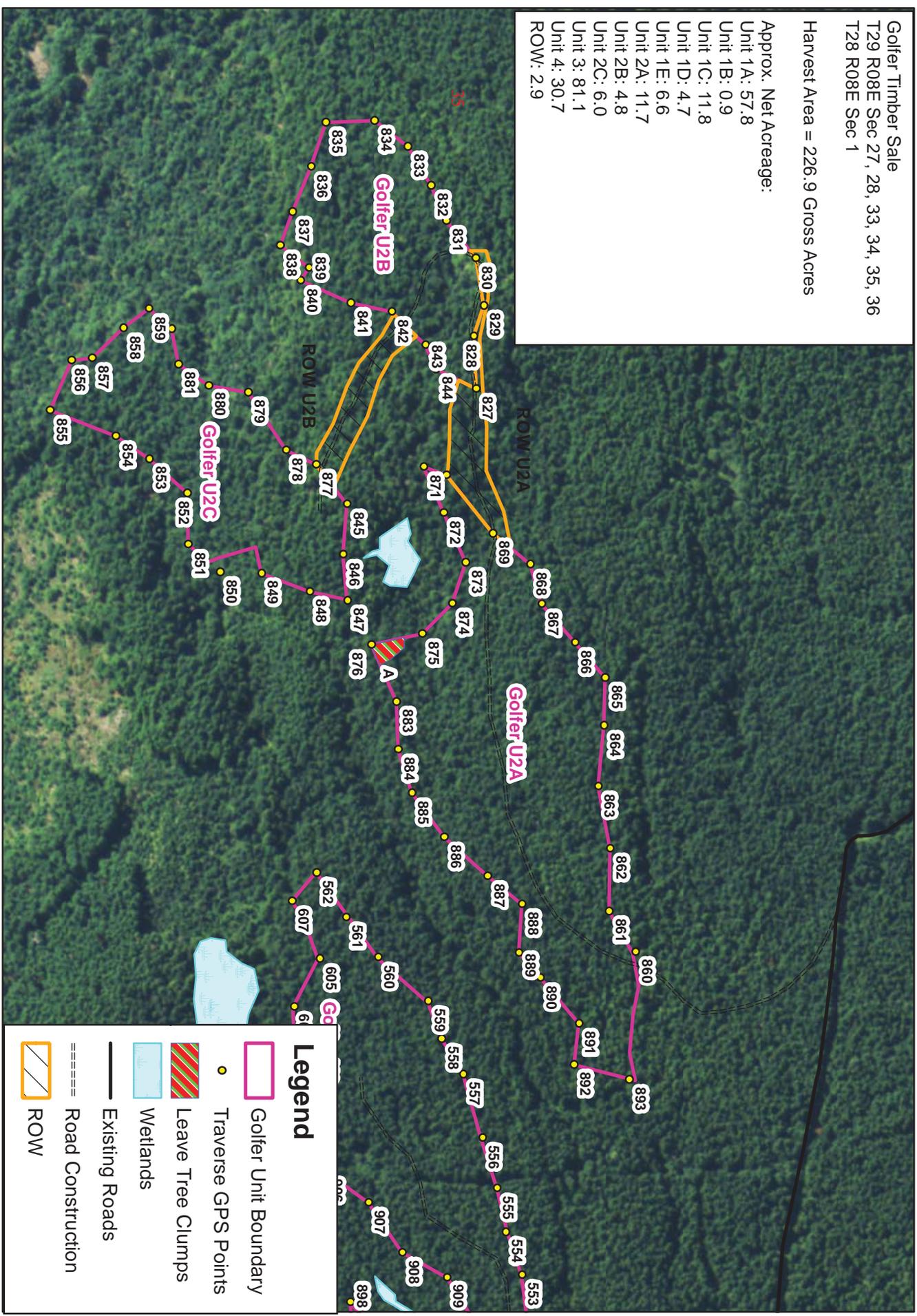
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Golfer Timber Sale  
 T29 R08E Sec 27, 28, 33, 34, 35, 36  
 T28 R08E Sec 1

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Approx. Net Acreage:

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- Unit 2B: 4.8
- Unit 2C: 6.0
- Unit 3: 81.1
- Unit 4: 30.7
- ROW: 2.9



**Legend**

- Golfer Unit Boundary
- Traverse GPS Points
- Leave Tree Clumps
- Wetlands
- Existing Roads
- Road Construction
- ROW



1 inch = 350 feet

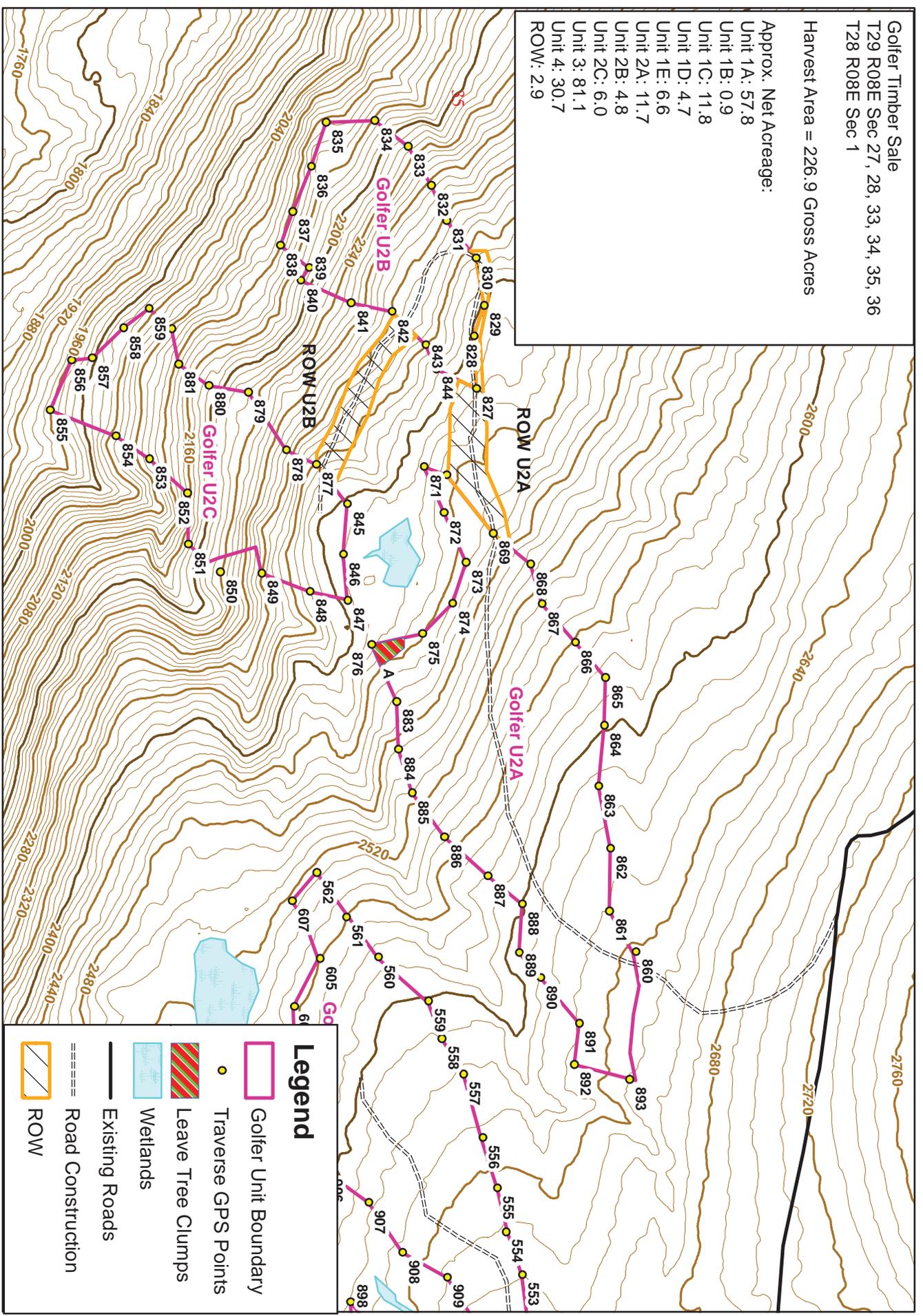
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**Legend**

- Golfer Unit Boundary
- Traverse GPS Points
- Leave Tree Clumps
- Wetlands
- Existing Roads
- Road Construction
- ROW



1 inch = 350 feet

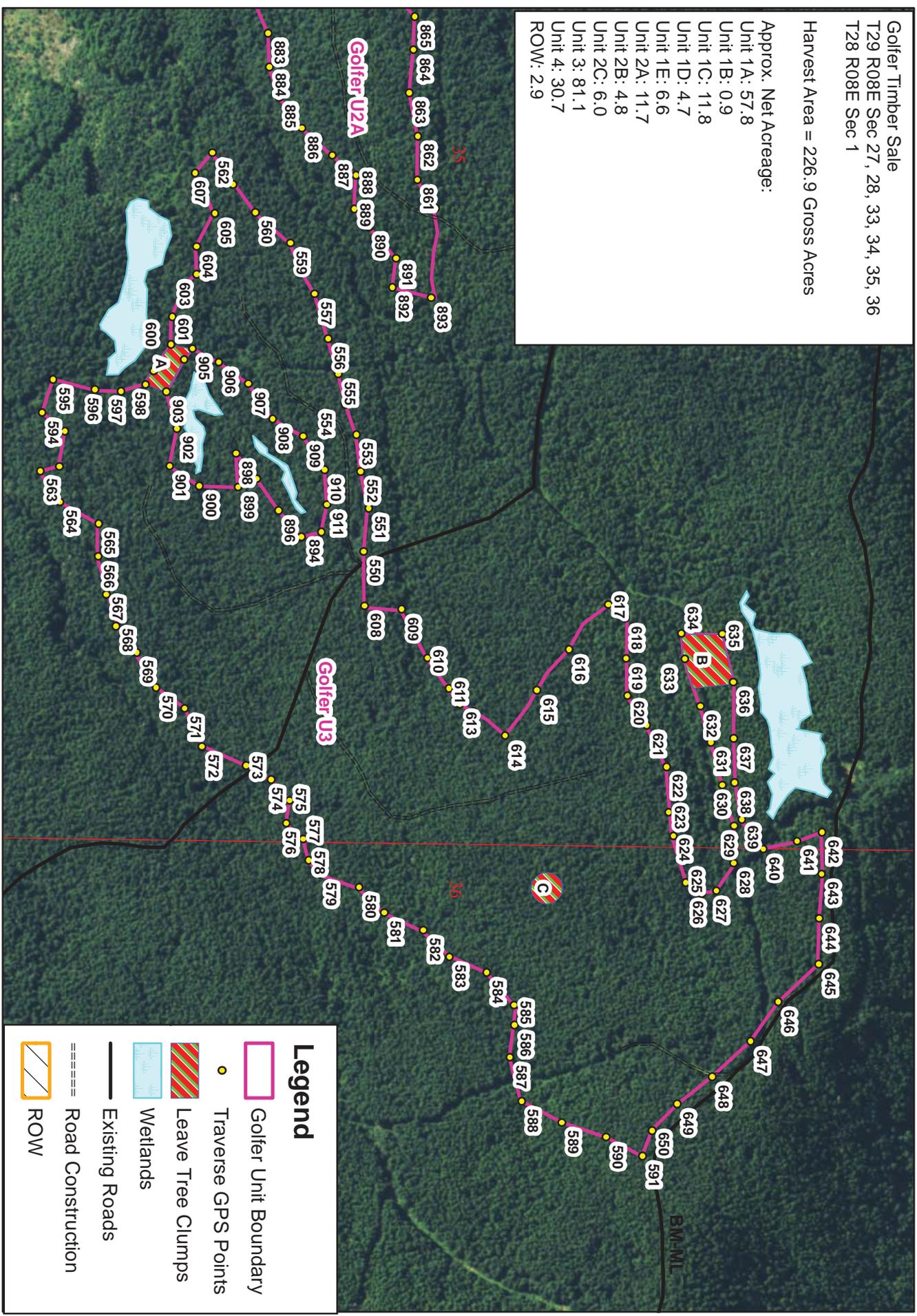
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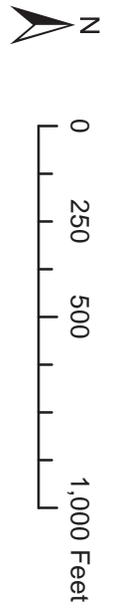
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- Unit 4: 30.7
- ROW: 2.9



**Legend**

- Golfer Unit Boundary
- Traverse GPS Points
- Leave Tree Clumps
- Wetlands
- Existing Roads
- Road Construction
- ROW



1 inch = 500 feet

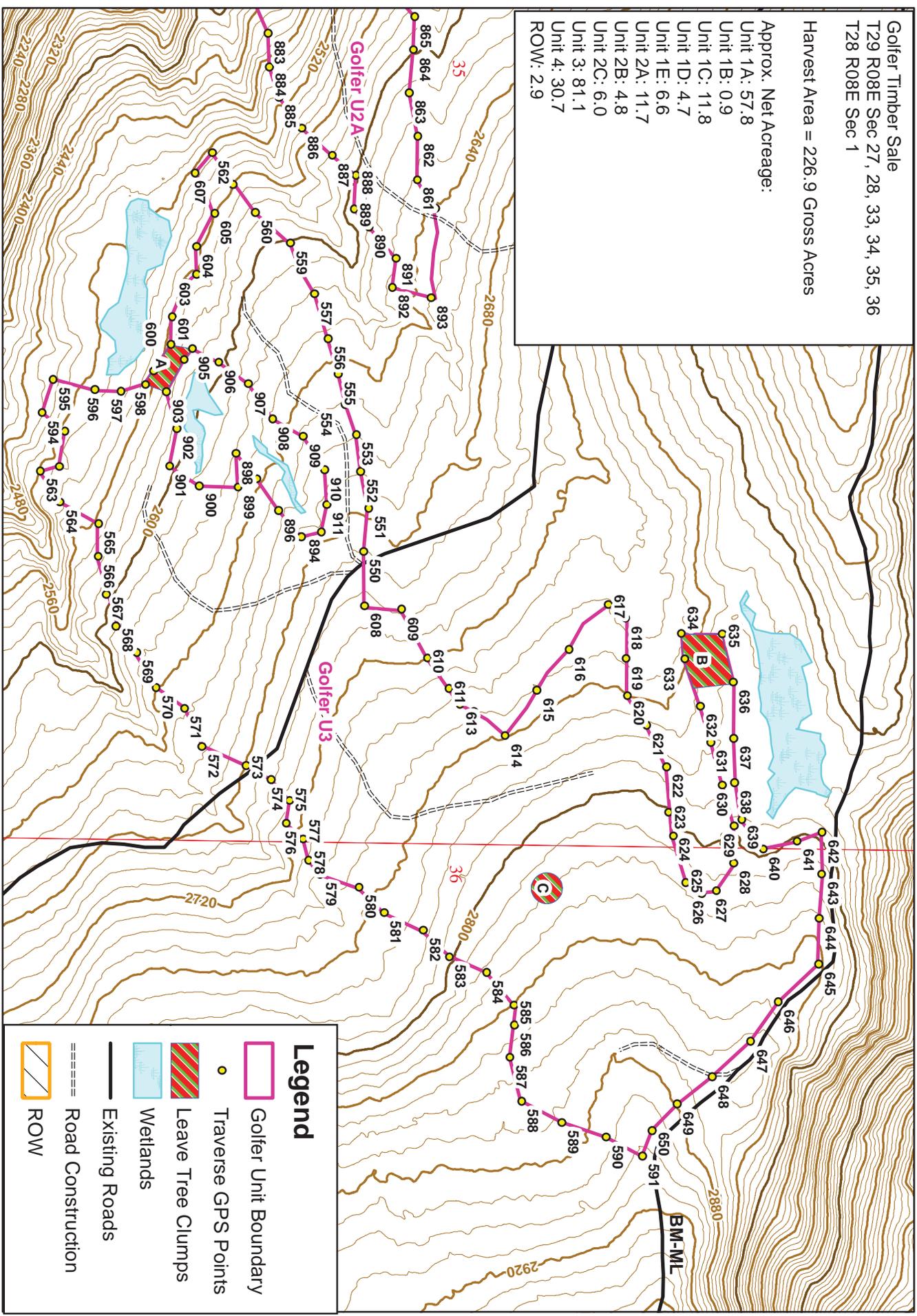
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 T28 R08E Sec 1

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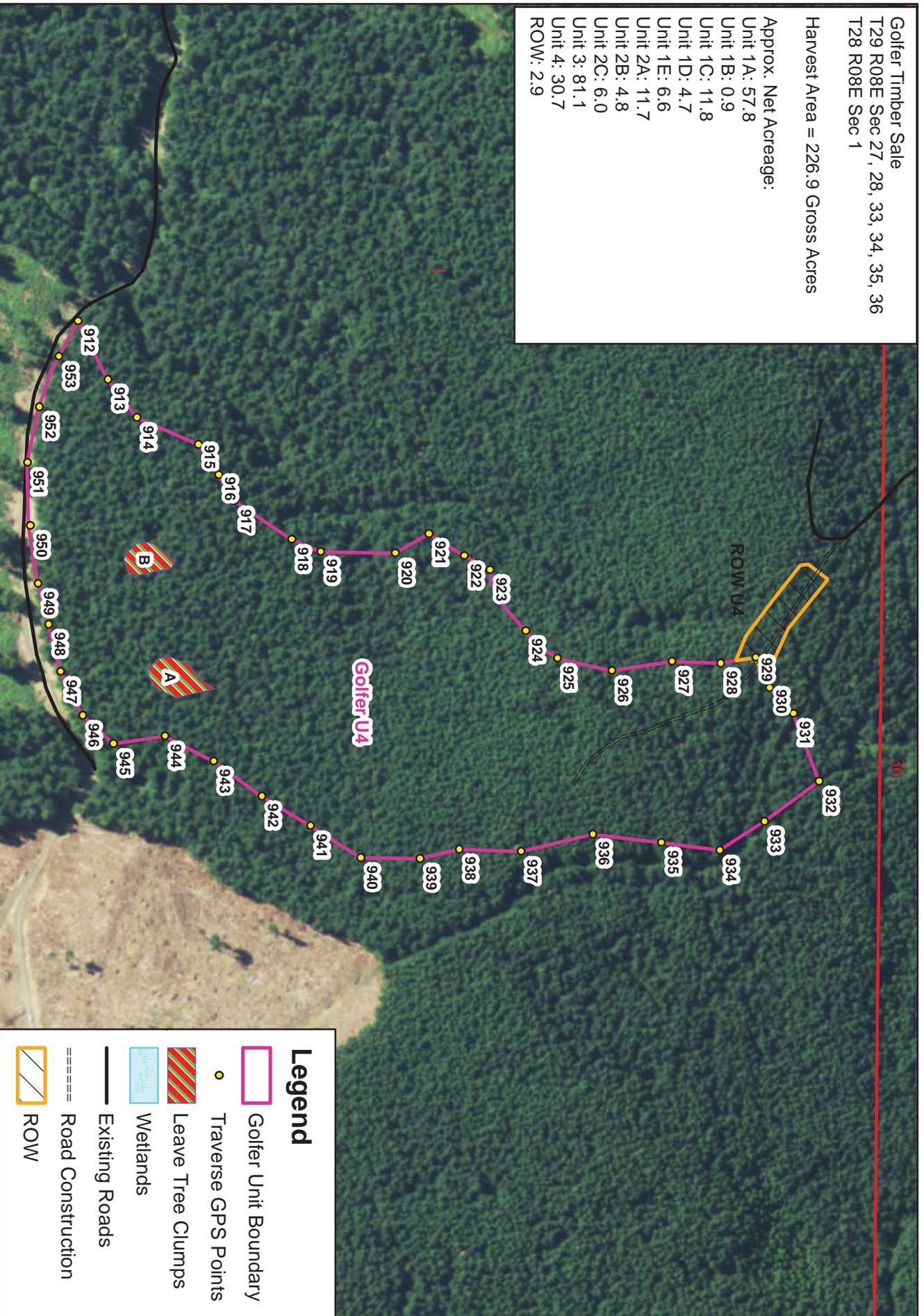
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- Unit 2C: 6.0
- Unit 3: 81.1
- Unit 4: 30.7
- ROW: 2.9



## Legend

- Gopher Unit Boundary
- Traverse GPS Points
- Leave Tree Clumps
- Wetlands
- Existing Roads
- Road Construction
- ROW



1 inch = 350 feet

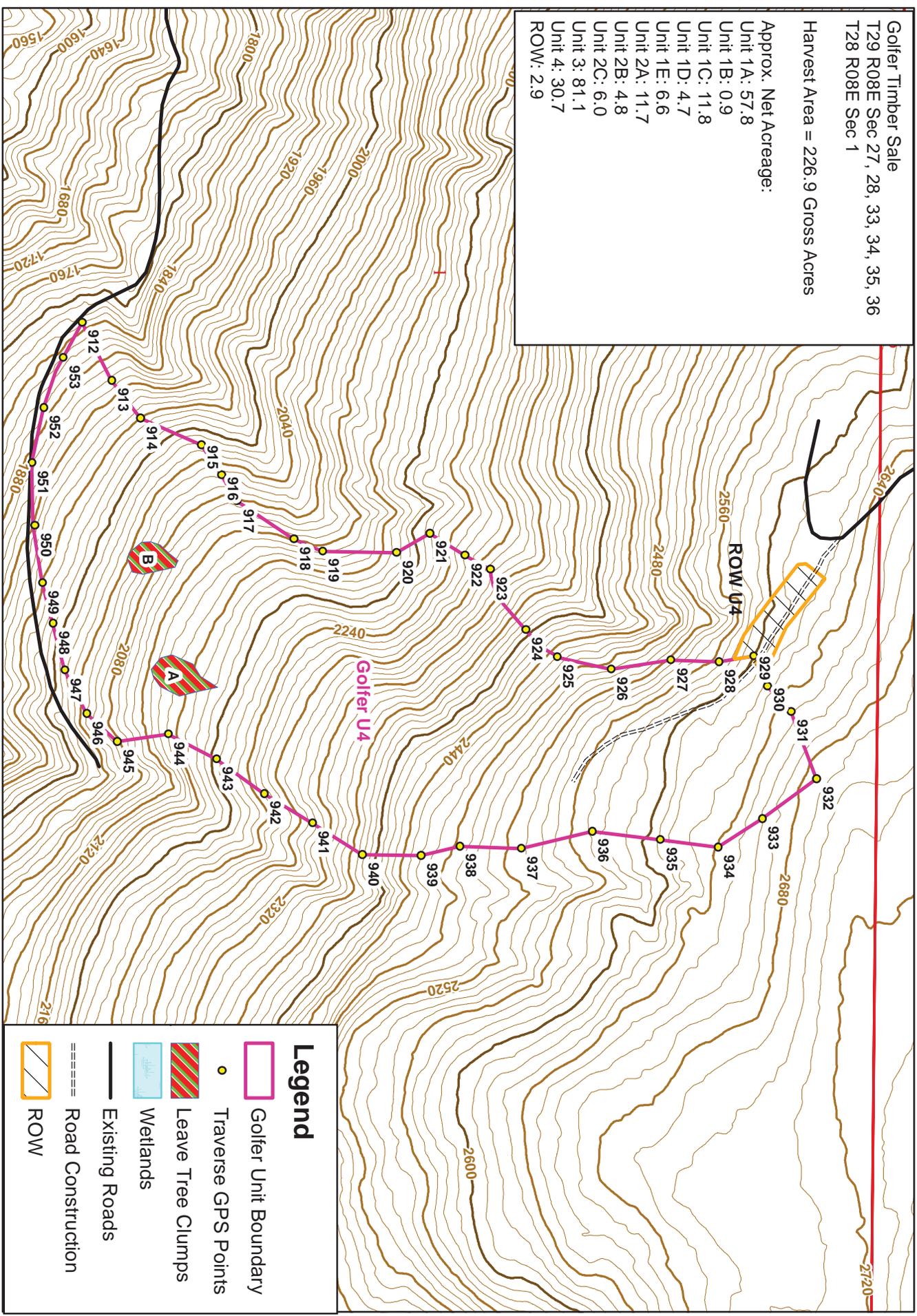
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- ROW: 2.9



**Legend**

- Golfer Unit Boundary
- Traverse GPS Points
- Leave Tree Clumps
- Wetlands
- Existing Roads
- Road Construction
- ROW



1 inch = 350 feet





WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**  
 Peter Goldmark - Commissioner of Public Lands

FPA/N No: 2814986

Effective Date: 2/26/2016

Expiration Date: 2/26/2019

**Forest Practices Application/Notification  
 Notice of Decision**

Shut Down Zone: 658

EARR Tax Credit:  Eligible  Non-eligible

Reference: Golfer

**DECISION:**

- NOTIFICATION Operations shall not begin before the effective date.
- APPROVED This Forest Practices Application is subject to the conditions listed below.
- DISAPPROVED This Forest Practices Application is disapproved for the reasons listed below.
- CLOSED Applicant has withdrawn FPA/N.

**FPA/N CLASSIFICATION**

Class II  Class III  Class IVG  Class IVS

**Number of Years Granted on Multi-Year Request**

4yrs  5 yrs

**Conditions on Approval / Reasons for Disapproval**

THIS OPERATION IS SUBJECT TO THESE CONDITIONS:

No additional condition.

FOR YOUR INFORMATION:

Notify DNR Northwest Region Office (360-856-3500) 48 business hours before commencing timber harvest operations. Please provide the application number and legal description for your operation.

Issued By: Steven Huang *S. H.*

Region: Northwest

Title: Skykomish Forest Practice Forester

Date: 2/26/2016

Copies to:  Landowner, Timber Owner and Operator

Issued in Person:  Landowner,  Timber Owner  Operator By: *S. Uteyama*

**Appeal Information**

You have thirty (30) days to appeal this Decision and any related State Environmental Policy Act determinations to the Pollution Control Hearings Board in writing at the following addresses:

**Physical address: 1111 Israel Rd. SW, Ste 301, Tumwater, WA 98501**

**Mailing address: P.O. BOX 40903, OLYMPIA, WA 98504-0903**

Information regarding the Pollution Control Hearings Board can be found at: <http://www.eluho.wa.gov/>

At the same time you file an appeal with the Pollution Control Hearings Board, also send a copy of the appeal to the Department of Natural Resources' region office and the Office of the Attorney General at the following addresses:

Office of the Attorney General  
Natural Resources Division  
1125 Washington Street SE  
PO Box 40100  
Olympia, WA 98504-0100

And

Department Of Natural Resources  
Northwest Region  
919 N Township Street  
Sedro-Woolley, WA 98284

**Other Applicable Laws**

Operating as described in this application/notification does not ensure compliance with the Endangered Species Act, or other federal, state, or local laws.

**Hydraulic Project Approval (HPA) (Chapter 77.55RCW and WAC 222-50-020(2))**

The Department of Fish and Wildlife (WDFW), as the jurisdictional agency issuing HPAs, has final authority for approving water crossing structures in Type S and F waters. WDFW continues to have authority on Type N waters and may exercise that authority on some Type N waters.

Notice: The HPA water crossing requirements supersede what is indicated on the FPA. Landowners are required by law to follow the provisions as directed on the HPA.

**Transfer of Forest Practices Application/Notification (WAC 222-20-010)**

Use the "Notice of Transfer of Approved Forest Practices Application/Notification" form. This form is available at region offices and on the Forest Practices Division website: <http://www.dnr.wa.gov/businesspermits/forestpractices>. Notify DNR of new Operators within 48 hours.

**Continuing Forest Land Obligations (RCW 76.09.060, RCW 76.09.070, RCW 76.09.390, and WAC 222-20-055)**

Obligations include reforestation, road maintenance and abandonment plans, conversions of forest land to non-forestry use and/or harvest strategies on perennial non-fish habitat (Type Np) waters in Eastern Washington.

Before the sale or transfer of land or perpetual timber rights subject to continuing forest land obligations, the seller must notify the buyer of such an obligation on a form titled "Notice of Continuing Forest Land Obligation". The seller and buyer must both sign the "Notice of Continuing Forest Land Obligation" form and send it to the DNR Region Office for retention. This form is available at DNR region offices.

If the seller fails to notify the buyer about the continuing forest land obligation, the seller must pay the buyer's costs related to continuing forest land obligations, including all legal costs and reasonable attorneys' fees incurred by the buyer in enforcing the continuing forest land obligation against the seller.

Failure by the seller to send the required notice to the DNR at the time of sale will be prima facie evidence in an action by the buyer against the seller for costs related to the continuing forest land obligation prior to sale.

**DNR affidavit of mailing:**

On this day \_\_\_\_\_, I placed in the United States mail at Sedro-Woolley, WA, postage paid, a true and accurate copy of the attached document. Notice of Decision FPA # \_\_2814\_\_

\_\_\_\_\_ L Utgard \_\_\_\_\_  
(Printed name)

\_\_\_\_\_  
(Signature)



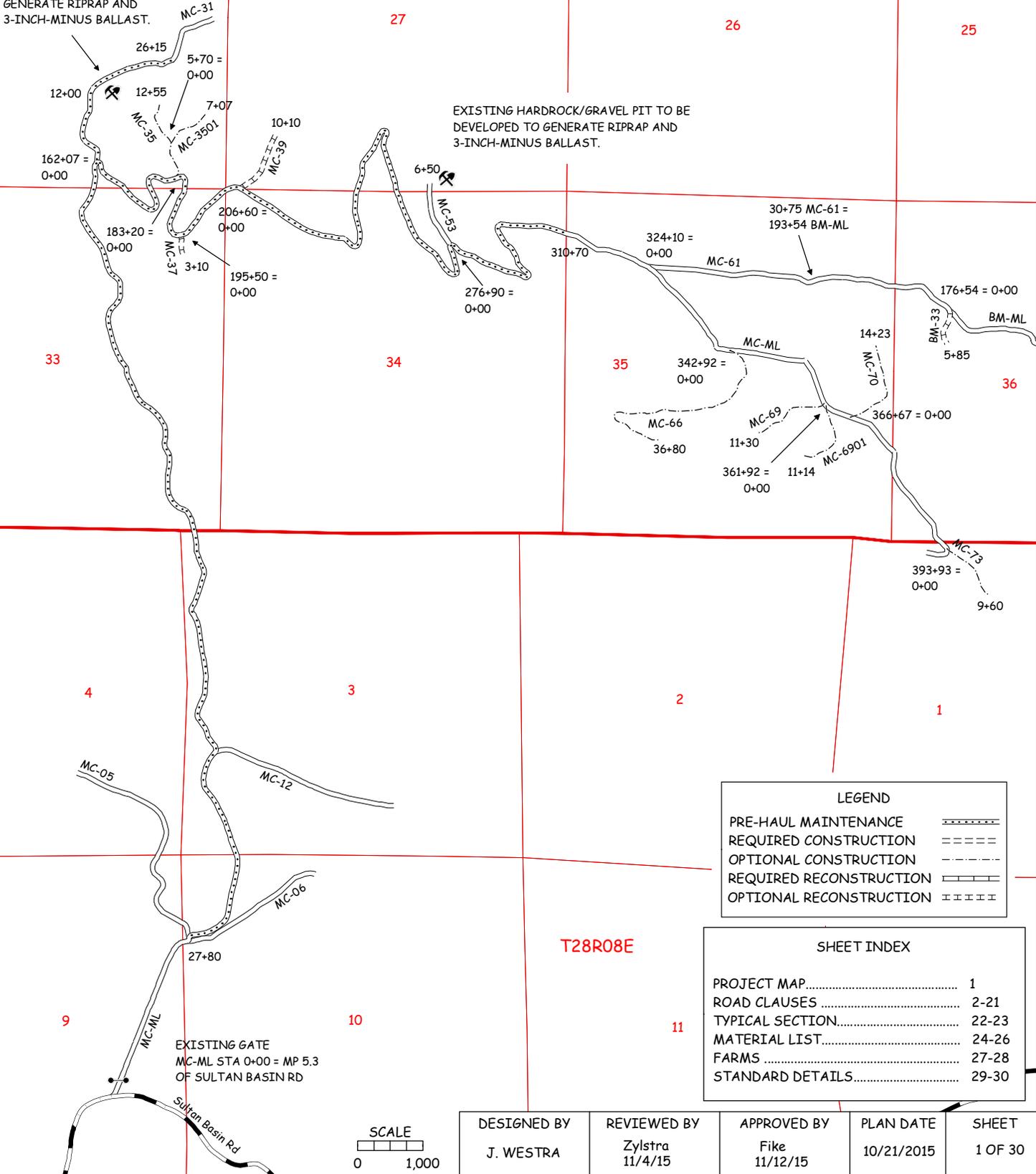
# ROAD PLAN AND SPECIFICATIONS

## 30-092649 GOLFER TIMBER SALE



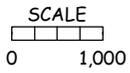
EXISTING HARDROCK/GRAVEL  
PIT TO BE DEVELOPED TO  
GENERATE RIPRAP AND  
3-INCH-MINUS BALLAST.

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LEGEND	
PRE-HAUL MAINTENANCE	=====
REQUIRED CONSTRUCTION	-----
OPTIONAL CONSTRUCTION	- - - - -
REQUIRED RECONSTRUCTION	=====
OPTIONAL RECONSTRUCTION	=====

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DESIGNED BY	REVIEWED BY	APPROVED BY	PLAN DATE	SHEET
J. WESTRA	Zylstra 11/4/15	Fike 11/12/15	10/21/2015	1 OF 30

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

GOLFER TIMBER SALE ROAD PLAN  
SNOHOMISH COUNTY  
BOULDER UNIT CASCADE DISTRICT

AGREEMENT NO.: 30-092649

STAFF ENGINEER: J. WESTRA

DATE: OCTOBER 21, 2015

SECTION 0 – SCOPE OF PROJECT

**0-1 ROAD PLAN SCOPE**

Clauses in this road plan apply to all road related work, including landings and rock source development, unless otherwise noted.

**0-2 REQUIRED ROADS**

The specified work on the following roads is required.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
MC-ML	27+80 to 310+70	PRE-HAUL MAINTENANCE
MC-31	0+00 to 26+15	PRE-HAUL MAINTENANCE

**0-3 OPTIONAL ROADS**

The specified work on the following roads is not required. Any optional roads built by the Purchaser must meet all the specifications in the road plan.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
MC-35	0+00 to 12+55	CONSTRUCTION
MC-3501	0+00 to 7+07	CONSTRUCTION
MC-37	0+00 to 3+10	RECONSTRUCTION
MC-39	0+00 to 10+10	RECONSTRUCTION
MC-66	0+00 to 36+80	CONSTRUCTION
MC-69	0+00 to 11+30	CONSTRUCTION
MC-6901	0+00 to 11+14	CONSTRUCTION
MC-70	0+00 to 14+23	CONSTRUCTION
MC-73	0+00 to 9+60	CONSTRUCTION
BM-33	0+00 to 5+85	RECONSTRUCTION

**0-4 CONSTRUCTION**

Construction includes, but is not limited to clearing, grubbing, excavation and embankment to sub-grade, landing and turnout construction, culvert installation and application of 3-inch minus ballast rock.

**0-5 RECONSTRUCTION**

Reconstruction includes, but is not limited to grading, shaping and culvert installation.

**0-6 PRE-HAUL MAINTENANCE**

This project includes, but is not limited to the following pre-haul maintenance requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
MC-ML	27+80 to 310+70	BRUSHING
MC-31	0+00 to 26+15	BRUSHING

**0-10 ABANDONMENT**

This project includes abandonment listed in Clause 9-21 ROAD ABANDONMENT.

**0-12 DEVELOP ROCK SOURCE**

Purchaser shall an existing rock source. Rock source development will involve drilling, shooting and processing rock to generate riprap and 3-inch minus ballast. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

**SECTION 1 – GENERAL**

**1-1 ROAD PLAN CHANGES**

If the Purchaser desires a change from this road plan including, but not limited to, relocation, extension, change in design, or adding roads; a revised road plan must be submitted in writing to the Contract Administrator for consideration. Before work begins, Purchaser shall obtain approval from the State for the submitted plan.

**1-2 UNFORESEEN CONDITIONS**

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to unforeseen conditions, or Purchaser's choice of construction season or techniques will be at the Purchaser's expense. Unforeseen conditions include, but are not limited to, solid subsurface rock, subsurface springs, saturated ground, and unstable soils.

**1-3 ROAD DIMENSIONS**

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan.

**1-4 ROAD TOLERANCES**

Purchaser shall perform road work within the tolerances listed below. The tolerance class for each road is listed on the TYPICAL SECTION SHEET.

<u>Tolerance Class</u>	<u>A</u>	<u>B</u>	<u>C</u>
Road and Subgrade Width (feet)	+1.5	+1.5	+2.0
Subgrade Elevation (feet +/-)	0.5	1.0	2.0
Centerline alignment (feet lt./rt.)	1.0	1.5	3.0

**1-6 ORDER OF PRECEDENCE**

Any conflict or inconsistency in the road plan will be resolved by giving the documents precedence in the following order:

1. Addenda.
2. Road Plan Clauses.
3. Typical Section Sheet.
4. Standard Lists.
5. Standard Details.

In case of any ambiguity or dispute over interpreting the road plan, the Contract Administrator's or designee's decision will be final.

**1-7 TEMPORARY ROAD CLOSURE**

Purchaser shall notify the Contract Administrator a minimum of 5 work days before the closure of any road. Construction may not close the following roads for more than the specified number of days.

<u>Road</u>	<u>Number of Allowable Closed Days</u>
MC-ML	3
BM-ML	3

**1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS**

Purchaser shall repair or replace all materials, roadway infrastructure, and road components damaged during road work or operation activities. The Contract Administrator will direct repairs and replacements. Repairs to structural materials must be made in accordance with the manufacturer's recommendation.

**1-9 DAMAGED METALLIC COATING**

Any damaged galvanized or aluminized coating on existing or new bridge components, culverts, downspouts, and flumes must be cleaned and treated with a minimum of two coats of zinc rich paint.

**1-18 REFERENCE POINT DAMAGE**

Purchaser shall reset reference points (RPs) that were moved or damaged at any time during construction to their original locations. Excavation and embankment may not proceed on road segments controlled by said RPs until Purchaser resets all moved or damaged RPs.

**1-21 HAUL APPROVAL**

Purchaser shall not use roads under this road plan for any hauling other than timber cut on the right-of-way, without written approval from the Contract Administrator.

**1-25 ACTIVITY TIMING RESTRICTION**

The specified activities are not allowed during the listed closure period(s) unless authorized in writing by the Contract Administrator.

<u>Activity</u>	<u>Closure Period</u>
All Activities	November 1 to March 31

**1-26 OPERATING DURING CLOSURE PERIOD**

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION Purchaser shall provide a maintenance plan to include further protection of state resources. Purchaser shall obtain written approval from the Contract Administrator for the maintenance plan, and shall put preventative measures in place before operating during the closure period. Purchaser is required to maintain all haul roads at their own expense including those listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER. If other operators are using, or desire to use these designated maintainer roads, a joint operating plan must be developed. All parties shall follow this plan.

**1-27 TIMING RESTRICTION FOR MARBLED MURRELET**

On the following road(s), any road work, right-of-way timber falling and yarding, rock pit operation, or heavy equipment operation is not allowed from one hour before official sunrise to two hours after official sunrise, and from one hour before official sunset to one hour after official sunset from April 1 through August 31. This restriction does not apply to hauling timber, rock, or equipment.

<u>Road</u>	<u>Stations</u>
MC-ML	149+82 to 165+32
MC-31	0+00 to 26+15

**1-29 SEDIMENT RESTRICTION**

Purchaser shall not allow silt-bearing runoff to enter any streams.

### **1-30 CLOSURE TO PREVENT DAMAGE**

In accordance with Contract Clause G-220 STATE SUSPENDS OPERATION, the Contract Administrator will suspend road work or hauling right-of-way timber, forest products, or rock under the following conditions:

- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

Operations must stop unless authority to continue working or hauling is granted in writing by the Contract Administrator. In the event that surface or base stability problems persist, Purchaser shall cease operations, or perform corrective maintenance or repairs, subject to specifications within this road plan. Before and during any suspension, Purchaser shall protect the work from damage or deterioration.

### **1-33 SNOW PLOWING RESTRICTION**

Snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the Contract Administrator upon request. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

## SECTION 2 – MAINTENANCE

### **2-1 GENERAL ROAD MAINTENANCE**

Purchaser shall maintain all roads used under this contract in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS for the entire term of this contract. Maintenance is required even during periods of inactivity.

### **2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE**

Purchaser shall perform maintenance on roads listed in Contract Clause C-050 PURCHASER ROAD MAINTENANCE AND REPAIR in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

### **2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER**

Purchaser may be required to perform maintenance on roads listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER as directed by the Contract Administrator. Purchaser shall maintain roads in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

### **2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS**

Purchaser shall clean ditches, headwalls, and catchbasins. Work must be done in accordance with the TYPICAL SECTION.

## SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

### 3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 3 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
MC-ML	27+80 to 310+70
MC-31	0+00 to 26+15

### 3-5 CLEARING

Purchaser shall fall all vegetative material larger than 2 inches DBH or over 5 feet high between the marked right-of-way boundaries or if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET. Clearing must be completed before starting excavation and embankment.

### 3-8 PROHIBITED DECKING AREAS

Purchaser shall not deck right-of-way timber in the following areas:

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 40%.
- Against standing trees unless approved by the Contract Administrator.

### 3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Grubbing must be completed before starting excavation and embankment.

### 3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clause G-010 PRODUCTS SOLD AND SALE AREA or G-011 RIGHT TO REMOVE FOREST PRODUCTS AND CONTRACT AREA, that is larger than one cubic foot in volume within the clearing limits as shown on the TYPICAL SECTION SHEET.

### **3-21 DISPOSAL COMPLETION**

Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris before the application of rock.

### **3-23 PROHIBITED DISPOSAL AREAS**

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 40%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

### **3-24 BURYING ORGANIC DEBRIS RESTRICTED**

Purchaser shall not bury organic debris unless otherwise stated in this plan.

### **3-25 SCATTERING ORGANIC DEBRIS**

Purchaser shall scatter organic debris outside of the clearing limits in natural openings unless otherwise detailed in this road plan.

## **SECTION 4 – EXCAVATION**

### **4-2 PIONEERING**

Pioneering may not extend past construction that will be completed during the current construction season. Pioneering may not extend more than 500 feet beyond completed construction unless approved in writing by the Contract Administrator. In addition, the following actions must be taken as pioneering progresses:

- Drainage must be provided on all uncompleted construction.
- Road pioneering operations may not undercut the final cut slope or restrict drainage.
- Culverts at live stream crossings must be installed during pioneering operations prior to embankment.

### **4-3 ROAD GRADE AND ALIGNMENT STANDARDS**

Purchaser shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 15 percent adverse.
- Minimum curve radius is 50 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

**4-4 SWITCHBACK STANDARDS**

A switchback is defined as a curved segment of road between a beginning and end of the same curve, where the change of traffic travel direction is greater than 90 degrees.

Purchaser shall follow these standards for switchbacks:

- Maximum adverse grades for switchbacks is 12%.
- Maximum favorable grades for switchbacks is 12%.
- Maximum transition grades entering and leaving switchbacks is a 5% grade change.
- Transition grades required to meet switchback grade limitations must be constructed on the tangents preceding and departing from the switchbacks.

**4-5 CUT SLOPE RATIO**

Purchaser shall construct excavation slopes no steeper than shown on the following table:

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Common Earth (on side slopes up to 55%)	1:1	100
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

**4-6 EMBANKMENT SLOPE RATIO**

Purchaser shall construct embankment slopes no steeper than shown on the following table:

<u>Material Type</u>	<u>Embankment Slope Ratio</u>	<u>Embankment Slope Percent</u>
Sandy Soils	2:1	50
Common Earth and Rounded Gravel	1½:1	67
Angular Rock	1¼:1	80

**4-7 SHAPING CUT AND FILL SLOPE**

Purchaser shall construct excavation and embankment slopes to a uniform line and left rough for easier revegetation.

**4-8 CURVE WIDENING**

The minimum widening placed on the inside of curves is:

- 6 feet for curves of 50 to 79 feet radius.
- 4 feet for curves of 80 to 100 feet radius.

**4-9 EMBANKMENT WIDENING**

The minimum embankment widening is:

- 2 feet for embankment heights at centerline of 2 to 6 feet.
- 4 feet for embankment heights at centerline of greater than 6 feet.

Purchaser shall apply embankment widening equally to both sides of the road to achieve the required width.

**4-21 TURNOUTS**

Purchaser shall construct turnouts intervisible with a maximum distance of 1,000 feet between turnouts unless otherwise shown on drawings. Locations may be adjusted to fit the final subgrade alignment and sight distances. Minimum dimensions are shown on the TYPICAL SECTION SHEET.

**4-25 DITCH CONSTRUCTION AND RECONSTRUCTION**

Purchaser shall construct or reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Ditches must be constructed concurrently with construction of the subgrade.

**4-28 DITCH DRAINAGE**

Ditches must drain to cross-drain culverts or ditchouts.

**4-29 DITCHOUTS**

Purchaser shall construct ditchouts at locations shown on the MATERIALS LIST. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio. L or R denotes ditchout left or ditchout right.

<u>Road</u>	<u>Stations</u>	<u>L or R</u>
MC-35	12+55	R
MC-3501	7+07	R
MC-66	36+80	L
MC-69	11+30	R
MC-6901	11+14	R
MC-73	9+60	L

**4-35 WASTE MATERIAL DEFINITION**

Waste material is defined as all dirt, rock, mud, or related material that is extraneous or unsuitable for construction material. Waste material, as used in Section 4 EXCAVATION, is not organic debris.

**4-36 DISPOSAL OF WASTE MATERIAL**

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris.

**4-38 PROHIBITED WASTE DISPOSAL AREAS**

Purchaser shall not deposit waste material in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.
- Outside the clearing limits.

**4-48 BORROW MATERIAL**

Borrow material may not contain more than 5% clay, organic debris, or trash by volume.

**4-49 BORROW SOURCE**

Purchaser shall obtain borrow material from the listed borrow source(s). Development of the borrow source must be in accordance with a written BORROW SOURCE DEVELOPMENT PLAN to be submitted by the Purchaser and approved in writing by the Contract Administrator.

<u>Source</u>	<u>Location</u>	<u>Type</u>
MC-3501	2+33	ROCK

**4-55 ROAD SHAPING**

Purchaser shall shape the subgrade and surface as shown on the TYPICAL SECTION SHEET. The subgrade and surface shape must ensure runoff in an even, un-concentrated manner, and must be uniform, firm, and rut-free.

**4-60 FILL COMPACTION**

Purchaser shall compact all embankment and waste material by routing equipment over the entire width of each lift.

**4-61 SUBGRADE COMPACTION**

Purchaser shall compact constructed and reconstructed subgrades by routing equipment over the entire width.

**4-70 SUBGRADE REINFORCEMENT**

On the following road(s), Purchaser shall provide and install geotextile fabric. Subgrade reinforcement must be installed to a width that is 2 feet more than the subgrade width, including turnouts. Geotextile fabric must overlap by a minimum of 2 feet at all joints. The geotextile fabric must be covered with a minimum of 12 inches of compacted 3-inch minus rock as specified in Clause 6-34 3-INCH MINUS BALLAST ROCK. Geotextile fabric must meet the specifications in Clause 10-1.

<u>Road</u>	<u>Stations</u>
MC-66	6+22 to 8+84
MC-70	5+57 to 7+84

**SECTION 5 – DRAINAGE**

**5-5 CULVERTS**

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the MATERIALS LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts may be new or used material and must meet the specifications in Clauses 10-15 through 10-23. Purchaser shall obtain approval from the Contract Administrator for the quality of used culverts before installation.

**5-11 UNUSED MATERIALS STATE PROPERTY**

On required roads, any materials listed on the MATERIALS LIST that are not installed will become the property of the state. Purchaser shall stockpile materials as directed by the Contract Administrator.

**5-15 CULVERT INSTALLATION**

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the National Corrugated Metal Pipe Association’s "Installation Manual for Corrugated Steel Drainage Structures" and the Corrugated Polyethylene Pipe Association’s “Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings”.

**5-16 APPROVAL FOR LARGER CULVERT INSTALLATION**

Purchaser shall obtain written approval from the Contract Administrator for the installation of culverts 36 inches in diameter and over before backfilling.

**5-17 CROSS DRAIN SKEW AND SLOPE**

Cross drains, on road grades in excess of 3%, must be skewed at least 30 degrees from perpendicular to the road centerline, except where the cross drain is at the low point in the road culverts will not be skewed. Cross drain culverts must be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 10%.

**5-18 CULVERT DEPTH OF COVER**

Cross drain culverts must be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point. Stream crossing culverts must be installed with a depth of cover recommended by the culvert manufacturer for the type and size of the pipe.

**5-25 CATCH BASINS**

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 4 feet long.

**5-26 HEADWALLS FOR CROSS DRAIN CULVERTS**

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. No placement by end dumping or dropping of rock is allowed.

**SECTION 6 – ROCK AND SURFACING**

**6-2 ROCK SOURCE ON STATE LAND**

Rock used in accordance with the quantities on the TYPICAL SECTION and MATERIALS LIST may be obtained from the following source(s) on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock source(s), a joint operating plan must be developed. All parties shall follow this plan.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
MC-3101 Pit	STA 12+00 of the MC-31 Road	3-inch minus ballast and rip rap
MC-5301 Pit	STA 6+50 of the MC-53 Road	3-inch minus ballast and rip rap

**6-5 ROCK FROM COMMERCIAL SOURCE**

Rock used in accordance with the quantities on the TYPICAL SECTION and MATERIALS LIST may be obtained from any commercial source at the Purchaser's expense. Rock sources are subject to written approval by the Contract Administrator before their use.

**6-11 ROCK SOURCE DEVELOPMENT PLAN BY PURCHASER**

Purchaser shall conduct rock source development and use at the following sources, in accordance with a written ROCK SOURCE DEVELOPMENT PLAN to be prepared by the Purchaser. The plan is subject to written approval by the Contract Administrator before any rock source operations. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator.

<u>Source</u>	<u>Rock Type</u>
MC-3101 Pit	3-inch minus ballast and rip rap
MC-5301 Pit	3-inch minus ballast and rip rap

Rock source development plans prepared by the Purchaser must show the following information:

- Rock source location.
- Rock source overview showing access roads, development areas, stockpile locations, waste areas, and floor drainage.
- Rock source profiles showing development areas, bench locations including widths, and wall faces including heights.

**6-12 ROCK SOURCE SPECIFICATIONS**

Rock sources must be in accordance with the following specifications:

- Pit walls may not be undermined or over steepened. The maximum slope of the walls must be consistent with recognized engineering standards for the type of material being excavated in accordance with the following table:

Material	Maximum Slope Ratio (Horiz. :Vert.)	Maximum Slope Percent
Sand	2:1	50
Gravel	1.5:1	67
Common Earth	1:1	100
Fractured Rock	0.5:1	200
Solid Rock	0:1	vertical

- Pit walls must be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches must be a minimum of 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
- All operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- All vehicle access to the top of the pit faces must be blocked.

**6-20 ROCK GRADATION TYPES**

Purchaser shall provide rock in accordance with the types and amounts listed in the TYPICAL SECTION and MATERIALS LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles or during manufacture and placement into a stockpile. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

**6-34 3-INCH MINUS BALLAST ROCK**

Ballast rock must be 100% equal to, or smaller than, 3 inches in at least one dimension.

Rock may contain no more than 5 percent organic debris, dirt and trash. All percentages are by weight.

**6-50 LIGHT LOOSE RIP RAP**

Rip rap must consist of angular, hard, sound, and durable stone. It must be free from segregation, seams, cracks, and other defects. Light loose rip rap must be free of rock fines, soil, organic debris or other extraneous material, and must meet the following requirements:

<u>At Least/Not More Than</u>	<u>Weight Range</u>
20% / 90%	300 lbs. to 1 ton
80% / --	50 lbs. to ½ ton
10% / 20%	50 lbs. max

**6-51 HEAVY LOOSE RIP RAP**

Rip rap must consist of angular, hard, sound, and durable stone. It must be free from segregation, seams, cracks, and other defects. Heavy loose riprap must be free of rock fines, soil, organic debris or other extraneous material, and must meet the following requirements:

<u>At Least/Not More Than</u>	<u>Weight Range</u>	<u>Size Range</u>
30% / 90%	1 ton to 3 ton	36" - 54"
70% / 90%	500 lbs. to 1 ½ ton	24" - 42"
10% / 30%	50 lbs. max	3" - 8"

**6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH**

Measurement of specified rock depths, are defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the TYPICAL SECTION are loose yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction.

**6-70 APPROVAL BEFORE ROCK APPLICATION**

Purchaser shall obtain written approval from the Contract Administrator for culvert installation, ditch construction, headwall construction, subgrade shaping and compaction before rock application.

**6-71 ROCK APPLICATION**

Purchaser shall apply rock in accordance with the specifications and quantities shown on the TYPICAL SECTION. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations. Road surfaces must be compacted in accordance with the TYPICAL SECTION by routing equipment over the entire width.

**6-73 ROCK FOR WIDENED PORTIONS**

Purchaser shall apply rock to turnarounds, turnouts, and areas with curve widening to the same depth and specifications as the traveled way.

**SECTION 8 – EROSION CONTROL**

**8-15 REVEGETATION**

Purchaser shall spread seed and fertilizer on all exposed soils resulting from road work activities. Cover all exposed soils using manual dispersal. Other methods of covering must be approved in writing by the Contract Administrator.

**8-16 REVEGETATION SUPPLY**

The Purchaser shall provide the seed and fertilizer.

**8-17 REVEGETATION TIMING**

Purchaser shall revegetate during the first available opportunity after road work is completed. Soils may not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator.

**8-18 PROTECTION FOR SEED**

Purchaser shall provide a protective cover for seed if revegetation occurs between July 1 and March 31. The protective cover may consist of dispersed straw, jute matting or clear plastic sheets. The protective cover requirement may be waived in writing by the Contract Administrator if Purchaser is able to demonstrate a revegetation plan that will result in the establishment of a uniform dense crop (at least 50% coverage) of 3-inch tall grass by October 31.

**8-19 ASSURANCE FOR SEEDED AREA**

Purchaser shall ensure the growth of a uniform and dense crop (at least 50% coverage) of 3-inch tall grass. Purchaser shall reapply the seed and fertilizer in areas that have failed to germinate or have been damaged through any cause. Restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the seed and fertilizer at no addition cost to the state.

**8-25 GRASS SEED**

Purchaser shall evenly spread the seed mixture listed below on all exposed soil at a rate of 50 pounds per acre of exposed soil. Grass seed must meet the following specifications:

1. Weed seed may not exceed 0.5% by weight.
2. All seed species must have a minimum 90% germination rate, unless otherwise specified.
3. Seed must be certified.
4. Seed must be furnished in standard containers showing the following information:
  - a. Common name of seed
  - b. Net weight
  - c. Percent of purity
  - d. Percentage of germination
  - e. Percentage of weed seed and inert material

5. Seed must conform to the following mixture unless a comparable mix is approved in writing by the Contract Administrator.

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Creeping Red Fescue	50
Elf Perennial Rye Grass	25
Highland Colonial Bentgrass	15
White Clover	10
Inert and Other Crop	0.5

**8-27 FERTILIZER**

Purchaser shall evenly spread the fertilizer listed below on all exposed soil inside the grubbing limits at a rate of 200 pounds per acre of exposed soil. Fertilizer must meet the following specifications:

<u>Chemical Component</u>	<u>% by Weight</u>
Nitrogen	16
Phosphorous	16
Potassium	16
Sulphur	3
Inerts	49

SECTION 9 – POST-HAUL ROAD WORK

**9-3 CULVERT MATERIAL REMOVED FROM STATE LAND**

Culverts removed from roads become the property of the Purchaser and must be removed from state land.

**9-5 POST-HAUL MAINTENANCE**

Purchaser shall perform post-haul maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

**9-10 LANDING DRAINAGE**

Purchaser shall provide for drainage of the landing surface.

**9-12 LANDING EMBANKMENT REMOVAL**

Purchaser shall reduce or relocate the landing embankment. Place excavated material in a waste area approved in writing by the Contract Administrator.

**9-21 ROAD ABANDONMENT**

Purchaser shall abandon the following roads before the termination of this contract.

<u>Road</u>	<u>Stations</u>
MC-35	0+00 to 12+55
MC-3501	0+00 to 7+07
MC-37	0+00 to 3+10
MC-39	0+00 to 10+10
MC-66	0+00 to 36+80
MC-69	0+00 to 11+30
MC-6901	0+00 to 11+14
MC-70	0+00 to 14+23
MC-73	0+00 to 9+60
BM-33	0+00 to 5+85

**9-22 ABANDONMENT**

- Remove all ditch relief culverts. The resulting slopes must be 1:1 or flatter. Place and compact the removed fill material in a location that will not erode into any Type 1 through 5 waters or wetlands.
- Remove all culverts in natural drainages. The resulting slopes must be 1:1 or flatter. Strive to match the existing native stream bank gradient. The natural streambed width must be re-established. Place and compact the removed fill material in a location that will not erode into any Type 1 through 5 waters or wetlands.
- Transport all removed culverts off site. All removed culverts are the property of the Purchaser.
- Construct non-drivable waterbars at natural drainage points and at a spacing that will produce a vertical drop of no more than 20 feet between waterbars and with a maximum horizontal spacing of 400 feet.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Inslope or outslope the road as appropriate.
- Remove bridges and other structures.
- Pull back unstable fill that has potential of failing and entering any Type 1 through 5 waters or wetlands. Place and compact removed material in a stable location.
- Remove berms except as designed.

- Block the road by constructing an aggressive barrier of dense interlocked large woody debris (logs, stumps, root wads, etc.) so that four wheel highway vehicles cannot pass the point of abandonment. Typical barrier dimensions are 10 feet high by 20 feet deep, spanning the entire road prism from top of cutslope to toe of fillslope. Long term effectiveness is the primary objective. If necessary construct a vehicular turn-around near the point of abandonment.
- Apply grass seed to all exposed soils resulting from the abandonment work and in accordance with Section 8 EROSION CONTROL.

## SECTION 10 MATERIALS

### 10-1 GEOTEXTILE FOR SUBSURFACE DRAINAGE

Geotextiles must meet the following minimum requirements for strength and property qualities, and must be designed by the manufacturer to be used for drainage or filtration. Woven slit-film geotextiles are not allowed. Material must be free of defects, cuts, and tears.

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Non-woven
Apparent opening size	D 4751	No. 40 max
Water permittivity	D 4491	0.1 sec <sup>-1</sup>
Grab tensile strength	D 4632	315 lb
Grab tensile elongation	D 4632	50%
Puncture strength	D 6241	620 lb
Tear strength	D 4533	112 lb
Ultraviolet stability	D 4355	50% retained after 500 hours of exposure

### 10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts must meet AASHTO M-36 (ASTM A-760) specifications. Culverts must be galvanized (zinc coated meeting AASHTO M-218).

### 10-16 CORRUGATED ALUMINUM CULVERT

Aluminum culverts must meet AASHTO M-196 (ASTM A-745) specifications.

### 10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culverts must be Type S – double walled with a corrugated exterior and smooth interior.

**10-21 METAL BAND**

Metal coupling and end bands must meet the AASHTO specification designated for the culvert and must have matching corrugations. Culverts 24 inches and smaller must have bands with a minimum width of 12 inches. Culverts over 24 inches must have bands with a minimum width of 24 inches.

**10-22 PLASTIC BAND**

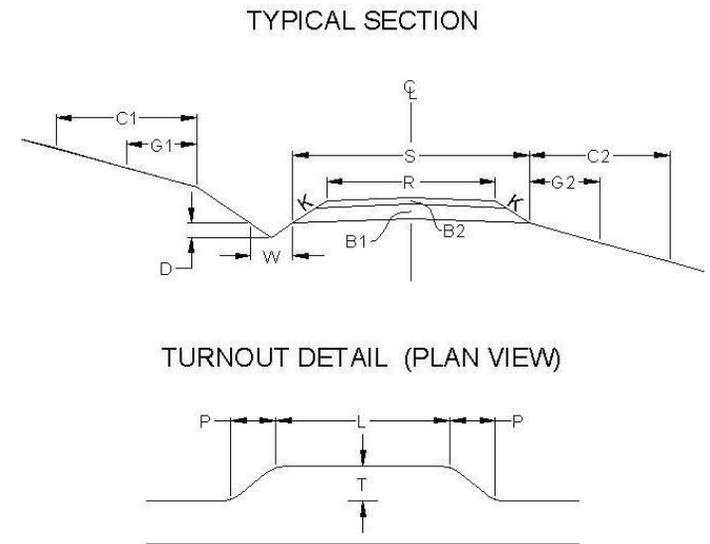
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used.

**10-24 GAGE AND CORRUGATION**

Metal culverts must conform to the following specifications for gage and corrugation as a function of diameter.

<u>Diameter</u>	<u>Gage</u>	<u>Corrugation</u>
18"	16 (0.064")	2 2/3" X 1/2"
24" to 48"	14 (0.079")	2 2/3" X 1/2"
54" to 96"	14 (0.079")	3" X 1"

ROAD #		MC-ML	MC-31	MC-35	MC-3501
REQUIRED / OPTIONAL		REQUURED	REQUURED	OPTIONAL	OPTIONAL
CONSTRUCT / RECONSTRUCT		PRE-HAUL	PRE-HAUL	CONTRUCT	CONTRUCT
TOLERANCE CLASS (A/B/C)		--	--	C	C
STATION / MP TO		27+80	0+00	0+00	0+00
STATION / MP		310+70	26+15	12+55	7+07
ROAD WIDTH	R	12	12	12	12
CROWN (INCHES @ C/L)		3	3	3	3
DITCH WIDTH	W	2	2	2	2
DITCH DEPTH	D	1	1	1	1
TURNOUT LENGTH	L	--	--	50	50
TURNOUT WIDTH	T	--	--	10	10
TURNOUT TAPER	P	--	--	25	25
GRUBBING	G1	--	--	5	5
	G2	--	--	5	5
CLEARING	C1	--	--	10	10
	C2	--	--	10	10
ROCK FILLSLOPE	K:1	--	--	1 ½	1 ½
❖ BALLAST DEPTH	B1	--	--	18	18
CUBIC YARDS / STATION		--	--	114	114
➤ TOTAL CY BALLAST		--	--	1430	810
❖ SURFACING DEPTH	B2	--	--	--	--
CUBIC YARDS / STATION		--	--	--	--
➤ TOTAL CY SURFACING		--	--	--	--
➤ TOTAL CUBIC YARDS		--	--	1430	810
SUBGRADE WIDTH	S	--	--	16.5	16.5
BRUSHCUT (Y/N)		Y	Y	N/A	N/A
BLADE, SHAPE, & DITCH (Y/N)		N	N	N/A	N/A



### **SYMBOL NOTES**

- ❖ Specified Rock Depth is FINISHED COMPACTED DEPTH in inches.
- Specified Rock Quantity is LOOSE MEASURE (Truck Cubic Yards) needed to accomplish specified FINISHED COMPACTED DEPTH. Rock quantities include volume for turnouts, curve widening and landings.

ROAD #		MC-37	MC-39	MC-66	MC-69	MC-6901	MC-70	MC-73	BM-33
REQUIRED / OPTIONAL		OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL
CONSTRUCT / RECONSTRUCT		RECONSTRUCT	RECONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT	CONSTRUCT	RECONSTRUCT
TOLERANCE CLASS (A/B/C)		C	C	C	C	C	C	C	C
STATION / MP TO		0+00	0+00	0+00	0+00	0+00	0+00	0+00	0+00
STATION / MP		3+10	10+10	36+80	11+30	11+14	14+23	9+60	5+85
ROAD WIDTH	R	12	12	12	12	12	12	12	12
CROWN (INCHES @ C/L)		3	3	3	3	3	3	3	3
DITCH WIDTH	W	2	2	2	2	2	2	2	2
DITCH DEPTH	D	1	1	1	1	1	1	1	1
TURNOUT LENGTH	L	50	50	50	50	50	50	50	50
TURNOUT WIDTH	T	10	10	10	10	10	10	10	10
TURNOUT TAPER	P	25	25	25	25	25	25	25	25
GRUBBING	G1	5	5	5	5	5	5	5	5
	G2	5	5	5	5	5	5	5	5
CLEARING	C1	10	10	10	10	10	10	10	10
	C2	10	10	10	10	10	10	10	10
ROCK FILLSLOPE	K:1	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½
❖ BALLAST DEPTH	B1	6	6	18	18	18	18	18	6
CUBIC YARDS / STATION		34	34	114	114	114	114	114	34
➤ TOTAL CY BALLAST		110	340	4200	1290	1270	1620	1100	200
❖ SURFACING DEPTH	B2	--	--	--	--	--	--	--	--
CUBIC YARDS / STATION		--	--	--	--	--	--	--	--
➤ TOTAL CY SURFACING		--	--	--	--	--	--	--	--
➤ TOTAL CUBIC YARDS		220	730	4200	1290	1270	1620	1100	200
SUBGRADE WIDTH	S	15	15	16.5	16.5	16.5	16.5	16.5	15
BRUSHCUT (Y/N)		N	N	N/A	N/A	N/A	N/A	N/A	N
BLADE, SHAPE, & DITCH (Y/N)		N	N	N/A	N/A	N/A	N/A	N/A	N

## MATERIALS LIST

LOCATION		CULVERT			DWNSPT		RIPRAP			FILL TYPE	TOLERANCE	REMARKS		
ROAD #	STATION	DIAMETER	LENGTH	TYPE	LENGTH	TYPE	INLET	OUTLET	TYPE			<u>Note:</u> Galvanized metal culverts shall conform to the following specifications for gage and corrugation as a function of the diameter:		
												Diameter	Gage	Corrugation
MC-35	0+38	24	34	XX	--	--	3	5	L	NT	C	MC-ML DITCH		
MC-35	3+50	18	32	XX	--	--	2	3	L	NT	C			
MC-35	3+73	54	38	GM	--	--	12	20	L/H	NT	C	TYPE 4		
MC-35	4+96	18	32	XX	--	--	2	3	L	NT	C			
MC-35	9+61	18	32	XX	--	--	2	3	L	NT	C			
MC-35	10+82	24	38	XX	--	--	5	7	L	NT	C	TYPE 5		
MC-35	12+55	--	--	--	--	--	--	--	--	--	--	DITCHOUT		
MC-3501	1+31	18	32	XX	--	--	2	3	L	NT	C			
MC-3501	5+30	18	32	XX	--	--	2	3	L	NT	C			
MC-3501	7+07	--	--	--	--	--	--	--	--	--	--	DITCHOUT		
MC-37	1+67	18	30	XX	--	--	2	3	L	NT	C			
MC-39	4+90	24	32	XX	--	--	2	3	L	NT	C			
MC-39	8+32	24	34	XX	--	--	2	3	L	NT	C	TYPE 5		
MC-66	3+62	18	30	XX	--	--	2	3	L	NT	C			
MC-66	6+22	--	--	--	--	--	--	--	--	--	--	START GEOTEXTILE		
MC-66	8+84	--	--	--	--	--	--	--	--	--	--	END GEOTEXTILE		
MC-66	10+06	18	32	XX	--	--	2	3	L	NT	C			

GM – Galvanized Metal    PS – Polyethylene Pipe Single Wall    PD – Polyethylene Pipe Dual Wall    AM – Aluminized Metal    C – Concrete    XX – PD or GM  
 H – Heavy Loose Riprap    L – Light Loose Riprap    SR – Shot Rock    NT – Native (Bank Run)    QS – Quarry Spalls

### MATERIALS LIST

LOCATION		CULVERT			DWNSPT		RIPRAP			FILL TYPE	TOLERANCE	REMARKS		
ROAD #	STATION	DIAMETER	LENGTH	TYPE	LENGTH	TYPE	INLET	OUTLET	TYPE			<u>Note:</u> Galvanized metal culverts shall conform to the following specifications for gage and corrugation as a function of the diameter:		
												Diameter	Gage	Corrugation
MC-66	13+78	18	32	XX	--	--	2	3	L	NT	C			
MC-66	17+41	18	32	XX	--	--	2	3	L	NT	C			
MC-66	20+64	18	32	XX	--	--	2	3	L	NT	C			
MC-66	21+58	24	32	XX	--	--	3	5	L	NT	C			
MC-66	23+26	48	40	GM	--	--	5	7	L/H	NT	C		TYPE 4	
MC-66	26+82	18	32	XX	--	--	2	3	L	NT	C			
MC-66	29+64	18	34	XX	--	--	2	5	L	NT	C			
MC-66	30+54	24	34	XX	--	--	3	5	L	NT	C			
MC-66	31+95	48	40	GM	--	--	5	7	L/H	NT	C		TYPE 4	
MC-66	32+64	18	32	XX	--	--	2	3	L	NT	C			
MC-66	34+14	48	40	GM	--	--	5	7	L/H	NT	C		TYPE 4	
MC-66	34+90	18	32	XX	--	--	2	3	L	NT	C			
MC-66	36+80	--	--	--	--	--	--	--	--	--	--		DITCHOUT	
MC-69	4+97	18	30	XX	--	--	2	3	L	NT	C			
MC-69	8+05	24	34	XX	--	--	5	7	L	NT	C			
MC-69	11+30	--	--	--	--	--	--	--	--	--	--		DITCHOUT	
MC-6901	4+68	18	30	XX	--	--	2	3	L	NT	C			
MC-6901	9+71	18	30	XX	--	--	2	3	L	NT	C			
MC-6901	11+14	--	--	--	--	--	--	--	--	--	--		DITCHOUT	

GM – Galvanized Metal    PS – Polyethylene Pipe Single Wall    PD – Polyethylene Pipe Dual Wall    AM – Aluminized Metal    C – Concrete    XX – PD or GM  
 H – Heavy Loose Riprap    L – Light Loose Riprap    SR – Shot Rock    NT – Native (Bank Run)    QS – Quarry Spalls

### MATERIALS LIST

LOCATION		CULVERT			DWNSPT		RIPRAP			FILL TYPE	TOLERANCE	REMARKS		
ROAD #	STATION	DIAMETER	LENGTH	TYPE	LENGTH	TYPE	INLET	OUTLET	TYPE			<u>Note:</u> Galvanized metal culverts shall conform to the following specifications for gage and corrugation as a function of the diameter:		
												Diameter	Gage	Corrugation
MC-70	0+30	24	36	XX	--	--	3	5	L	NT	C	MC-ML DITCH		
MC-70	4+35	18	30	XX	--	--	2	3	L	NT	C			
MC-70	5+57	--	--	--	--	--	--	--	--	--	--	START GEOTEXTILE		
MC-70	7+84	--	--	--	--	--	--	--	--	--	--	END GEOTEXTILE		
MC-70	9+40	18	30	XX	--	--	2	3	L	NT	C			
MC-73	0+37	24	32	XX	--	--	3	5	L	NT	C	MC-ML DITCH		
MC-73	1+54	30	40	GM	--	--	5	7	L/H	NT	C	TYPE 4		
MC-73	2+38	48	40	GM	--	--	5	7	L/H	NT	C	TYPE 4		
MC-73	4+01	18	30	XX	--	--	2	3	L	NT	C			
MC-73	7+76	18	30	XX	--	--	2	3	L	NT	C			
MC-73	9+60	--	--	--	--	--	--	--	--	--	--	DITCHOUT		
BM-33	1+77	18	30	XX	--	--	2	3	L	NT	C			

GM – Galvanized Metal    PS – Polyethylene Pipe Single Wall    PD – Polyethylene Pipe Dual Wall    AM – Aluminized Metal    C – Concrete    XX – PD or GM  
 H – Heavy Loose Riprap    L – Light Loose Riprap    SR – Shot Rock    NT – Native (Bank Run)    QS – Quarry Spalls

## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

### Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the construction materials. Remove slides from ditches and the roadway. Repair fill-failures, in accordance with Clause 4-6 EMBANKMENT SLOPE RATIO, with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

### Surface

- Grade and shape the road surface, turnouts, and shoulders to the original shape on the TYPICAL SECTION SHEET. Inslope or outslope as directed, to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- Blading shall not undercut the backslope or cut into geotextile fabric on the road.
- If required by the Contract Administrator, water shall be applied as necessary to control dust and retain fine surface rock.
- Surface material shall not be bladed off the roadway. Replace surface material when lost or worn away, or as directed by the Contract Administrator.
- Remove shoulder berms, created by grading, to facilitate drainage, except as marked or directed by the Contract Administrator.
- For roads with geotextile fabric: spread surface aggregate to fill in soft spots and wheel ruts (barrel spread) to prevent damage to the geotextile fabric.

### Drainage

- Prevent silt bearing road surface and ditch runoff from delivering sediment to any streams or wetlands.
- Maintain rolling dips and drivable waterbars as needed to keep them functioning as intended.
- Maintain headwalls to the road shoulder level with material that will resist erosion.
- Maintain energy dissipaters at culvert outlets with non-erodible material or rock.
- Keep ditches, culverts, and other drainage structures clear of obstructions and functioning as intended.
- Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This shall be done even during periods of inactivity.

## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 2 of 2

### Preventative Maintenance

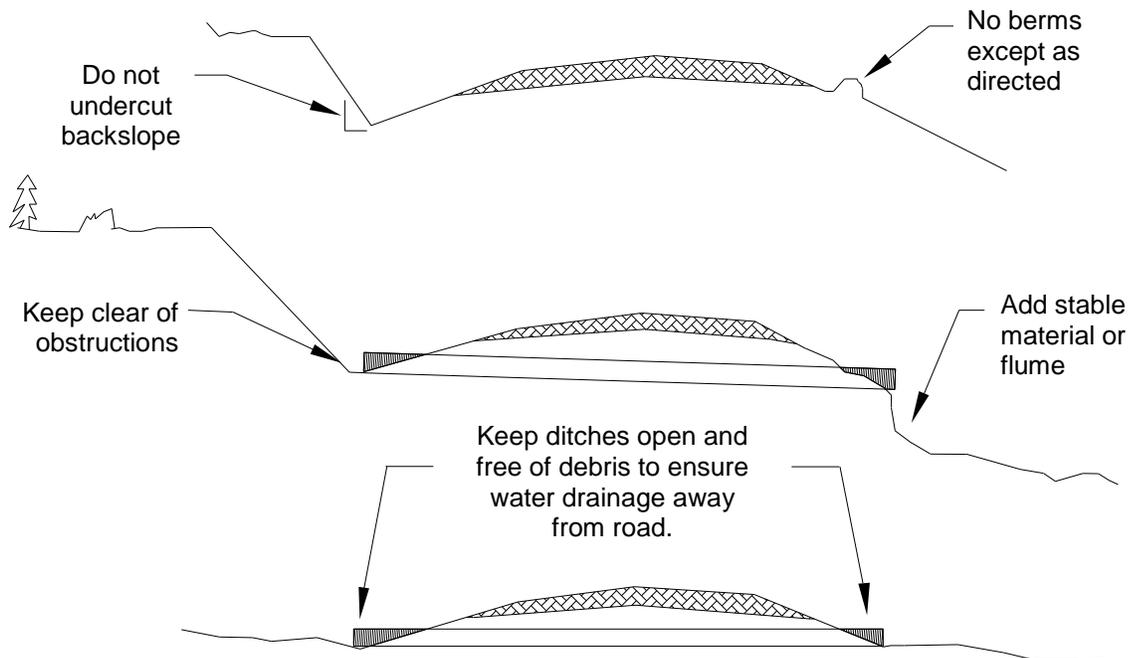
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

### Termination of Use or End of Season

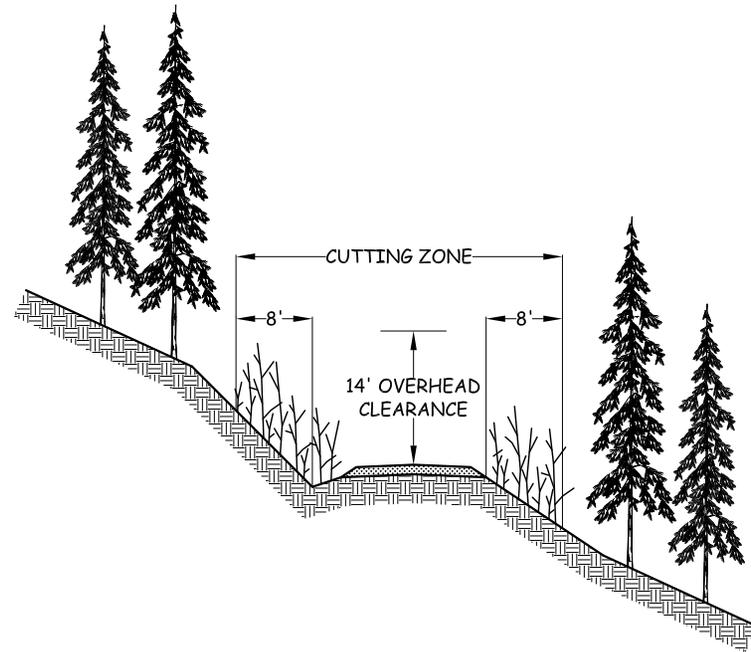
- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

### Debris

- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.



## ROAD BRUSHING DETAILS



### SPECIFICATIONS

BRUSH SHALL BE CUT ON THE ROAD SURFACE AND 8 ft. BACK FROM ROAD DITCH AND OUTSIDE EDGE OF RUNNING SURFACE.

ON THE INSIDE OF SWITCHBACKS AND TIGHT CURVES, BRUSH SHALL BE CUT BACK 16 ft. FOR VISIBILITY.

ON TRUCK TURNOUTS, BRUSH SHALL BE CUT 8 ft. BACK FROM OUTSIDE EDGE.

BRUSH SHALL BE CUT TO PROVIDE AN OVERHEAD CLEARANCE OF 14 ft. ABOVE THE ROAD RUNNING SURFACE.

BRUSH SHALL BE CUT TO WITHIN 6 in. OF THE GROUND.

SLASH SHALL BE REMOVED FROM CUT SLOPES ABOVE THE ROAD AND SCATTERED ON EMBANKMENT SLOPES.

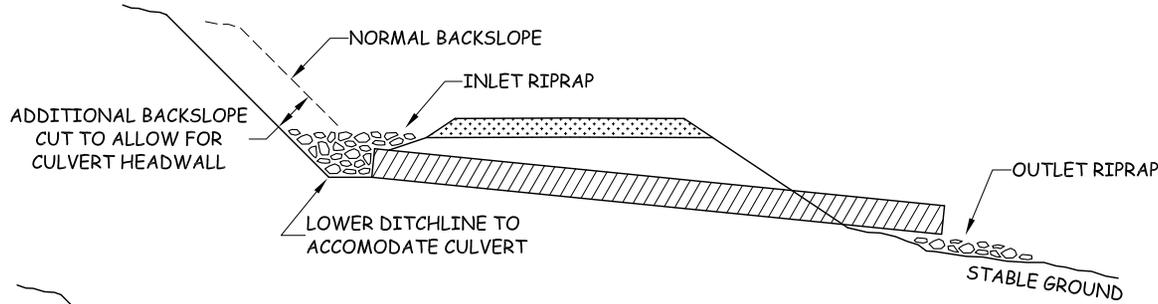
DITCHES SHALL BE CLEARED OF WOODY DEBRIS.

CULVERT INLETS AND OUTLETS SHALL BE CLEANED A MINIMUM DISTANCE OF TWO PIPE DIAMETERS AWAY.

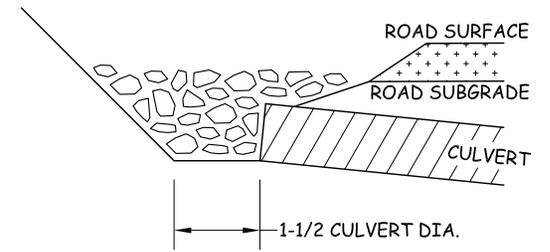
CONTRACT # 30-092649	PROJECT GOLFER	SHEET 29 OF 30
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# CULVERT AND DRAINAGE SPECIFICATIONS

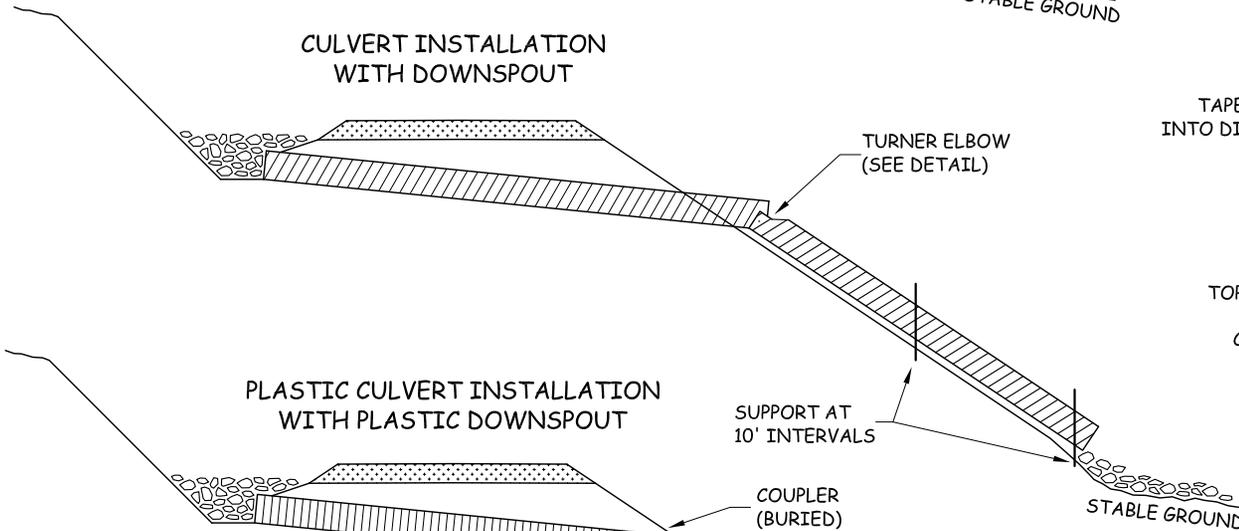
**CULVERT INSTALLATION (TYPICAL)**



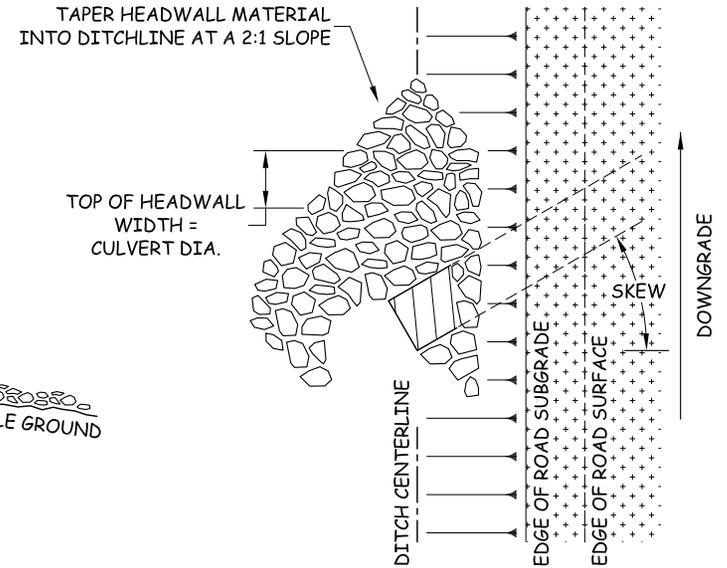
**CULVERT HEADWALL - SECTION VIEW**



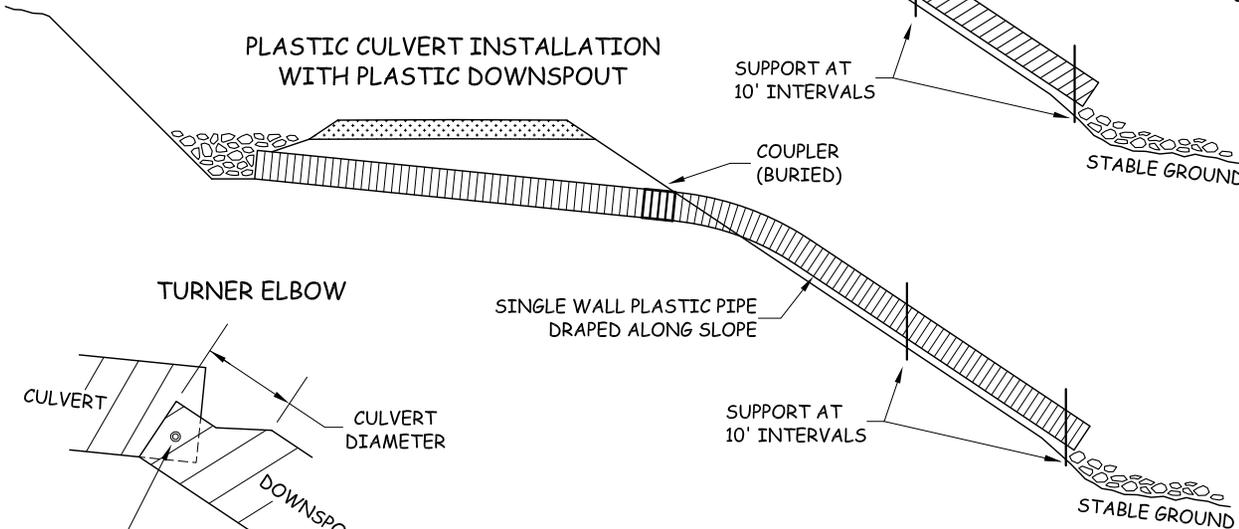
**CULVERT INSTALLATION WITH DOWNSPOUT**



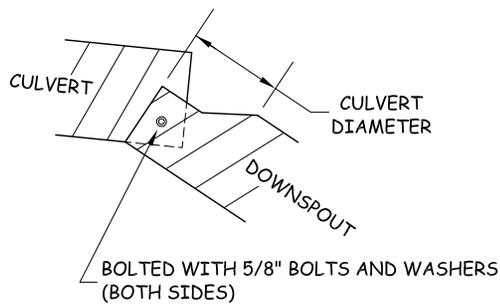
**CULVERT HEADWALL - PLAN VIEW**



**PLASTIC CULVERT INSTALLATION WITH PLASTIC DOWNSPOUT**



**TURNER ELBOW**



**HEADWALL NOTE:**  
 HEADWALL TO BE CONSTRUCTED OF IMPERVIOUS MATERIAL THAT WILL RESIST EROSION AND ARMORED WITH RIPRAP QUANTITY SPECIFIED IN ROAD PLAN.

CONTRACT #	PROJECT	SHEET
30-092649	GOLFER	30 OF 30

## SUMMARY - Road Development Costs

REGION: NW

DISTRICT: Cascade

SALE/PROJECT NAME: Golfer

CONTRACT #: 92649

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ROAD NUMBERS:	MC-35, MC-37, MC-39, MC-66, MC-69, MC-6901, MC-70, MC- 73, BM-33	MC-ML, MC-31	-
ROAD STANDARD:	Construction	Pre-Haul Maintenance	
NUMBER OF STATIONS:	121.74	309.05	
CLEARING & GRUBBING:	\$34,093	-	
EXCAVATION AND FILL:	\$27,014	\$0	
MISC. MAINTENANCE:		\$6,646	
ROAD ROCK:	\$123,499	\$0	
ROCK STOCKPILE PROD:	-	-	
CULVERTS AND FABRIC:	\$42,281	\$0	
STRUCTURES:	-	-	
MOBILIZATION:	-	-	Built into other costs
TOTAL COSTS:	\$226,888	\$6,646	
COST PER STATION:	\$1,864	\$22	
ROAD DEACTIVATION & ABANDONMENT COSTS:		\$3,655	

<b>TOTAL (All Roads)</b>	=	<b>\$237,189</b>
<b>SALE VOLUME MBF</b>	=	<b>6775</b>
<b>TOTAL \$/MBF</b>	=	<b>\$35.01</b>

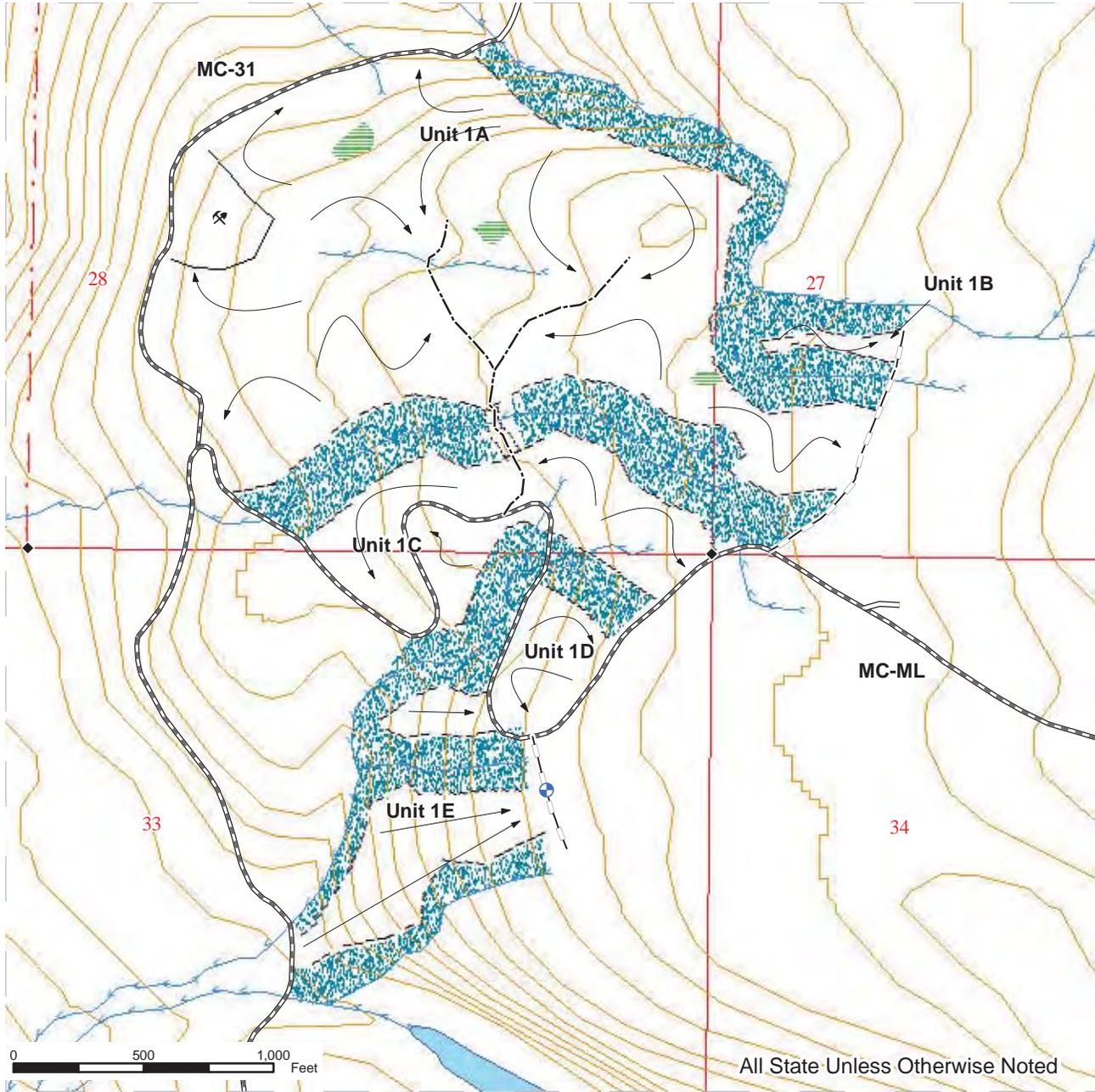
Compiled by: Westra

Date: 10/22/15

# LOGGING PLAN MAP

**SALE NAME:** GOLFER  
**AGREEMENT#:** 92649  
**TOWNSHIP(S):** T29R08E, T28R08E  
**TRUST(S):** State Forest Transfer(1), Common School and Indemnity(3), Capitol Grant(7)

**REGION:** Northwest Region  
**COUNTY(S):** SNOHOMISH  
**ELEVATION RGE:** 1168-2912



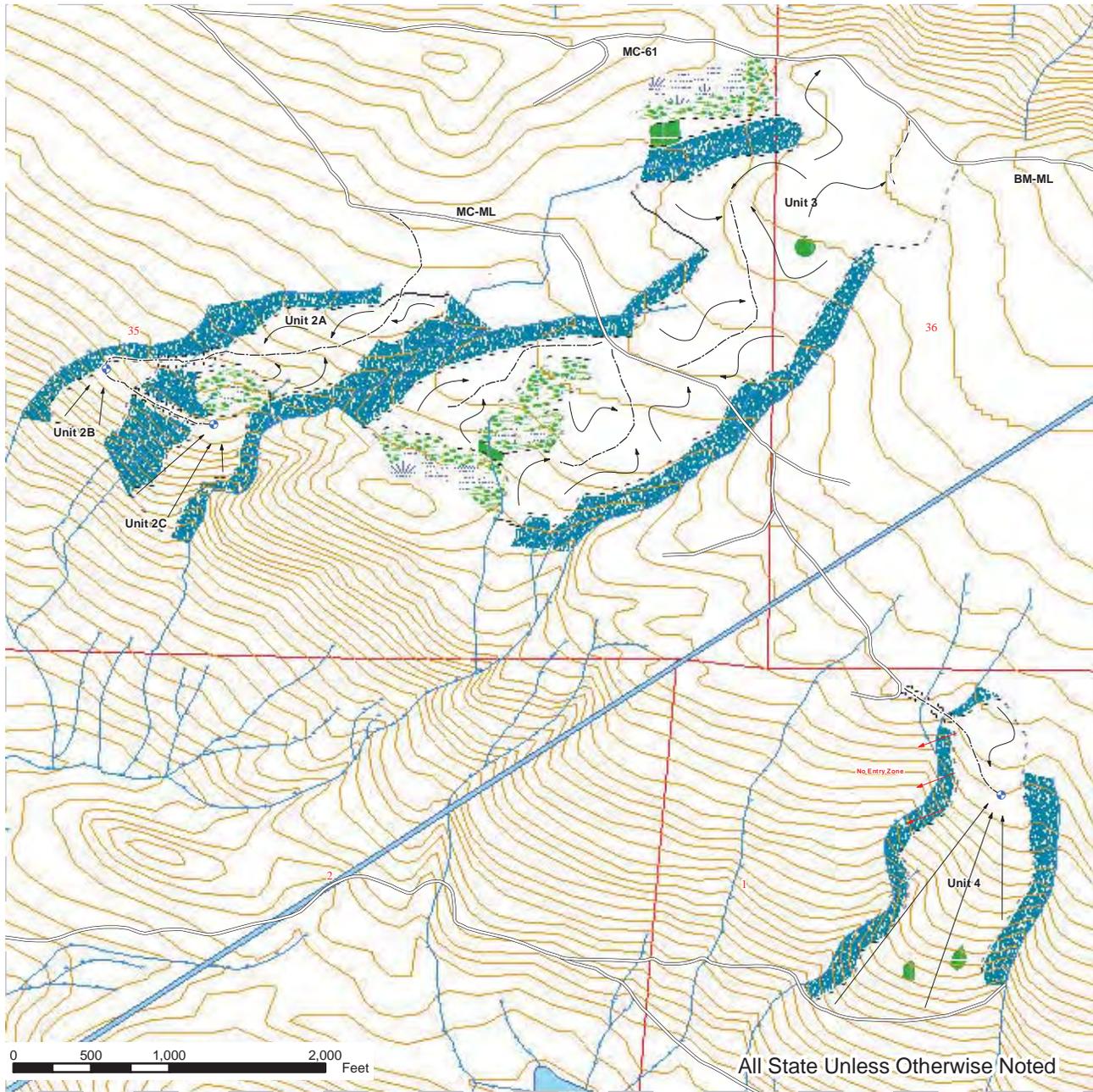
~ ~ ~ Sale Boundary Tags	Wetland Mgt Zone	Wetlands
— Sale Boundary No Tags	Riparian Mgt Zone	Streams
- - - Right of Way Tags	Leave Tree Area	Survey Corners
== Existing Roads	Proposed Landing	Existing Rock Pit
- - - Optional Reconstruction	Cable Yarding	
- - - Optional Construction	Ground-based Harvesting	
▬ Pre-Haul Maintenance		



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