

SECTION A – CONTINUATION OF STANDARD FORM 1449

This is a three-year indefinite-delivery, indefinite-quantity contract for stand exams for the Roseburg District, Oregon. The quantities listed are a representative proportion of work anticipated throughout the contract, for evaluation purposes only. Task orders may be placed by contracting officers in the BLM Oregon State Office and the Roseburg District.

Offerors shall enter a unit price for each item listed below, and then multiply the unit price by the estimated quantity to obtain the total amount. These prices will be used to determine the price for each task order.

<u>Item</u>	<u>Description</u>	<u>Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total Amount</u>
1	Stand Exam	100	Plot	\$ _____	\$ _____
				(ALL OR NONE)	

ESTIMATED START WORK DATE: March 31, 2009

PERFORMANCE TIME: One calendar day for 15 plots.

THIS PROCUREMENT IS SET ASIDE FOR SMALL BUSINESS CONCERNS.

EVALUATION FOR AWARD: For evaluation purposes only, award will be based on the total of all listed items for the base year plus the economic price adjustment percentages for the additional years. Award will be made on an item basis.

TASK ORDERS: After award, task orders may be placed by the Government. All task orders will be placed no later than three years from the date of contract award. Prices for the base year will be effective for one year from the date of contract award. Prices for subsequent years will be effective the first day after the anniversary date of contract award. The date of the work to be performed on the task order will determine the task order prices.

MINIMUM/MAXIMUM SERVICES: Minimum services to be rendered will not be less than \$10,000.00 for the contract. The maximum amount of services to be rendered shall be no more than \$300,000.00 for the contract.

## ANNUAL ECONOMIC PRICE ADJUSTMENT

Offerors wishing to propose revised prices in successive years shall state in the spaces below the economic price adjustment percentages to be used by the Government to compute future year prices, to be effective for the second, third, fourth and fifth years. For instance, a 3% economic price adjustment factor is shown as 3% (rather than 103% or 1.03). Note that the economic price adjustment percentage can be either negative or positive. The factors stated will be compounded annually. If no percentage is entered, future year prices will be the same as base year prices. Offeror's economic price adjustment percentage(s):

2nd Year \_\_\_\_\_

3rd Year \_\_\_\_\_

REFER TO SECTION C, CLAUSES 52.216-18 ORDERING, 52.216-19 TASK ORDER LIMITATIONS, AND 52.216-22 AND INDEFINITE.

## SECTION C. CONTRACT CLAUSES

### **52.212-2 Evaluation—Commercial Items. (Jan 1999)**

(a) The Government will award a contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be most advantageous to the Government, price and other factors considered. The following factors shall be used to evaluate offers:

Offerors shall meet the following minimum requirements:

The Contractor must provide a foreman who possesses a minimum of an Associate of Science Degree in Forestry, or a minimum of three 120-day seasons of performing forest surveys (stand examinations or timber inventory) in the Pacific Northwest.

The Contractor must provide crew members who possess a minimum of two 120-day seasons of performing forest surveys (stand examinations or timber inventory) in the Pacific Northwest.

Offerors shall submit a resume' of their foreman's and crew member's educational background and past applicable work experience. The resume shall cover work experience for the last four years, listing periods of employment by individual employer, the title of position held and type of work done (if self-employed, list the type of work done by years). References shall include telephone numbers of previous employers or contracting offices.

EDUCATIONAL BACKGROUND:

COLLEGES/UNIVERSITIES ATTENDED:

DEGREES RECEIVED:

WORK EXPERIENCE:

(b) A written notice of award or acceptance of an offer, mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer, shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award.

52.212-4 CONTRACT TERMS AND CONDITIONS--  
COMMERCIAL ITEMS

(FEB 2007)

(a) *Inspection/Acceptance.* The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in

contract price. If repair/replacement or reperformance will not correct the defects or is not possible, the Government may seek an equitable price reduction or adequate consideration for acceptance of nonconforming supplies or services. The Government must exercise its post-acceptance rights—

(1) Within a reasonable time after the defect was discovered or should have been discovered; and

(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) *Assignment.* The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act ([31 U.S.C. 3727](#)). However, when a third party makes payment (e.g., use of the Governmentwide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) *Changes.* Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) *Disputes.* This contract is subject to the Contract Disputes Act of 1978, as amended ([41 U.S.C. 601-613](#)). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR [52.233-1](#), Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) *Definitions.* The clause at FAR [52.202-1](#), Definitions, is incorporated herein by reference.

(f) *Excusable delays.* The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) *Invoice.*

(1) The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized) to the address designated in the contract to receive invoices. An invoice must include—

- (i) Name and address of the Contractor;
- (ii) Invoice date and number;
- (iii) Contract number, contract line item number and, if applicable, the order number;
- (iv) Description, quantity, unit of measure, unit price and extended price of the items delivered;
- (v) Shipping number and date of shipment, including the bill of lading number and weight of shipment if shipped on Government bill of lading;
- (vi) Terms of any discount for prompt payment offered;
- (vii) Name and address of official to whom payment is to be sent;
- (viii) Name, title, and phone number of person to notify in event of defective invoice; and
- (ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision, contract clause (e.g., [52.232-33](#), Payment by Electronic Funds Transfer—Central Contractor Registration, or [52.232-34](#), Payment by Electronic Funds Transfer—Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(2) Invoices will be handled in accordance with the Prompt Payment Act ([31 U.S.C. 3903](#)) and Office of Management and Budget (OMB) prompt payment regulations at 5 CFR Part 1315.

(h) *Patent indemnity*. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) *Payment*.—

(1) *Items accepted*. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract.

(2) *Prompt payment*. The Government will make payment in accordance with the Prompt Payment Act ([31 U.S.C. 3903](#)) and prompt payment regulations at 5 CFR Part 1315.

(3) *Electronic Funds Transfer (EFT)*. If the Government makes payment by EFT, see [52.212-5\(b\)](#) for the appropriate EFT clause.

(4) *Discount*. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(5) *Overpayments*. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(j) *Risk of loss*. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) *Taxes*. The contract price includes all applicable Federal, State, and local taxes and duties.

(l) *Termination for the Government's convenience*. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) *Termination for cause*. The Government may terminate this contract, or any part hereof, for

cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) *Title*. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) *Warranty*. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) *Limitation of liability*. Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) *Other compliances*. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) *Compliance with laws unique to Government contracts*. The Contractor agrees to comply with [31 U.S.C. 1352](#) relating to limitations on the use of appropriated funds to influence certain Federal contracts; [18 U.S.C. 431](#) relating to officials not to benefit; [40 U.S.C. 3701](#), *et seq.*, Contract Work Hours and Safety Standards Act; [41 U.S.C. 51-58](#), Anti-Kickback Act of 1986; [41 U.S.C. 265](#) and [10 U.S.C. 2409](#) relating to whistleblower protections; [49 U.S.C. 40118](#), Fly American; and [41 U.S.C. 423](#) relating to procurement integrity.

(s) *Order of precedence*. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order:

(1) The schedule of supplies/services.

(2) The Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause.

(3) The clause at [52.212-5](#).

(4) Addenda to this solicitation or contract, including any license agreements for computer software.

(5) Solicitation provisions if this is a solicitation.

(6) Other paragraphs of this clause.

(7) The [Standard Form 1449](#).

(8) Other documents, exhibits, and attachments.

(9) The specification.

(t) Central Contractor Registration (CCR).

(1) Unless exempted by an addendum to this contract, the Contractor is responsible during performance and through final payment of any contract for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(2)(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-

name agreements in FAR [Subpart 42.12](#), the Contractor shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of [Subpart 42.12](#); and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (t)(2)(i) of this clause, or fails to perform the agreement at paragraph (t)(2)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(3) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see [Subpart 32.8](#), Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(4) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423 or 269-961-5757.

52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO (JUN 2008)  
IMPLEMENT STATUTES OR EXECUTIVE ORDERS--  
COMMERCIAL ITEMS

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) [52.233-3](#), Protest After Award (AUG 1996) ([31 U.S.C. 3553](#)).

(2) [52.233-4](#), Applicable Law for Breach of Contract Claim (OCT 2004) (Pub. L. 108-77, 108-78)

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

[Contracting Officer check as appropriate.]

(1) [52.203-6](#), Restrictions on Subcontractor Sales to the Government (Sept 2006), with Alternate I (Oct 1995) ([41 U.S.C. 253g](#) and [10 U.S.C. 2402](#)).

(2) [52.219-3](#), Notice of Total HUBZone Set-Aside (Jan 1999) ([15 U.S.C. 657a](#)).

(3) [52.219-4](#), Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JULY 2005) (if the offeror elects to waive the preference, it shall so indicate in its offer) ([15 U.S.C. 657a](#)).

(4) [Reserved]

(5)(i) [52.219-6](#), Notice of Total Small Business Set-Aside (June 2003) ([15 U.S.C. 644](#)).

(ii) Alternate I (Oct 1995) of [52.219-6](#).

(iii) Alternate II (Mar 2004) of [52.219-6](#).

(6)(i) [52.219-7](#), Notice of Partial Small Business Set-Aside (June 2003) ([15 U.S.C. 644](#)).

(ii) Alternate I (Oct 1995) of [52.219-7](#).

- \_\_\_ (iii) Alternate II (Mar 2004) of [52.219-7](#).
- (7) [52.219-8](#), Utilization of Small Business Concerns (May 2004) ([15 U.S.C. 637\(d\)\(2\)](#)) and (3)).
- \_\_\_ (8)(i) [52.219-9](#), Small Business Subcontracting Plan (Apr 2008) ([15 U.S.C. 637\(d\)\(4\)](#)).
- \_\_\_ (ii) Alternate I (Oct 2001) of [52.219-9](#).
- \_\_\_ (iii) Alternate II (Oct 2001) of [52.219-9](#).
- (9) [52.219-14](#), Limitations on Subcontracting (Dec 1996) ([15 U.S.C. 637\(a\)\(14\)](#)).
- \_\_\_ (10) [52.219-16](#), Liquidated Damages—Subcontracting Plan (Jan 1999) ([15 U.S.C. 637\(d\)\(4\)\(F\)\(i\)](#)).
- \_\_\_ (11)(i) [52.219-23](#), Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (SEPT 2005) ([10 U.S.C. 2323](#)) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).
- \_\_\_ (ii) Alternate I (June 2003) of [52.219-23](#).
- \_\_\_ (12) [52.219-25](#), Small Disadvantaged Business Participation Program—Disadvantaged Status and Reporting (Apr 2008) (Pub. L. 103-355, section 7102, and [10 U.S.C. 2323](#)).
- \_\_\_ (13) [52.219-26](#), Small Disadvantaged Business Participation Program—Incentive Subcontracting (Oct 2000) (Pub. L. 103-355, section 7102, and [10 U.S.C. 2323](#)).
- \_\_\_ (14) [52.219-27](#), Notice of Total Service-Disabled Veteran-Owned Small Business Set-Aside (May 2004) ([15 U.S.C. 657 f](#)).
- (15) [52.219-28](#), Post Award Small Business Program Rerepresentation (June 2007) ([15 U.S.C. 632\(a\)\(2\)](#)).
- (16) [52.222-3](#), Convict Labor (June 2003) (E.O. 11755).
- \_\_\_ (17) [52.222-19](#), Child Labor—Cooperation with Authorities and Remedies (Feb 2008) (E.O. 13126).
- (18) [52.222-21](#), Prohibition of Segregated Facilities (Feb 1999).
- (19) [52.222-26](#), Equal Opportunity (Mar 2007) (E.O. 11246).
- (20) [52.222-35](#), Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sept 2006) ([38 U.S.C. 4212](#)).
- (21) [52.222-36](#), Affirmative Action for Workers with Disabilities (Jun 1998) ([29 U.S.C. 793](#)).
- (22) [52.222-37](#), Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sept 2006) ([38 U.S.C. 4212](#)).
- (23) [52.222-39](#), Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201).
- (24)(i) [52.222-50](#), Combating Trafficking in Persons (Aug 2007) (Applies to all contracts).
- \_\_\_ (ii) Alternate I (Aug 2007) of [52.222-50](#).
- (25)(i) [52.223-9](#), Estimate of Percentage of Recovered Material Content for EPA-Designated Items (May 2008) ([42 U.S.C. 6962\(c\)\(3\)\(A\)\(ii\)](#)).
- \_\_\_ (ii) Alternate I (May 2008) of [52.223-9](#) ([42 U.S.C. 6962\(i\)\(2\)\(C\)](#)).
- \_\_\_ (26) [52.223-15](#), Energy Efficiency in Energy-Consuming Products (DEC 2007) ([42 U.S.C. 8259b](#)).
- \_\_\_ (27)(i) [52.223-16](#), IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products (DEC 2007) (E.O. 13423).
- \_\_\_ (ii) Alternate I (DEC 2007) of [52.223-16](#).
- \_\_\_ (28) [52.225-1](#), Buy American Act—Supplies (June 2003) ([41 U.S.C. 10a-10d](#)).
- \_\_\_ (29)(i) [52.225-3](#), Buy American Act—Free Trade Agreements—Israeli Trade Act (Aug 2007) ([41 U.S.C. 10a-10d](#), [19 U.S.C. 3301](#) note, [19 U.S.C. 2112](#) note, Pub. L 108-77, 108-78, 108-286, 109-53 and 109-169).
- \_\_\_ (ii) Alternate I (Jan 2004) of [52.225-3](#).



- \_\_\_ (iii) Alternate II (Jan 2004) of [52.225-3](#).
- \_\_\_ (30) [52.225-5](#), Trade Agreements (Nov 2007) ([19 U.S.C. 2501](#), et seq., [19 U.S.C. 3301](#) note).
- X (31) [52.225-13](#), Restrictions on Certain Foreign Purchases (June 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).
- \_\_\_ (32) [52.226-4](#), Notice of Disaster or Emergency Area Set-Aside (Nov 2007) ([42 U.S.C. 5150](#)).
- \_\_\_ (33) [52.226-5](#), Restrictions on Subcontracting Outside Disaster or Emergency Area (Nov 2007) ([42 U.S.C. 5150](#)).
- X (34) [52.232-29](#), Terms for Financing of Purchases of Commercial Items (Feb 2002) ([41 U.S.C. 255\(f\)](#), [10 U.S.C. 2307\(f\)](#)).
- \_\_\_ (35) [52.232-30](#), Installment Payments for Commercial Items (Oct 1995) ([41 U.S.C. 255\(f\)](#), [10 U.S.C. 2307\(f\)](#)).
- X (36) [52.232-33](#), Payment by Electronic Funds Transfer—Central Contractor Registration (Oct 2003) ([31 U.S.C. 3332](#)).
- \_\_\_ (37) [52.232-34](#), Payment by Electronic Funds Transfer—Other than Central Contractor Registration (May 1999) ([31 U.S.C. 3332](#)).
- \_\_\_ (38) [52.232-36](#), Payment by Third Party (May 1999) ([31 U.S.C. 3332](#)).
- \_\_\_ (39) [52.239-1](#), Privacy or Security Safeguards (Aug 1996) ([5 U.S.C. 552a](#)).
- \_\_\_ (40)(i) [52.247-64](#), Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) ([46 U.S.C. Appx. 1241\(b\)](#) and [10 U.S.C. 2631](#)).
- \_\_\_ (ii) Alternate I (Apr 2003) of [52.247-64](#).

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

[Contracting Officer check as appropriate.]

- X (1) [52.222-41](#), Service Contract Act of 1965 (Nov 2007) ([41 U.S.C. 351](#), et seq.).
- X (2) [52.222-42](#), Statement of Equivalent Rates for Federal Hires (May 1989) ([29 U.S.C. 206](#) and [41 U.S.C. 351](#), et seq.).
- \_\_\_ (3) [52.222-43](#), Fair Labor Standards Act and Service Contract Act—Price Adjustment (Multiple Year and Option Contracts) (Nov 2006) ([29 U.S.C. 206](#) and [41 U.S.C. 351](#), et seq.).
- X (4) [52.222-44](#), Fair Labor Standards Act and Service Contract Act—Price Adjustment (Feb 2002) ([29 U.S.C. 206](#) and [41 U.S.C. 351](#), et seq.).
- \_\_\_ (5) [52.222-51](#), Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment—Requirements (Nov 2007) ([41 U.S.C. 351](#), et seq.).
- \_\_\_ (6) [52.222-53](#), Exemption from Application of the Service Contract Act to Contracts for Certain Services—Requirements (Nov 2007) ([41 U.S.C. 351](#), et seq.).
- \_\_\_ (7) [52.237-11](#), Accepting and Dispensing of \$1 Coin (Aug 2007) ([31 U.S.C. 5112\(p\)\(1\)](#)).

(d) Comptroller General Examination of Record. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at [52.215-2](#), Audit and Records—Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment

under this contract or for any shorter period specified in FAR [Subpart 4.7](#), Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in paragraphs (i) through (vii) of this paragraph in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause—

(i) [52.219-8](#), Utilization of Small Business Concerns (May 2004) ([15 U.S.C. 637\(d\)\(2\)](#)) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$550,000 (\$1,000,000 for construction of any public facility), the subcontractor must include [52.219-8](#) in lower tier subcontracts that offer subcontracting opportunities.

(ii) [52.222-26](#), Equal Opportunity (Mar 2007) (E.O. 11246).

(iii) [52.222-35](#), Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sept 2006) ([38 U.S.C. 4212](#)).

(iv) [52.222-36](#), Affirmative Action for Workers with Disabilities (June 1998) ([29 U.S.C. 793](#)).

(v) [52.222-39](#), Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201).

(vi) [52.222-41](#), Service Contract Act of 1965 (Nov 2007) ([41 U.S.C. 351](#), et seq.).

(vii) [52.222-50](#), Combating Trafficking in Persons (Aug 2007) ([22 U.S.C. 7104\(g\)](#)). Flow down required in accordance with paragraph (f) of FAR clause [52.222-50](#).

(viii) [52.222-51](#), Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (Nov 2007) ([41 U.S.C. 351](#), et seq.).

(ix) [52.222-53](#), Exemption from Application of the Service Contract Act to Contracts for Certain Services-Requirements (Nov 2007) ([41 U.S.C. 351](#), et seq.).

(x) [52.247-64](#), Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) ([46 U.S.C. Appx. 1241\(b\)](#) and [10 U.S.C. 2631](#)). Flow down required in accordance with paragraph (d) of FAR clause [52.247-64](#).

## 52.216-18 ORDERING

(OCT 1995)

(a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued three years from the date of contract award.

(b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.

(c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, or by facsimile, or by electronic commerce

methods only if authorized in the Schedule.

#### 52.216-19 ORDER LIMITATIONS

(OCT 1995)

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than \$1,000, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The Contractor is not obligated to honor-

(1) Any order for single item in excess of \$200,000.

(2) Any order for a combination of items in excess of \$200,000.

(3) A series of orders from the same ordering office within 30 days that together call for quantities exceeding (See Schedule).

(c) Notwithstanding paragraphs (b) and (c) of this section, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within seven (7) days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

#### 52.216-22 INDEFINITE QUANTITY

(OCT 1995)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum." The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."

(c) Except for any limitations on quantities in the Delivery-Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after March 31, 2012.

#### 52.252-02 CLAUSES INCORPORATED BY REFERENCE

(FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of the clause may be accessed electronically at this/these address(es):

Federal Acquisition Regulation clauses and provisions:

<http://www.acquisition.gov/comp/far/index.htm> or <http://www.arnet.gov/far/loadmainre.html>

CLAUSES INCORPORATED BY REFERENCE

<u>Clause</u>	<u>Title</u>	<u>Date</u>
52.203-3	Gratuities	APR 1984
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.204-7	Central Contractor Registration	JULY 2006
52.242-13	Bankruptcy	JULY 1995
52.242-14	Suspension of Work	APR 1984
52-242-15	Stop Work Order	AUG 1989

SECTION D. CONTRACT DOCUMENTS, EXHIBITS OR ATTACHMENTS

- Attachment No. 1      Statement of Work
- Attachment No. 2      Fire Requirements
- Attachment No. 3      Vicinity Map
- Attachment No. 4      Sample Task Order Maps

## Statement of Work (SOW)

### Roseburg District Stand Exams

- 1.0 Description of Services: The purpose of this project is to conduct stand exams on stands typically 30-80 years old. The stand exams will be used as an assessment for commercial thinning. The primary objectives are to determine stand composition, trees per acre, basal area, and volume. Project areas will consist of wide ranges of topography features, tree and brush denseness, and access issues. Data will be collected in the field using hand-held data collectors. The collected data then will be transferred to a "BLM EcoSurvey Lite" computer program using the contractor's personal computer (PC). The contractor will then submit the electronic data to the Bureau of Land Management (BLM) via E-mail or computer disk.
- 1.1 Boundaries of Units - The unit boundaries are identified on Project Area Maps and aerial photographs. All necessary maps and aerial photos will be provided by the Government.
- 1.2 Access to Units
  - 1.2.1 The areas to be surveyed under this contract are located within the Roseburg District.
  - 1.2.2 Access to project areas will be over county, BLM, and private logging road systems with a variety of road surfaces, e.g., asphalt, gravel, or natural/dirt.
  - 1.2.3 Access is (1) passable with a 2-wheel drive vehicle although a 4-wheel drive may sometimes be required or (2) when foot travel to the project area boundary is necessary it is typically less than 1/4 mile but may be up to a 1.5 miles.
  - 1.2.4 If standard access to a project area is blocked by a slide or washout and is further then 1.5 miles using foot travel, additional pay shall be negotiated between the Contractor and the Government.
  - 1.2.5 If an all terrain vehicle is used, it shall be of such design that it will travel over rough, uneven terrain and not create wheel ruts and channels. The all terrain vehicle must meet with the approval of the Government.
  - 1.2.6 Use of 2-wheel drive and 4-wheel drive vehicles on dirt roads is permitted only on approval of the Government.
  - 1.2.7 Some units may be behind locked gates. Locked gates shall remain locked at all times other than when the Contractor is passing through them. A key for access to locked gates will be supplied to the Contractor after the contract is awarded.
- 2.0 DEFINITIONS

Age Tree - A live tree assigned by the data recorder with the tree flag "A" that requires total breast height age, 5 year, and 10 year radial growth measurement data.

Azimuth - The horizontal angle (0 - 360 degrees) from a reference point, usually true north or true south. Also known as a bearing.

Basal Area Factor (BAF) - A factor used in variable plots which makes it possible to convert stem count per plot to basal area per acre.

Bole - The main stem or trunk of a tree.

Borderline Tree - A tree which is difficult to judge as being "in" or "out" of the variable plot because it is located at a distance from plot center which is nearly equal to the plot radius for a tree of its diameter.

Breast Height (BH) - A measured point which is 54 inches above ground level on the uphill side of the bole

Canopy Layers - A height grouping classification assigned to trees within a survey unit. When one third height differences exist between trees in defined crown classes, then trees within the defined crown classes will be assigned to a layer.

Layer 1 - Topmost layer of defined crown class trees in a stand or survey unit comprising 10 % or more of the total crown cover of the stand or survey unit. Layer 1 is generally comprised of dominant trees and co-dominant trees. May include intermediate and overtopped trees in even aged DF stands and saplings in younger stands.

Layer 2 - A layer of defined crown class trees that are on the average less than 2/3 the average height of the topmost layer (Layer 1) and comprise greater than 10% of the total crown cover. Layer 2 is generally composed of shade tolerant conifers.

Layer 3 - A layer of defined crown class trees that are on the average less than 1/3 the height of the topmost layer (Layer 1) and comprise greater than 1% of the total crown cover. Layer 3 is generally comprised of saplings and seedlings.

Crown Class - A description of the relative position of the tree crown with respect to competing trees which surround it. For this contract it will not be collected but will be used to help determine crown layer.

1 = Open Grown - Trees with crowns which have received light from above and all sides throughout most of the life, particularly during the early development period, and which have not been and are not likely to be influenced as to form or crown shape of other trees.

2 = Dominant - Trees with crowns extending above the general level of the crown canopy and receiving full light from above and partly from the side; larger than the

average trees in the stand, and with crowns dense, comparatively wide and long, but possibly somewhat crowded on the sides.

3 = Co-dominant - Trees with crowns forming the general level of the crown canopy and receiving full light from above but comparatively little from the sides; usually with medium-size crowns more or less crowded on the sides.

4 = Intermediate - Trees shorter than dominants or co-dominants, with crowns below or barely reaching into the main canopy formed by dominant and co-dominant trees, receiving a little direct light from above and none from the sides, usually with small crowns considerably crowded on the sides.

5 = Overtopped - Trees with crowns entirely below the general level of the canopy, receiving no direct light from either above or from the sides.

6 = Pre-Dominant – Over-story trees remaining from an earlier stand. Crown is well above the well developed dominant crowns of the newer stand.

In multiple-aged stands or even-aged stands with under-story trees of younger age classes, direct application of the above definitions is often difficult. The classification into intermediate and overtopped crown classes is intended to include primarily trees seriously affected by direct competition with adjacent trees.

As a general rule, in two-story or multistory stands, crown class for each tree must be judged in the context of its immediate environment, that is, in terms of crown competition. For example, a dominant tree is a tree which generally stands head and shoulders above all other trees in the vicinity. However, there may be a young vigorous tree nearby but not overtopped by a large dominant tree. The smaller tree may be considerably shorter than the dominant but still receiving full light from above and partly from the side. In its own immediate environment, it is dominant and should be recorded as such. The same principles apply to two-storied stands. Only under-story trees immediately adjacent to the over-story tree will be assigned subordinate crown classes. In cases where the over-story consists of scattered veterans standing above larger numbers of younger trees, a considerable portion of the under-story trees will be classified as dominant or co-dominant.

Crown Ratio - The length of live crown expressed as a percent of total tree height, commonly referred to as percent live crown. For trees of uneven crown ratio length, visually transfer lower branches on the longer side to fill in the upper portion until a full even crown is generated. Recorded to the nearest 5% increments.

Cut Tree – A toggle option on the tree screen to select cut or leave. For this contract, all trees will be entered as a Leave Tree.

Dead Tree – A tree no longer alive or growing. A tree devoid of viable meristematic tissue, live foliage, live branches or live buds. A tree with one or more live branches would be classified as a Live tree.



Diameter at Breast Height (DBH) – The outside bark diameter of the tree bole measured in tenths of an inch at a point 4-1/2 feet above ground level from the uphill side of the tree.

Fallen – A tree (live or dead) is one that is not supporting itself on the stump in an upright position and leaning at an angle of 45 degrees or more measured from the vertical. Each tree on the variable plot will be asked if it is standing or fallen.

Fixed Plot - A circular plot with a 11.8 foot radius measured horizontally from the plot center.

HDCP – Data file format of downloaded handheld data.

HHPC – Handheld Personal Computer. A handheld personal computer used to collect, store and download forest survey data. Also referred to as a Field Data Recorder (FDR).

Height Tree – A tally tree assigned by the data recorder with tree flag “H” which requires several measurements including: species identification, classification as a Leave - Standing/Fallen - Dead/Live tree, total height, DBH, % defect estimation, damage code (if %defect >”0”% or damage affecting volume, growth, or survival.), severity code ( if damage code is recorded),and crown ratio.

Height to Break- The height measurement for a standing tree with a broken or missing top, measured from the ground to point on the bole where the break occurred.

"In" Tree – A tree whose DBH is large enough to subtend the fixed critical angle of a Relaskop. Additionally, a tree having 50 percent or more of its bole (measured at ground level) within the fixed plot boundary. Trees meeting these criteria will compose the set of tally trees for each plot.

Leave Tree – A toggle option on the tree screen to select cut or leave. For this contract, all trees will be entered as a Leave Tree.

Limiting Distance - A method of determining whether a borderline tree is truly "in" or "out" of the variable plot.

Non forest plot – A non forested area is one that is not capable of being forested, This is different from a ‘Trees not stocked’. On plot screen “Plot No Stocking” 2/6, these choices are available in describing the plot.

Old Growth Tree – A large, old, tree, often with thick, deeply furrowed bark, having large limbs and epicormic branches, and a DBH usually greater than 30 inches. Assigned a tree flag equal to “old” on the tree flag screen.

"Out" Tree - A tree not meeting the requirements for an "in" tree.

Radial Growth - Measured from an increment core bored at right angles to the tree bole. When measuring radial growth do not include the bark, phloem (current years spring

wood), or the current years summer wood. Count the number of rings for a 5 year and 10 year period and measure in 20th's of an inch.

Ratio Sampling - A variable plot sample system whereby a percentage of the plot trees are aged and the height is measured. The Handheld Data Collection Program (HDCP) randomly selects trees to measure heights and ages based on a user defined probability. In this contract about 30% of the trees on the variable plot will be height trees, and about 10% of the height trees are selected as Age trees.

Reference Point (RP) – A point accurately locatable on an aerial photo or Project Area Maps used to establish an on the ground point of access to a particular group of plots.

Saplings – Trees at least 4.5 feet in height and less than 7 inches DBH.

Seedlings – Trees less than 4.5 feet and greater than 12 inches in height.

Site Tree - A live tree upon which measurements are taken to establish the relationship between tree age and tree height. One site tree will be measured per plot. Examiner will assign a tree flag “S” that requires the same data collection as Height and Age trees.

Slope Percent - Slope is the number of units the land falls (or rises) in 100 units of horizontal distance, recorded as a percent.

Snag – Standing dead tree

Standing Tree – A tree (live or dead) that is supporting itself on the stump in an upright position and leaning at an angle of less than 45 degrees measured from the vertical. Each tree on the variable plot will be asked if it is standing or fallen.

Strata - A unit area having trees of similar characteristics (age, species, composition, density) from which the collected data will be analyzed as a single stand.

Tally Tree - Those trees determined to be “In” trees within the variable-radius plot or fixed-radius plot and are subsequently recorded with the required data.

Tree Flags - Attributes assigned to trees using the variable plot Ratio Sampling method that indicate the measurement data required or collected for the individual tree. Height and age tree flags are randomly assigned to the trees by the handheld data collection computer, but can be over ridden or changed by the examiner. Trees may have more than one tree flag assigned. Other flags can be designated manually, such as Site Tree (S), old growth (Old) and forced Age Tree (fA). Trees may have more than one tree flag assigned. (Examples: HA, HfA, S Out, fA, etc.)

Tree Flag Types – H = Height tree, A = Age tree, S = Site Tree, Out = Site Tree located off the plot, Old = old growth, r = a required measurement rejected by the operator, f= a measurement forced to be taken on a tree by the operator.

Trees not stocked – A non forested area where there are no trees on the plot but the area is

capable of sustaining commercial growing trees. This is different from a 'Non forest plot'. On plot screen "Plot No Stocking" 2/6, these choices are available in describing the plot.

Variable radius plot -- A variable probability sampling system where each tree has its own plot size dependent on the diameter of the tree. Using a fixed critical angle with a relaskop, each tree within a 360 degree sweep of the point is checked at breast height as a possible sample tree. Trees greater than 7" DBH which have a diameter larger than the critical angle projected by the gauge are selected as Tally trees. A 20 BAF will be used.

### 3.0 CONTRACTOR PERSONNEL REQUIREMENTS

3.1 The Contractor shall attend a prework meeting and present a written performance plan, including crew size and scheduling. The Contractor will keep the COR informed of crew location and when each unit is completed or a new unit is started on a weekly basis.

3.2 The Contractor shall notify the Contracting Officer's Representative (COR) whenever work operations cease for three or more days, and shall notify the COR before starting operations.

### 3.3 Crew Requirements

The Contractor must maintain an adequate work force at all times to ensure timely completion of the work. The Contractor is responsible for the crew(s) knowing and performing the requirements of the contract.

### 3.4 Crew Supervisor

3.4.1 A supervisor meeting the skills identified below must be on-site directing work at all times. Failure to maintain a supervisor, who demonstrates the minimum skills and ability shown below, will result in suspension of work until an acceptable on-the-ground supervisor is provided.

3.4.2 The supervisor shall possess skills in the following areas:

- a) Accurate identification of all conifer and hardwood tree species found in the Roseburg District.
- b) Ability to accurately determine crown layer and live crown ratio of trees.
- c) Ability to accurately determine age and growth rates from increment borer cores.
- d) Accurate identification of disease and damage agents, and their associated severities.
- e) Ability to accurately rate timber volume defects, and their associated volume losses.
- f) Ability to read and draw maps, interpret aerial photographs, and locate points on the ground by compass, pacing, and topographic measurements.
- g) Ability to accurately perform common forest mensuration practices and techniques. Be proficient in taking diameter measurements, height measurements, use of increment borers and use of a Relaskop.
- h) Have basic competency for use of handheld field data collecting computers.

- i) Ability to use personal computers including loading programs, data management, hook-ups, and file transfers.

### 3.5 Equipment and Supplies

3.5.1 The Contractor shall furnish all necessary labor, equipment, transportation, supervision, materials, and incidentals necessary to complete the work as described.

3.5.2 The Contractor shall provide the proper equipment to perform and record the measurements required in each plot. Measuring and recording equipment will be approved by the COR prior to starting work. Typical equipment shall include:

- a. American Scale Spiegel Relaskop for measuring basal area, height, and slope percent.
- b. String box (hip chain) and/or range finder for measuring distances.
- c. Diameter tape that can measure diameters to the nearest tenth of an inch.
- d. 16-inch increment borers.
- e. Instruments for measuring growth increments to the nearest twentieth of an inch.
- f. 75 or 100 foot measuring tape or Logger's Tape.
- g. Azimuth hand compass, set to local declination of 16.5 degrees East.
- h. Clinometer for converting slope distances to horizontal distances.
- i. Wire flags for marking plot centers, minimum 12-inch length.
- j. Waterproof and dust proof photo protective cases.
- k. White or silver tree marking paint for marking tally trees.
- l. Orange flagging for marking reference points, road crossings, plot centers, and the end points on the line-transect.
- m. White flagging for marking lines between plots.
- n. Pencils and permanent markers.
- o. Personal Computer with the following system requirements:
  - Operating system: Windows 2000, or Windows XP home or professional
  - Hard-disk drive: 200 MB of available hard-disk space
  - Communications: USB port
  - Program loading: CD-ROM drive
  - Graphics card: VGA or compatible video graphics adapter at 256 color
  - Monitor: 124 X 768 resolution
  - Keyboard: Any
  - Mouse: Microsoft Mouse or comparable input device.
- p. Handheld Personal Computers that meets or exceeds the following specifications:
  - Memory: 32 M Ram
  - Storage: 64 M disk storage
  - Operating System: Microsoft Windows CE.3.0 or newer
  - Communications: Serial 9-pin DTR port & connectors OR
  - Communications: USB port (docking station for Allegro & connectors
  - Display: Black on white or color monitor

Field computers that meet the above mentioned requirements include the Juniper Systems Allegro CE, Allegro CX, and the TDS Ranger.

#### 4.0 GOVERNMENT FURNISHED PROPERTY

- 4.1 The Government will provide the following items:
- a. Project area maps, project name, and color copies of aerial photos of the areas to be examined.
  - b. Keys to unlock BLM and private gates. If keys are not returned within 15 days of the completion of the contract or the keys are turned in to the COR unusable, the Contractor will be charged the actual cost to replace a lost or unuseable key.
  - c. User Guide for the handheld data collection computer, and other exam information required to facilitate data entry.
  - d. All pertinent codes, tables, and other exam information to facilitate data entry. BLM EcoSurvey Lite(Ver. 357.342 or newer), ActiveSync (Ver.3.7.1 or higher), BLM EcoSurvey CE- Forest Survey for the Handheld (Ver. 2.2 or newer) computer software for contractor's personal computer and HHPC. Handheld look-up tables including Tree Data Entry Rules and default settings. CD installation will be provided by the Government.
- 4.2 Camping on BLM Administered Land: The Contractor shall obtain approval from the COR prior to camping on BLM administered lands.

#### 5.0 SPECIFIC TASKS

##### 5.1 Project Area Map and Narrative

- 5.1.1 The systematic grid system and plot layout will be shown on the project area map and will include plot numbers, plot locations, and direction of travel between plots. The project area map will also show other required data such as: RP point, survey date, initial azimuth, line spacing, and plot spacing. The contractor shall also mark noted features and conditions on the Project Area Map if required to clarify their location and description.
- 5.1.2 On the back side of the project area map, record any significant or unique features observed by on plots, between plots or adjacent to plots. (For example: Between plots 26-27, root rot, ¼ ac patch). Types of features to be recorded, but not limited to, are: blowdown areas, poor stocking, stand damage, disease pockets, corrected road locations, road failures, corrected stream locations, wet areas, landslides and a general description of the observed stocking and stand condition.

##### 5.2 Plot Numbers and Locations

- 5.2.1 Each task order will include a Project Area Map with the number of plots identified. One plot per five acres will typically be prescribed. The Contractor shall perform all necessary measurements on each plot.
- 5.2.2 It is the Contractor's responsibility to determine the distances between traverse lines and plots for each unit to be surveyed.
- 5.2.3 Plot locations shall be situated on a systematic grid system and shall be distributed to cover the entire stand. Due to the unit size and the numbers of plots required for a particular

- unit, the distance between plots and grid lines will vary. The design interval between plots and grid lines shall be constant throughout the stand whenever possible while maintaining a uniform coverage of the area. For example: In an irregular shaped 100 acre unit, twenty (20) plots may be required. In order to fit all of the plots evenly throughout the unit, the grid system will be about 470 feet by 470 feet (The square root of  $((100 \text{ acres} * 43,560 \text{ square feet/acre})/20)$ ). The distance between plots and grid lines must be identical and expressed in north/south or east/west directional layout.
- 5.2.4 The distance of the first grid line and first plot to the stand boundaries shall be approximately one-half the design interval. For example, if the design interval is 470 by 470 feet, the first traverse line and first plot shall be 235 feet from the project boundary. The initial grid lines or first plot shall typically never be less than 200 feet from edge of project area boundary. The size or shape of the unit may make this impossible. The distance between plots on a transect line shall be the same as the distance between transect lines.
- 5.2.5 If a plot falls on a road location or is influenced by a road, the Contractor shall proceed a designated distance where the plot is no longer influenced by the road prism. The examiner shall make a notation in the Plot comment screen. The subsequent plot distance would also need to be adjusted in order to maintain the original design layout. For example, if the Contractor had to proceed an additional 50 feet due to road influence then the contractor shall make a 50 foot alteration between the next plot.
- 5.2.6 Once the grid system layout has been determined on the Project Area Map and the plots numbered in sequential order, the Contractor shall submit a copy to the COR for approval. Grid and plot layout for each project unit must be approved by the COR before any field work may begin.
- 5.3 Orientation to Plots and Between Plots
- 5.3.1 A hand compass and string box (hip chain), or equivalent, shall be used for measuring distances between plot centers. Plots shall be established on the ground coinciding with the predetermined and approved layout on the Project Area Map.
- 5.3.2 Plot centers shall be marked with a wire flag driven securely into the ground. At a minimum, two lengths of orange flagging shall be hung over the plot center, or as near as possible to the plot center. The plot number, examiner's initials, and date shall be written on the flagging with a permanent marker on the flagging hanging over plot center.
- 5.3.3 A maximum variation of 10 percent in distance between grid lines and between plots will be accepted. A maximum variation of five (5) degrees from the stated azimuth of the plot line will be allowed. Error in location of plots and grid lines greater than this will render the survey unsatisfactory and will require relocation and re-measurement of plots.
- 5.3.4 Mark the route to and between plots with white flagging to facilitate relocation of plots during inspection. Flags shall be visible from flag point to flag point.
- 5.3.5 Examiners shall not deviate from the approved grid system layout on the Project Area

## Maps.

5.3.6 Reference Points - The Contractor shall identify starting Reference Point(s) (RP) for each survey unit. The RP(s) shall be easily identifiable on the Project Area Map. The RP shall be designated on the ground with one strip of orange flagging. The survey unit number and the distance and azimuth to the plot shall be written on the RP flagging with a permanent marker. For multiple survey units using the same RP, the above information shall be listed on separate flags. The distance and azimuth to the first plot(s) referenced by the RP(s) shall be documented in the Survey Unit Narrative (example: RP to P#12345-200 ft.-AZ 180).

## 5.4 Tree and Regen plot types

Stand examinations shall be accomplished by using two types of plots at each plot location to collect information on conifer and hardwood tree species. The variable plot collects data inputted into the tree data screen and the fixed plot collects data that is inputted into the Regen screen. Instructions and illustrations on specific measurement procedures are under section 6.0 and 7.0.

### 5.4.1 Variable plot

5.4.1.1 The variable plot will be taken using an American Scale Spiegel Relaskop. A BAF of 20 shall be used to determine trees that are on plot and are at least 7 inches DBH.

5.4.1.2 Record all live trees, snags, and fallen trees over seven (7) inches DBH. Only record snags fifteen (15) feet tall or taller and fallen dead trees that are have a Decay Class 1 or 2 (as shown in section 6.6).

5.4.1.3 All trees within the variable plot shall be identified by large legible numbers marked on the tree with white tree marking paint, at eye level, on the side of the tree facing plot center. Trees shall be numbered starting at an azimuth of 360 degrees and proceeding in a clockwise direction around the plot center. Trees shall be numbered in order.

5.4.1.4 When two or more trees are in the same azimuth line, the tree closest to plot center shall be given the smaller number.

5.4.1.5 For plots with greater than 10 trees on them a half plot may be used. The half plot will always be the NE and SE quadrants of the plot.

5.4.1.6 If the site tree is selected off the plot it shall be recorded as the last tree on the plot and flagged as an off plot site tree.

5.4.1.7 Old Growth tree shall be assigned tree flag "old"

5.4.1.8 All variable plot tally trees require the following information:

1. Species identification
2. Classification as a Leave - Standing/Fallen - Dead/Live tree. Standing Dead trees also require height, % deduct, and decay class.

3. DBH measurement
  4. Canopy layer
  5. Decay class for snags
- 5.4.1.9 A height tree assigned with tree flag “H” requires the data listed under 5.4.1.8 and the following additional information:
1. Total height
  2. % defect estimation
  3. Damage code (if %defect >”0”% or damage affecting volume, growth, or survival.)
  4. Severity code ( if damage code is recorded)
  5. Crown ratio
- 5.4.1.10 An age tree assigned with tree flag “A” and site trees requires the data listed under 5.4.1.8, 5.4.1.9, and the following additional information:
1. Total breast height age
  2. Five and ten year radial growth measurements
- 5.4.2 Fixed plot
- 5.4.2.1 The fixed plot is a 11.8 foot radius fixed plot measured horizontally from the plot center will be used to record live seedlings and saplings.
- 5.4.2.2 If the variable plot is a 1/2 plot, the fixed plot will also be a half plot in the NE and SE quadrants.
- 5.4.2.3 If no seedlings or saplings are located on the fixed plot; return to the 2/6 Plot No Stocking Screen and enter a check mark in the box preceding “SubMerch / Regen Not Stocked” field.
- 5.4.3 Saplings
- 5.4.3.1 Record saplings that are 54 inches in height or taller and 6.9 inches DBH or smaller.
- 5.4.3.2 Start at an azimuth of 360 degrees and proceed in a clockwise direction around the plot center. The first tally tree on the fixed plot shall be marked with orange flagging and labeled with the letters “FP” and determine the BH age of the tree.
- 5.4.3.3 All saplings having 50 percent or more of their bole (measured at ground level) within the fixed plot are considered in the plot.
- 5.4.3.4 The following data is required for saplings:
1. Species identification
  2. DBH measurement
  3. Height measurement
  4. Crown Ratio (% CR) - Record live crown ratio to nearest 5 percent.
  5. Breast Height Age (Age) - Record the estimated BHA to the nearest year for the first sapling tallied on the plot within a Canopy Layer. Only one sapling per layer per plot needs to be recorded.



6. Canopy Layer (Lyr) – Record the Canopy Layer 1-3 for all saplings.

5.4.4 Seedlings

5.4.4.1 Record live seedlings that are less than 54 inches in height and at least 12 inches in height.

5.4.4.2 The following data is required for seedlings:

1. Species identification
2. Stem Count (Count) – Enter the number of seedlings by species.
3. Average Height (Ht.) – Record the average total height to the nearest foot.

5.5 Site Tree Selection

5.5.1 One site tree shall be chosen per plot and assigned tree flag “S”. The site tree shall be a dominant, healthy, un-damaged Douglas-fir.

5.5.2 Collect information on the site tree that you would for an Age tree.

5.5.3 If a dominant Douglas-fir that is healthy and un-damaged has already been selected and flagged as a height and age tree it may be selected and flagged as the plot site tree. The tree must be rejected for height and age by assigning tree flags rH and rA as appropriate to allow the software to isolate their measurement for on plot tally trees.

5.5.4 If there are no suitable trees within the plot, one shall be selected from outside the plot as close to the plot as possible and also assigned tree flag “Out” using the “I/O 9 button. The azimuth and distance from plot center to the site tree selected off plot shall be recorded on the plot narrative screen. Off site plot trees shall always be the last tree recorded for the plot.

5.5.5 Each site tree shall be numbered as well as painted with an “S” facing plot center.

5.6 Plot Description and Narrative

5.6.1 For each the following information is required on Screen 3/6:

1. Aspect (in azimuth)
2. Plot % slope
3. % Canopy Cover by story (over, middle, lower, and total)

5.6.2 For each plot the contractor shall report any unusual features or conditions located within the plot on the appropriate plot data screen. Screen 6/6 (Plot Comments) on the handheld data collection computer shall be used to record this narrative. The distance and azimuth from plot center to any off plot site trees shall be recorded on this screen as part of the narrative.

5.7 Instructions and Illustrations on specific measurement procedures

## 5.7.1 Borderline Tree

5.7.1.1 Occasionally trees occur which are unclear whether they are in or out of the variable plot. Trees may be near the edge of the plot, behind other trees or shrubs, and are hard to see. These trees shall be determined “in” or “out” by determining the limiting horizontal distance. Limiting horizontal distance is calculated by multiplying the DBH of the borderline tree by the plot radius factor for the BAF being used on the plot. If the horizontal distance from plot center to the center of the tree at DBH is less than the limiting distance found, the tree will be determined to be “in”.

5.7.1.2 The HDCP contains a Borderline Tree Calculator that calculates the limiting horizontal distance and reports whether the tree is “in” or “out”.

5.7.1.3 All borderline trees will have an “X” painted on them facing the plot center.

5.7.1.4 When a fallen down tree occurs on the variable plot, whether a tree is “in” or “out” of the plot is determined from where the tree leans. Original position of the tree is disregarded. Measure the distance to the DBH as it lies to determine if it is within the limiting distance.

## 5.7.2 Diameter Breast Height (DBH) Measurement

5.7.2.1 Measure DBH perpendicular to the bole of the tree at a point 54 inches above the ground on the uphill side of the tree. Record DBH in tenths of an inch.

5.7.2.2 If branches or a whorl of branches prevent measurement at 54 inches above the ground level then two diameter measurements shall be taken. One measurement above the 54 inch mark (as close to 54 inch mark as possible) and second measurement below the 54 inch mark (as close to the 54 inch mark as possible). The average of these two diameter measurements shall be recorded as the DBH for the tree. For other irregularities such as burls, scarring, and swelling measure DBH immediately above the irregularities.

5.7.2.3 A tree forked at or above breast height (BH) shall be tallied as one tree. A tree forked below BH shall be tallied as two (or more) trees with required measurement taken on each stem.

## 5.8 Height Measurements

5.8.1 Measure heights to the nearest foot.

5.8.1.1 Height of snags will be measured from the ground to the attached top of the tree. Record this height in the Total Height (Ht.) field. For snags that have a broken top, record the height in the total Height field and also record the height in the Height to Broken Top field found on the drop down menu on the tree screen. The top portion of the tree no longer attached to the bole will not be used to calculate the total height of the standing dead tree.

5.8.1.2 If the top is missing out of a live tree, estimate the missing length for inclusion in the standing height measurement and enter this into the Total Height (Ht.) field. Enter the

standing height measurement in the Height to Broken Top field found on the drop down menu on the tree screen.

5.8.1.3 A height tree shall be rejected if it is “fallen”. Reject that measurement by flagging that tree as “rH”. Measure the next sequential tree on the plot that is not already flagged as a height tree. The replacement Height tree shall be assigned tree flag “fH”. If no suitable replacement trees are available on the plot, then the first available tree on the next plot shall be selected as a replacement. If this is the last plot to be measured on the survey unit, then no replacement Height tree shall be required.

## 5.9 Age Measurements

### 5.9.1 Age measurement procedures for tally trees within a variable plot

5.9.1.1 All selected site trees assigned tree flag “S” and all Age Trees assigned tree flag “A” or “fA” will be measured for age.

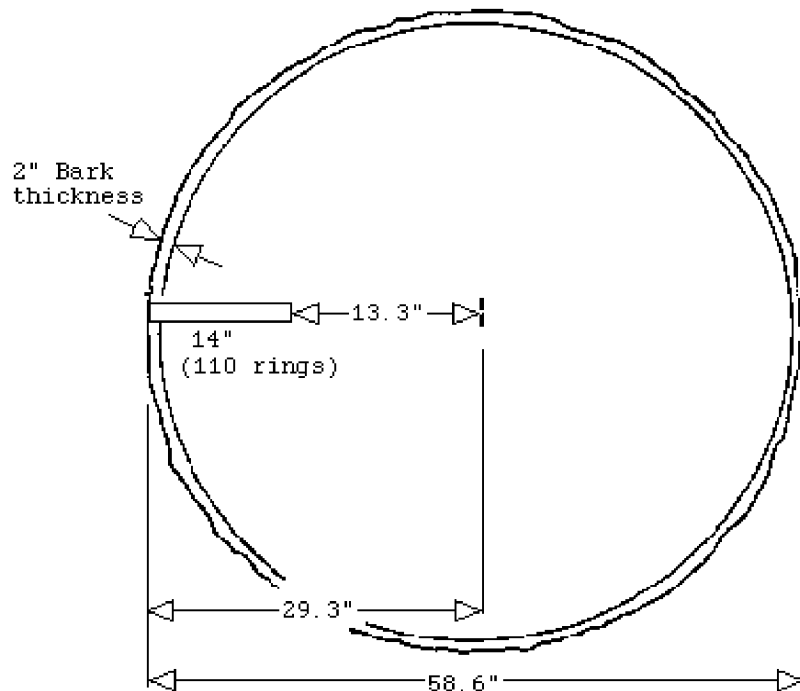
5.9.1.2 Measure breast height age from an increment core bored at DBH and at a right angle to the bole. Bore the tree such that the increment passes through and beyond the center of the tree. Beginning inside the phloem and the outer edge of the first dark ring (end of last years fall wood), count the number of dark rings from the outer end of the wood core to the center of the tree and record the total breast height age.

5.9.1.3 An age shall be rejected if the tree is dead, a hardwood, old-growth tree, or the tree core is rotten.

5.9.1.4 The increment wood core shall be placed at the base of the tree, and a circle will be painted around the core hole.

5.9.1.5 To Determine the age of a tree that has a radius greater than the length of the increment borer refer to Figure 2 and following example. Make a note of the extrapolation on the comment screen.

Example: Given a tree: 58.6 inches DBH, 2.0 inch bark thickness, 14.0 inch increment core with 110 total rings and 10 rings on the interior two inches of the core. Solve for age. Determine the radius of the tree at DBH ( $58.6"/2 = 29.3"$ ). Subtract bark thickness to get wood radius at DBH ( $29.3" - 2.0" = 27.3"$ ). Find the remaining distance to the center of the tree ( $27.3 - 14.0" = 13.3"$ ). Calculate the average rings per inch ( $10 \text{ rings}/2" = 5 \text{ rings}/\text{inch}$ ). Extrapolate the average rings per inch of missing core ( $5 \text{ rings}/\text{inch} \times 13.3" = 66.5 \text{ rings}$ , round to 67). Add the actual ring count and the extrapolated ring total together to determine age ( $110 + 67 = 177 \text{ years age}$ ).

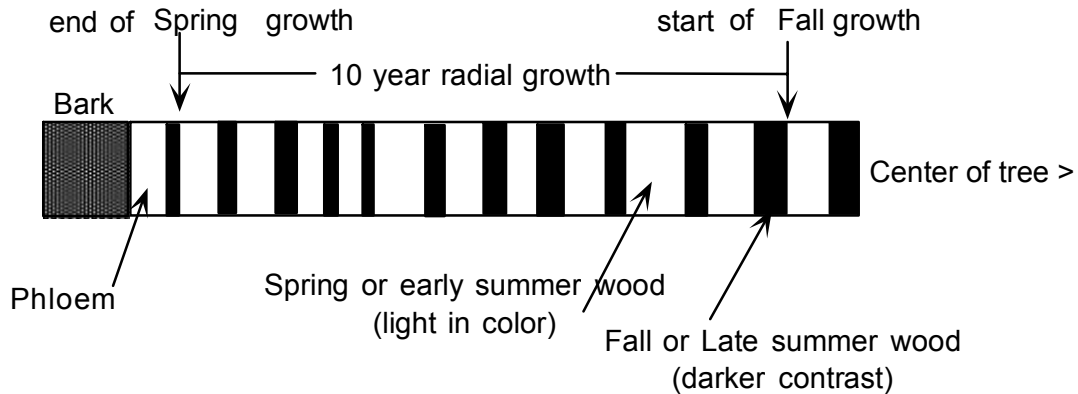


**Figure 1: Determining the Age of a Large Tree**

- 5.9.1.6 If the tree assigned with tree flag “A” cannot be bored for age and growth then the next sequential tree on the plot that is alive and not already flagged as an Age Tree shall be selected as a replacement Age Tree. *The replacement Age Tree shall be assigned tree flag “fA” and measured for total breast height age, and 5 year and 10 year radial growth.* If no suitable replacement trees are available on the plot, then the first available tree on the next plot shall be selected as a replacement. If this is the last plot to be measured on the survey unit, then no replacement Age tree shall be required.
- 5.9.1.7 No more than 2 trees per plot shall be age trees. When more than 2 trees on a plot are randomly selected for age measurements select first any tree that shall serve as the site tree, and second a conifer that is in a different canopy layer then the first age tree. All other age trees on plot may be rejected.
- 5.9.2 Age measurement procedures for saplings within a fixed plot.
- Determine the basal height age of the first saplings tallied. For saplings with a DBH 3” and greater, use an increment bore. For saplings less than 3” DBH, estimate the age. Begin at DBH and count the branch whorls to the top leader.
- 5.10 Growth Measurements
- 5.10.1 All selected site trees assigned tree flag “S” and all Age Trees assigned tree flag “A” or “fA” will be measured for 5 year and 10 year radial growth.
- 5.10.2 Measure radial growth from an increment core bored at DBH and at a right angle to the bole. Beginning inside the phloem (current years spring wood) and the inner edge of the first dark ring (end of last years spring growth), count to the 5<sup>th</sup> and 10<sup>th</sup> ring. Using a ruler

graduated to 1/20 inch, measure and record the distance from end of last years spring growth to inner side (start of fall growth) of the 5<sup>th</sup> and 10<sup>th</sup> ring. (Example: 1.1 inch = 1 and 2/20ths inch, and is recorded as “22”).

- 5.10.3 When measuring radial growth do not include the bark, phloem (current years spring wood), or the current years summer wood. Measure both 5-year and 10-year period beginning at the end of the 2nd years’ spring wood and stopping at the beginning of the 5th years’ and 10th years’ fall wood



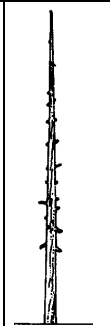
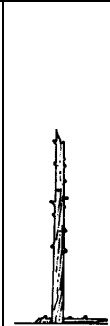



**Figure 2: Measuring Radial Growth**

- 5.10.4 The increment wood core shall be placed at the base of the tree and a circle shall be painted around the core hole.
- 5.11 Snags

**Table 1: Dead Tree Decay Class Condition Codes**

Code >	1	2	3	4	5
Bark	Tight intact	50% loose or missing	75% Missing	75% Missing	75% Missing
Heartwood decay	Minor	None to advanced	Incipient to advanced	Incipient to advanced	Advanced to crumbly
Sapwood decay	None to incipient	Non to incipient	None to 25%	25% +	50% + advanced
Limbs	Mostly present	Small limbs missing	Few remain	Few remain	Absent
Top breakage	May be present	May be present	Approx. 1/3	Approx. 1/3-1/2	Approx. 1/2 +

					
<b>Code &gt;</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Bole form	Intact	Intact	Mostly intact	Losing form, soft	Form mostly lost

<sup>1</sup>Code 1 equals 1 to 5 years since death.

## 5.12 Damage and Severity Codes

**Table 2: Damage and Severity Codes**

Code	Damage	Code	Severity
<b>BARK BEETLES</b>			
01	General/other bark beetles	1	Unsuccessful current attack
02	Mountain pine beetle (All Pinus spp)	2	Successful current attack
03	Douglas-fir beetle (PSME; LAOC)		
04	Spruce beetle (Picea spp; rare PICO)	3	Last year's successful attack
05	Western pine beetle (PIPO)	4	Older dead
06	Pine engraver beetle (All Pinus spp)		
07	Fir engraver beetle (Abies; TSHE; PIEN)		
08	Silver fir beetle		
09	Red turpentine beetle (All Pinus spp)	5	Top kill
<b>DEFOLIATORS</b>			
10	General/other	1-9	Divide live crown into thirds. Rate each third separately based on the following cutoffs: 0 - No detectable defoliation 1 - Up to 33% foliage (old and new) missing 2 - 34-66% missing foliage 3 - 67-100% missing foliage  Obtain rating for entire tree by adding ratings for each third. Record total in severity column.
11	W. blackheaded budworm		
12	Pine butterfly		
13	Douglas-fir tussock moth		
14	Larch casebearer		
15	W. spruce/Mndoc budworm		
16	Western hemlock looper		
17	Sawflies		
18	Needle and sheath miners		
19	Gypsy moth		
<b>OTHER INSECTS</b>			
20	General	1	Bottlebrush or shortened leaders 0-2 forks on tree stem OR less than 20% of branches affected OR less than 50% of bole with visible larval galleries.
21	Shoot moths		
22	Weevils		
23	Wood borers		
24	Balsam wooly Adelgid		
		2	3+ forks on tree stem OR 20% or more of branches affected OR terminal leader dead OR >=50% of bole with visible larval galleries.
Code	Damage	Code	Severity
<b>DWARF MISTLETOE</b>			

30	Dwarf mistletoe	1-6	<p>Divide the live crown into thirds. Rate each third separately and give each third a rating based on the following cutoffs:</p> <p><b>Rating</b></p> <p>0 = No visible infections  1 = 1/2 or less of total number of branches have visible infections  2 = More than 1/2 the branches have visible infections</p> <p>Obtain rating for entire tree by adding ratings for each third.</p>
<b>WHITE PINE BLISTER RUST</b>			
36	White pine blister rust	1	Branch infections located greater than 2' from tree bole.
		2	Branch infections located between 6" and 2' from bole.
		3	Bole infections or branch infection within 6" of bole.
<b>STEM-BRANCH CANKERS</b>			
40	General/other	1	Branch infections. Less than 50% of the crown involved.
41	Western gall rust (PIPO; PICO)		
42	Comandra blister rust (PIPO)		
43	Stalactiform rust (PICO)	2	Branch infections. 50% or more of crown involved. Any occurrence on the bole.
44	Atropellis canker (Pines spp)		
45	Cytospore/Phomopsis (PSME; Abies)		
<b>STEM DECAYS</b>			
46	General/other	1	1 conk on stem or at ground line.
47	Red ring rot (P. pin')		
48	Indian paint fungus (E. tinctorium)	2	2 or more conks separated by less than 16' on the bole.
49	Brown cubical rot (P. schweinitzii)	3	2 or more conks separated by more than 16' on the bole.
		4	No conks. Visible decay in interior of bole.

Code	Damage	Code	Severity
<b>FOLIAR PATHOGENS</b>			
55	General/other	1	Less than 20% of foliage affected or less than 20% of crown in brooms.
56	Rhabdocline (only PSME)		
57	Elytroderma (only PIPO)		
58	Broom rusts (only Abies, Picea)	2	20% or more of foliage affected or 20% or more of crown in brooms.
<b>ROOT DISEASE</b>			
60	General/other	1	Live tree within 30' of a tree or stump with known root disease.
61	Annosus root disease		
62	Armillaria root disease	2	Live tree with signs or symptoms diagnostic for root disease such as characteristic decay, stain, ectotrophic mycelia, mycelial fans, conks, or excessive resin flow at the root collar. No visible crown deterioration.
63	Black stain root disease		
65	Laminated root rot	3	Live tree with signs or symptoms diagnostic for root disease such as characteristic decay, stain, ectotrophic mycelia, mycelia) fans, conks, or excessive resin flow at the root collar. Visible crown deterioration such as thinning, chlorotic foliage, reduced terminal growth, and/or stress cones.

Code	Damage	Code	Severity
------	--------	------	----------

<b>DAMAGES: ANIMAL. WEATHER, OTHER</b>				
70	Animal--general/unknown	1	Less than 20% of crown affected. Bole damage restricted to less than 1 /2 of circumference.	
71	Mountain beaver			
72	Livestock			
73	Deer or elk			
74	Porcupines	2	20% or more of crown affected. Bole damage to 1 /2 or more of the circumference.	
75	Pocket gophers, squirrels, mice, voles, rabbits, hares			
76	Beaver			
77	Bear			
78	Human (not logging)			
80	Weather--general/unknown	1	Less than 20% of crown affected.	
81	Windthrow or wind break			
82	Snow/ice bending or breakage	2	20% or more of crown affected or any damage to bole.	
83	Frost damage on shoots			
84	Winter desiccation			
85	Drought/heat moisture deficiency			
86	Sun scald			
87	Lightning damage			
90	Other/unknown damage	1	Less than 20% of crown affected.	
91	Logging damage			
92	Fire: basal scars/heat	2	20% or more of crown affected or any damage to bole.	
93	Improper planting technique			
94	Air pollution or other chemical damage			
<b>PHYSICAL DEFECTS</b>				
95	Unspecified physical defect	0	For all physical defects	
98	Forks/lean/crooks/sweep			
99	Checks/bole cracks			
<b>BROKEN/MISSING/DEAD TOPS</b>				
96	Broken/missing top	0	01-10	Record severity as a percentage of the normal or original tree height that is dead or missing.
97	Dead top	1	11-20	
		2	21-30	
		3	31-40	
		4	41-50	
		5	51-60	
		6	61-70	
		7	71-80	
		8	81-90	
		9	91-100	

### 5.13 Hand-held data collection instructions and data submission

5.13.1 The contractor is responsible for installation and operation of Active Sync (Ver. 3.7.1 or newer) and BLM EcoSurvey Lite (Ver. 357.342 or newer) software. An installation CD will be provided by the Government. Only ActiveSync and BLM EcoSurvey Lite shall be installed from the CD. The Government is not responsible for technical support of contractors' computer and associated handheld data collector interface software.

The Contractor shall be responsible for proper input of all pertinent data. All data shall be entered into handheld data collector in the field at time of collection. Refer to EcoSurvey Handheld Procedures Guide for instructions in entering data into the handheld data collector.

5.13.2 Data shall be downloaded into contractor's PC on a daily basis (see BLM EcoSurvey Data Handling Guide). Contractor shall retain all collected data on the HHPC and Contractor' PC until such time as the data has been received, downloaded, and approved as satisfactory by the COR.

5.13.3 The Contractor shall be responsible for all back-ups and data related re-entry that might result from the rare event of equipment or software failure. The Contractor must be self-



sufficient in the use of the software.

5.13.4 The contractor shall provide completed EcoSurvey data files (in HDCP format) and Project Area Maps to the COR or Project Inspector upon completion of each survey unit. Data shall be submitted upon completion to facilitate prompt inspection and possible corrective actions.

5.13.5 Refer to the EcoSurvey Handheld Procedures Guide for instructions to enter data into the handheld data collector. A brief description of the requirements is as follows:

5.13.5.1 New Unit Screen, Create New Unit

Enter project name that will be assigned on the task order. The Unit is the five digit number on the Project Area Map that corresponds to the unit being surveyed.

Screen 1 of 9 Unit Location: Enter the three digit RMA (Resource Management Area) code for each resource area (351 for the Swiftwater Resource area and 354 for the South River Resource area) Area, acres in stand being surveyed, MS (ignore), OI Key (five digit unit number on Project Area Map), Township, Range, and Section.

Screen 2 of 9 Unit Examiners: Examiners name and date of survey

Screen 3 of 9 Site Tree Tables: Site Tree Table enter "DFHS" and Site Potential Tree leave blank.

Screen 4 of 9 Seedling Info: Seedling Layer enter "3" and Seedling Total Age enter "5"

Screen 5 of 9 User Defined Data: Leave blank.

Screen 6 of 9 Unit Reports: Check boxes to report Stand Condition Summary, Stand Table By Species, Site Tree Summary, Plot Summary, Snag Summary, Organon Export, M\*S Stand Attributes, M\*S Layer Statistics, and M\*S Snags. The other reports are not check marked.

Screen 7 thru 9 of 9 are for Unit Notes and User Defined: These are normally left blank, but can be used if necessary.

5.13.5.2 Stratum Setup Screens

This shall be done once for the contract. The only field that changes is the Area in acres of the stand being examined.

Screen 1 of 6 Stratum Setup: Strata ID enter "A", Area enter the acres for the stand being examined as shown on the Project Area Map, Select "VP", Prism enter "20", VP Sampling Method enter "Ratio", Age Ratio enter "10", Ht. Ratio enter "30".

Screen 2 of 6 Stratum Plot Sizes: Seedling/ Regen Plot Size enter "11.8 ft.", Min.Merch.DBH(in.) enter "7"

Screen 3 of 6 Sapling/Regen Plot Setup: Plot Size enter “11.8”, toggle “Feet”, Max DBH enter “6.9”.

Screen 4 of 6 Stratum Snag Sizes: Min. Snag DBH enter “7”, Min. Snag length/HT enter “15”.

Screens 5/6 and 6/6 User Defined Data and Stratum Comments: Normally left blank but can be used by the examiner if needed.

#### 5.13.5.3 Plot Procedures

From the Unit or Strata Screen on the HDCP press the “Plots” button. Plot 1 will be displayed on the Select a Plot Screen. Select “Edit” to enter data on the 1<sup>st</sup> plot. Select “New” to start a new plot.

Screen 1 of 6 Plot Setup: Plot ID should display the correct plot number, Stratum enter “A”, Shape enter “Full”, or “Half” (if the number of trees on the variable plot is more than 10), Non Forest check if true, Plot Type toggle “Measure”

Screen 2 of 6 Plot No Stocking: Check all that apply. Plots with no trees, seedlings, saplings, and/or are non-forest must be recorded here and are noted in the narrative on the back of the Project Area Map.

Screen 3 of 6 Plot Description: Record Plot Azimuth and Slope. Leave Topog. Blank, Estimate and enter the Over Story, Middle Story, Lower Story, and Total % Cover on the plot.

Screens 4 of 6 Plot Location, 5 of 6 User Defined Data, and 6 of 6 Plot Comments: Leave all fields blank unless plot comments are required such as distance to off plot site tree and/or unique features on plot.

#### 5.13.5.4 Tree Screen

The Tree Screen may be accessed by the “Tree” button block at the bottom of the Plot Screens.

The Tree Number Block displays the “flags” that indicate if the tree will have an Age and/or Height measured and recorded. Press the Tree Number Block to access the Tree Flags Screen. Use the Tree Flags screen to reject or force a Height or Age measurement, and to designate a tree as a site tree. The selected flags shall be displayed in the Tree Number Block. A height shall always be accepted.

- 1) Species – Enter tree species or select species from drop down list by pressing the “Period” Key while cursor is in this block. (You may not choose an unknown hardwood or unknown conifer.)
- 2) Select the appropriate: Cut/Leave (always leave), Standing/Fallen, Live/Dead classifications.

- 3) Record the DBH to the nearest tenth (1/10) of an inch.
- 4) Record the height/length to the nearest foot for height trees and site trees.
- 5) Record 5 yr. and 10 yr. radial growth to the nearest twentieth (1/20) of an inch as required by the assigned tree flags.
- 6) Record Breast Height Age for age trees and site trees.
- 7) % Deduct – Record percent of volume loss if the trees has volume loss due to defect. Record a “0” if no defect present.
- 8) DC/Decay Class - Record appropriate 1-5 Decay Class Code for all Dead Trees – Refer to **Table 1** for descriptions of required input Codes.
- 9) Dmg/Damage Code – If required enter Damage Code. Select code from drop down list by pressing the “Period” Key while curser is in this block to find a code.
- 10) Sev/Damage Severity – If required enter Severity Code. Select code from drop down list by pressing the “Period” Key while curser is in this block to find a code.
- 11) CL/Canopy Layer –Enter Canopy Layer 1-3. Refer to definitions.
- 12) CR/Crown Ratio – If required enter live Crown Ratio %. Refer to definitions.
- 13) Esc key to escape to plot screens or Error Check Screen.

If no there are no trees on the plot, return to the “Plot No Stocking” screen on 2/6. Enter check mark in the box preceding “Trees Not Stocked” field.

Validating Tree Screen - Use this screen to correct any data errors detected by the HDCP. When all errors have been corrected return to the plot screen. The plot screen will also validate upon escape to the unit screen. Refer to Tables, Figures and Descriptions of required input Codes.

#### 5.13.5.5 Regen Screen

The Regen screen may can be accessed by the “Regen” button block at the bottom of the Plot Screens.

If no seedlings or saplings are located on the fixed plot, return to the “Plot No Stocking” screen on 2/6. Enter a check mark in the box preceding “SubMerch / Regen Not Stocked” field.

For Saplings screen: From the drop down menu select “4 Saplings (>=4.5 ft)”

- 1) Species – Enter tree species. Or select species from drop down list by pressing the “Period” Key while curser is in this block. (You may not choose an unknown hardwood or unknown conifer.)
- 2) DBH - Record DBH to nearest 1/10 of an inch.
- 3) Ht./ Height ft. – Record total height to the nearest foot.
- 4) % CR/Crown Ratio % - Record live crown ratio to nearest percent.
- 5) Ldr./Leader Length in. – Leave this field blank.
- 6) Age / B. Ht. Age – Record the estimated BHA to the nearest year for the first sapling tallied on the plot within a Canopy Layer. Only one sapling per layer per plot needs to be recorded. Generally all saplings will be in Canopy Layer 3. If saplings extend into

upper layers then record the BHA of the first sapling tallied within each of the upper layers.

- 7) Lyr – Record the Canopy Layer 1-3 for all saplings. Refer to Illustration 1 for Crown Layer definitions.
- 8) Esc key to return to plot screen.

For the Seedlings - From the drop down menu select “Z Seedlings (<=4.5 ft)”

- 1) Species – Enter tree species Or select species from drop down list by pressing the “Period” Key while curser is in this block. (You may not choose an unknown hardwood or unknown conifer.)
- 2) Stem count – Enter the number of seedlings by species.
- 3) Ht./Height ft. – Record total height to the nearest foot.
- 4) % CR/Crown Ratio % - Record live crown ratio to nearest percent.
- 5) Ldr./Leader Length in. – Leave this field blank.
- 6) Esc key to return to plot screen.

## 6.0 QUALITY CONTROL AND GOVERNMENT REMEDIES

### 6.1 Surveillance Plan

6.1.1 The COR or Project Inspectors (PI) will perform on-the-ground inspection to determine if the specified methods of work have been used. Failure to use specified methods shall require prompt corrective action. Repeated failure to follow the specified methods of work may be cause for termination of the Contractor's right to proceed.

6.1.2 The Government shall inspect and accept or reject on a per unit basis. This includes on-the-ground unit layout, unit information, strata information, plot data, maps, and stand narrative. A sample percentage of plots, determined by the COR, will be inspected on a per unit basis. Unit acceptance or nonacceptance is based on the quality of the conformance to specifications and the data collected on these inspected plots.

6.2 The grading system is explained in detail in following paragraph. Payments to the Contractor will be on a "per plot" basis for each satisfactory unit.

6.3 The Government reserves the right to designate the sequence in which the units are to be inspected. Each project unit will first be inspected on a broad basis and classified as either satisfactory or unsatisfactory according to the listed criteria below. A field inspection of the data will be administered after a unit is considered satisfactory.

- A. The specified number of plots shown on the Project Area Maps must be completed on each unit. Each plot consists of the variable radius plot and fixed radius plot, each sample plot type must be completed on each plot center.
- B. Maps, plot design, and narrative must be in complete compliance with the specifications.
- C. Stratum, Unit screens, and the HDCP configuration is done correctly.

6.4 Plots to be inspected will be selected at random and in sufficient quantity to ensure a

minimum sample of 5% of the total plots required for this contract. At each plot inspected, the Project Inspector will examine the area for each of the items required. Each item of information is accepted or rejected as it conforms to specified methods of work. A point system will be used to determine work quality.

- 6.5 Points will be assigned to each data item (refer to 8.5 for an example of an inspection sheet). When compared to the Government measurements, if the Contractor's recorded measurements are within the listed accuracy standards, the points will be awarded. If the recorded value is not within the accuracy standards, either a reduction will be made or no points may be awarded.
- 6.6 Plots may have varying potential point totals depending on the number of trees per plot and the number of items to be measured per plot.

The total number of on-the-ground inspection plots will determine the potential unit points and accumulated satisfactory point totals. The unit work quality is determined by dividing the number of satisfactory points by the total number of potential points from the inspected plots.

#### 6.7 Satisfactory Work

A minimum work quality standard of 80% is required for each unit. WORK QUALITY OF 90% OR BETTER SHALL BE PAID AS 100%. Work quality of 80% to 89% will be paid at the comparable percentage. For example, if work quality is at 83% in a unit, contractor will be paid 83% of full pay for that unit.

#### 6.8 Unsatisfactory Work Quality

- 6.8.1 If the plot quality percentage falls below 80% for a unit, or if one (1) or more units are rejected on the basis of improper survey design or insufficient plots, the COR will immediately notify the Contractor in writing to improve the quality of his work. Rework will be required for units earning less than 80% quality.

- 6.8.2 If the unit is found to not meet the specifications for distance between survey lines and plots, correctly numbered/ordered trees, and plot center properly identified then the unit will be un-acceptable. No further inspection will occur until corrected.

#### 6.8.3 Re-inspection

If the quality of future plots is not raised to or above the minimum acceptable level within two (2) consecutive work days after written notification, the Contracting Officer may issue a suspend order. There will be only one (1) reinspection per unit. If additional reinspections are required, the Contractor will be charged for the Government's cost of reinspection. Rework of units in the 80% to 89% range may be performed at the discretion of the COR.

#### 6.9 Example of Inspection sheet

	Tolerance	Acceptable	Unacceptable
Correct number of plots completed	-		
Maps and narrative complete	-		
Status, plot setup & HDCP config. correct			
Distance between plot & survey lines	+/- 10%		
Plot center, flagging, & trees numbered	-		

Any of these items can result the unit unacceptable

	Data Item	Points	Tolerance	Potential	Earned
Plot Screen	Aspect	1/plot	+/- 20 degrees azimuth		
	Plot % Slope	1/plot	+/- 15 %		
	% Canopy Cover	2/plot	+/- 15 %		
Variable Plot	Species	2/tree	-		
	Cut/Leave (all leave)	1/plot	-	1	
	Standing/Fallen	1/tree	-		
	Live/Dead	1/tree	-		
	DBH	3/tree	+/- 1/2 in.		
	Tree Height (& Ht. to broken top)	4/tree	+/- 10%		
	Radial Growth (1/r.g.)	2/tree	+/- 2/20 in.		
	Breast Height Age	2/tree	+/- 5 yrs		
	Crown Layer	1/tree	-		
	Crown Ratio	1/tree	+/- 10%		
	Decay Class (snags)	1/tree	+/- 1 class		
	% Defect	1/tree	+/- 20%		
	Damage & Severity	1/tree	-		
	Site Tree (proper selection)	3/site tree	-		
Old-growth tree flag	1/tree	-			
Saplings	Species	1/tree	-		
	DBH	1/tree	+/- 1/2 in.		
	Height	1/tree	+/- 20%		
	% Crown Ratio	1/tree	+/- 10%		
	Canopy Layer	1/tree	-		
	Age (min. 1/layer)	1/tree	+/- 5 yrs		
Seedlings	Stem Count/Species	1/group	-		
	Average Height	1/group	+/- 20%		
Total Points					

## 6.10 Payment

The following procedure will be used to determine satisfactory work quality and payment on a per unit basis.

- 6.10.1 The unit work quality percentage is determined by dividing the number of satisfactory points by the total number of possible points on the inspected plots.
- 6.10.2 The unit price times the required number of plots in the unit equals the potential payment.
- 6.10.3 The potential payment times the satisfactory work quality percentage equals the unit payment.

Example of Payment Calculation:

Unit XYZ has 100 acres.  
Contractor met required design, mapping, and narrative standards.  
Contractor installed required plots: 15 plots.

The project inspector inspected 2 plots and calculated 150 potential tally points and 18 contractor error points.

$18 \text{ error points} \div 150 \text{ potential tally points} \times 100 = 12\%$   
 $100 - 12\% = 88\%$   
 $88\% = 88\% \text{ work quality percentage}$

Since the work quality percentage was between 80-90%, the unit shall be paid at 88% of the unit price. (If the work quality was 90% or better, the unit would be paid at full price.)

In this example the contractor bid \$40.00 per plot.  
 $15 \text{ plots} \times \$40.00 \text{ per plot} = \$600.00 \text{ gross payment}$   
 $\$600.00 \times 88\% = \$528.00 \text{ net payment for Unit XYZ}$

## 7.0 COMMENCEMENT OF WORK ON INDIVIDUAL TASK ORDERS

The Contractor shall begin work within 5 calendar days from the effective date of the Task Order. The Contractor shall continue performance of the work under each task order without delay or interruption except by causes beyond his/her control as defined by contract clauses, or by the receipt of a "Suspend Work order" issued by the Government. Failure to do so may be cause for action under the "Default" clause. The Contractor shall complete all work required within the time specified in each task order.

## 8.0 TASK ORDER MODIFICATIONS

Changes to task order content shall be made by a modification to the task order. Any required change to a previously issued task order will be issued in writing by the Contracting Officer.

## 9.0 TASK ORDER PRIORITIES

In the event of issuance of a "priority" task order as determined by the Government, the Government may modify delivery dates on any or all other task orders.

## 10.0 TASK ORDER MANAGER

A Task Order (TO) Manager (TOM) may be assigned to administer the TO as a technical representative for which the TO was issued. If a TOM is designated, the TOM will be responsible for working with the Project Inspector (PI) to ensure Contractor's compliance regarding technical requirements, work schedule and deliverables. The TOM will report directly to the COR or to the CO when determined necessary. The TOM and COR may be the same individual.

## 11.0 TASK ORDER OMBUDSMAN

1510-52.216-70 - The task order contract ombudsman for this contract is: Stephanie Coleman, Bureau of Land Management, Oregon State Office (952), 333 S. W. 1<sup>st</sup> Ave., P. O. Box 2965, Portland, Oregon 97208, telephone number (503) 808-6216. facsimile number (503) 808-6312, and e-mail address stephanicoleman@or.blm.gov. In accordance with FAR 16.505(b)(4), the ombudsman shall review complaints from contractors regarding contracts awarded under Solicitation Number L09PS00100 Stand Exams, Roseburg District. Failure of an agency to follow ombudsman advice may result in termination of the agency's authority to place orders.

## 12.0 CONTRACTING OFFICER'S REPRESENTATIVE DEFINITION

The "Contracting Officer's Representative (COR)" is the on-the-ground administrator for the Contracting Officer.

## 13.0 PROJECT INSPECTOR DEFINITION

"Project Inspector" means the person designated by the COR to perform, as needed, on-the-job Government inspection of work accomplished by the Contractor.

## 14.0 RESPONSIBILITIES OF THE CONTRACTING OFFICER'S REPRESENTATIVE AND PROJECT INSPECTOR

14.1 The COR's authorities and responsibilities are defined in the COR's Designation Letter. The COR is authorized to clarify technical requirements, and to review and approve work which is clearly within the scope of work. The COR is NOT authorized to issue changes pursuant to the changes clause or to in any other way modify the scope of work.

14.2 The Project Inspector is responsible for checking the Contractor's compliance with the technical specifications, drawings, work schedule, and labor provisions at the site of the work.

## 15.0 NOTICE TO PROCEED

15.1 After award of contract, the COR will issue to the Contractor a written notice to proceed. Issuance of the notice may be delayed for a reasonable time, at the discretion of the Government, if adverse soil, vegetative, or climatological conditions exist.

15.2 The Contractor shall perform no preliminary work prior to receipt of the written notice to proceed. Contract time starts on the effective date of the notice to proceed.



## 16.0 WORK HOURS

Work hours and days under this contract shall be mutually agreed upon.

## 17.0 PROSECUTION OF THE WORK

- 17.1 The capacity of the Contractor's plant, method of operation, and forces employed shall, at all times during the continuance of the contract, be subject to the approval of the Contracting Officer and shall be such as to assure the completion of the work within the specified period of time. To the extent stated in the specifications, the Contracting Officer shall have the right to select the sequence in which the individual work will be completed.
- 17.2 If work is seriously or chronically deficient, the Contractor's right to proceed may be suspended until the performance problems can be resolved and work may resume. The contract time will continue to run during any such period of suspension.
- 17.3 The Contracting Officer may, in writing, require the Contractor to remove from the work any employee found to be working in an unsafe manner.

## 18.0 ENVIRONMENTAL INTERRUPTION OF WORK

- 18.1 Environmental - The Contracting Officer, by issuance of a suspend work order, may direct the Contractor to shut down any work that may be subject to damage due to weather conditions or fire danger. The Contractor will be given a resume work order which will document the date the work suspension ends. An allowance has been included in the contract time for short term environmental delays up to one day at a time. The count of contract time will therefore continue during work interruptions of one day or less, but the count of contract time will stop during work interruptions in excess of one day at a time. All periods of interruptions directed by the Government will be documented. The Contractor will not be entitled to additional monetary compensation for such suspensions regardless of duration.
- 18.2 Endangered Species - The Government may direct the Contractor to discontinue all operations in the event that listed or proposed threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, or Federal candidate (Category 1 and 2), sensitive or state listed species, identified under BLM Manual 6840, are discovered to be present in or adjacent to the project area. Actions taken under this paragraph shall be subject to the Suspension of Work clause in Section I, FAR 52.242-14.

## 19.0 PRESERVATION OF HISTORICAL AND ARCHEOLOGICAL RESOURCES

If, in connection with operations under this contract, the Contractor, subcontractors, or the employees of any of them, discovers, encounters or becomes aware of any objects or sites of cultural value on the project area, such as historical or prehistorical ruins, graves or grave markers, fossils, or artifacts, the Contractor shall immediately suspend all operations in the vicinity of the cultural value and shall notify the COR in writing of the findings. No objects of cultural resource value may be removed. Operations may resume at the discovery site upon receipt of written instructions. Actions taken under this paragraph shall be subject to the

Suspension of Work clause in Section I, FAR 52.242-14.

## 20.0 SUBCONTRACTS

If the contractor desires to subcontract any work under the contract, it shall obtain the Contracting Officer's written consent. The request to subcontract shall contain the following information:

- a. Name of subcontractor
- b. Description and amount of supplies or services to be subcontracted. The Contractor shall insert in any subcontracts all applicable clauses contained in the contract.

## 21.0 RESTORATION OF RESOURCES

21.1 Cleanup - The Contractor is responsible for cleaning up all camp and worksites before leaving the area. Final payment may be withheld until the Contractor has complied with this requirement.

21.2 Access Roads - Public or private access roads damaged by the Contractor shall be restored, at his expense, to the same condition they were in at the commencement of work.

## 22.0 FIRE DANGER SEASON

If the COR allows the Contractor to continue work during periods of Closed Fire Season, the Contractor shall comply with all applicable State laws relating to fire prevention and with all special conditions of work as directed by the COR.

## ATTACHMENT NO. 2

### BLM FIRE PROTECTION REQUIREMENTS

This outline covers the fire protection requirements of a contractor or private party who performs service or construction contracts on BLM land. In western Oregon, the BLM allows Oregon Forest Law (ORS) and Oregon Administrative Rules (OAR) to apply to these operations on BLM lands rather than develop similar rules applicable only to BLM lands.

#### 1. CLOSED FIRE SEASON

The closed fire season means that fire season has been declared. ORS 477.505 gives the State Forester the authority to establish the fire season. The authority has been delegated to the District Foresters around the state who issue public notices through the newspapers and radio when fire season will be closed for their individual districts. Closed fire season depends upon the drying of forest fuels, rainfall, and time of year. During the closed fire season, the following requirements must be met:

- a. Fire tools must be on site;
- b. Fire extinguisher must be in all vehicles;
- c. Chainsaws must have a .023-inch mesh screen installed in the exhaust;
- d. Only unmodified saws are to be used in the forest;
- e. Approved spark arresters must be on all internal combustion engines;
- f. Watchman service must be provided for 3 hrs after shutdown of power equipment for the day;
- g. No smoking is permitted while working or traveling through any operations area in the forest;
- h. No use of explosives is permitted unless approved by the State Forester's representative;
- i. Permits to burn are required unless waived by a representative of the State Forester.

Changes or modifications to the above requirements are possible depending upon changes in State of Oregon law and requirements of the State Districts and Protective Associations.

#### 2. FIRE PRECAUTION LEVELS

There are 4 fire precaution levels that begin with level 1 at the start of the closed fire season and can go through level 4 if conditions warrant. The fire precaution levels restrict certain forest operations as the fire danger increases. It is the responsibility of the individual operating on forest land to know the precaution level for the day and take the correct fire precautions. There are no precaution levels prior to the closed fire season. Each fire precaution level requires adherence to the restrictions applicable to all lower levels in addition to the limits placed by that level.

**Level 1** is the lowest level of fire danger usually occurring early in the season and perhaps again after significant rainfall during the season. All requirements listed above apply. Waivers may be issued by the State Districts or Protective Associations and these MUST be approved by the BLM. Waivers will only be considered if the conditions on the work site are not as severe as predicted. The requirements for fire tools on site, screens installed in saws, and fire extinguishers with saws will not be waived.

**Level 2** is the partial hootowl where saws can operate from first light in the morning until 1:00 p.m. in the afternoon. From 1:00 p.m. until the end of the day saws are to be shut down. Waivers for operating beyond the 1:00 p.m. shutdown will be evaluated on a site-by-site basis.

**Level 3** is the partial shutdown of all forest industrial operations and shuts down contractor operations with few exceptions. Waivers may be issued on a site-by-site basis.

**Level 4** is the general shutdown of all contractor operations. Waivers will not be issued. Landowners are permitted entry into their lands.

**ORS. 477.066** requires that an operator on forest land take immediate action to control and extinguish a fire on forest land. The contractor shall take this action and notify the BLM and the nearest State of Oregon District office immediately.

**OAR. 629-43-030** requires watchmen to be:

- a. Physically capable and experienced in operating any firefighting equipment on site.
- b. On duty for 3 hours after the shutdown of the last power-driven equipment for the day.
- c. Furnished adequate facilities for transportation and communications in order to summon assistance if needed.
- d. Patrolling and visually inspecting all sites where work was done during the day.

**3. FIRE TOOLS REQUIRED DURING CLOSED FIRE SEASON**

The operator/contractor shall furnish fire tools to all personnel on site using the following combinations.

				NUMBER OF PERSONNEL										
				-4						0	1	2	3	4
KINDS OF TOOLS				NUMBER OF TOOLS										
Pulaskis														
Shovels														
Hazel Hoes														

In addition to the above handtools, the operator/contractor must provide a backpack pump can filled with water located with the tool box in a readily available area.

All shovels are to be size 0 or larger, long handled. All tools shall be sharp and ready for service. Fire extinguishers as follows:

- a. For chainsaws - 8 oz. capacity by weight.
- b. For vehicles - UL rating of at least 4 BC.