New Hampshire Fish and Game Department

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Headquarters: (603) 271-3421
Website: www.WildNH.com

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Scott R. Mason
Executive Director

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March 29, 2023

His Excellency, Governor Christopher T. Sununu
And the Honorable Council
State House
Concord, New Hampshire 03301

REQUESTED ACTION

Authorize the New Hampshire Fish and Game Department (NHFG) to enter into a contract with LandVest, Inc., (Vendor Code #427560), Concord, NH, in the amount of $208,915.00 to collect and prepare a comprehensive forest and wildlife habitat inventory that will guide the stewardship and management of the 25,000-acre Connecticut Lakes Natural Area WMA in Pittsburg and Clarksville, NH. The contract is to be effective upon Governor and Council approval through June 30, 2024. Funding is 75% federal and 25% Wildlife Habitat Funds.

Funds are available in the following account for Fiscal Years 2023 and 2024 with the authority to adjust encumbrances between fiscal years within the price limitation through the Budget Office, if needed and justified.

		FY23	FY24
03 75 75 751520-21550000	Wildlife Program – Wildlife Habitat Conservation		
020-07500-21550000-304- 500841	Research and Management	$84,457.50	$124,457.50

EXPLANATION

The NH Fish and Game Department has owned and managed the 25,000-acre Connecticut Lakes Natural Area WMA since 2002. The property was purchased with a conservation easement held by The Nature Conservancy. Under that easement, the Department is required to ensure management is maintaining or enhancing the purposes outlined in the easement. The easement also requires a Stewardship Plan which provides the goals and objectives of long-term ownership and management. Finally, the Department is responsible for managing habitats following the state lands management process. Updated forest and wildlife habitat inventory data is needed to meet all of these outlined requirements. This proposal will cover the collection, summary and reporting of new inventory data for the entire property.

A request for proposals (RFP) was solicited through the NH Department of Administrative Services website and direct emails to prospective vendors. The RFP was open for 29 days. Inquiries from three vendors were received and only one of which, LandVest Inc., submitted a proposal. LandVest Inc. has the skills and qualifications necessary to complete this contract (see attached ranking form).

Respectfully submitted,

Scott R. Mason
Executive Director

Kathy Ann LaBonte
Chief, Business Division

RFP Ranking Form for CLNA Inventory 2023

		Scores	
			Total
1. Company Profile and Qualifications		(0-10)	
	LandVest		9
2. Biography of Key Personnel		(0-10)	
	LandVest		9
3. References		(1-10)	
	LandVest		9
4. Project Plan			
	1. aerial photography and stand delineations	(0-20)	
	LandVest		18
	2. Inventory design and sampling	(0-20)	
	LandVest		16
	3. 2005 data transformations and database management	(0-20)	
	LandVest		17
	4. carbon point data collection	(0-20)	
	LandVest		17
5. Cost or bid Value		(0-10)	
	LandVest		6
	TOTAL	120	101

Notice: This agreement and all of its attachments shall become public upon submission to Governor and Executive Council for approval. Any information that is private, confidential or proprietary must be clearly identified to the agency and agreed to in writing prior to signing the contract.

AGREEMENT

The State of New Hampshire and the Contractor hereby mutually agree as follows:

GENERAL PROVISIONS

1. IDENTIFICATION.

1.1 State Agency Name NH Fish and Game Department		1.2 State Agency Address 11 Hazen Drive Concord NH 03301	
1.3 Contractor Name LandVest, Inc.		1.4 Contractor Address One Capital Street, Suite 300, Concord NH 03301	
1.5 Contractor Phone Number 603-228-2020	1.6 Account Unit and Class 020-07500-21550000-3 04- 500841	1.7 Completion Date June 30, 2024	1.8 Price Limitation $208,915.00
1.9 Contracting Officer for State Agency Scott R. Mason, Executive Director		1.10 State Agency Telephone Number 603-271-3511	
1.11 Contractor Signature Date: 3/3/23		1.12 Name and Title of Contractor Signatory Steven G. Hawkes, Vice President LandVest, Inc.	
1.13 State Agency Signature Date: 4/10/23		1.14 Name and Title of State Agency Signatory Scott R. Mason, Executive Director NH Fish and Game Department	
1.15 Approval by the N.H. Department of Administration, Division of Personnel *(if applicable)* By: Director, On:			
1.16 Approval by the Attorney General (Form, Substance and Execution) *(if applicable)* By: On: 5/4/2023			
1.17 Approval by the Governor and Executive Council *(if applicable)* G&C Item number: G&C Meeting Date:			

Contractor Initials SGH
Date 3/3/23

2. SERVICES TO BE PERFORMED. The State of New Hampshire, acting through the agency identified in block 1.1 ("State"), engages contractor identified in block 1.3 ("Contractor") to perform, and the Contractor shall perform, the work or sale of goods, or both, identified and more particularly described in the attached EXHIBIT B which is incorporated herein by reference ("Services").

3. EFFECTIVE DATE/COMPLETION OF SERVICES.

3.1 Notwithstanding any provision of this Agreement to the contrary, and subject to the approval of the Governor and Executive Council of the State of New Hampshire, if applicable, this Agreement, and all obligations of the parties hereunder, shall become effective on the date the Governor and Executive Council approve this Agreement, unless no such approval is required, in which case the Agreement shall become effective on the date the Agreement is signed by the State Agency as shown in block 1.13 ("Effective Date").

3.2 If the Contractor commences the Services prior to the Effective Date, all Services performed by the Contractor prior to the Effective Date shall be performed at the sole risk of the Contractor, and in the event that this Agreement does not become effective, the State shall have no liability to the Contractor, including without limitation, any obligation to pay the Contractor for any costs incurred or Services performed.

3.3 Contractor must complete all Services by the Completion Date specified in block 1.7.

4. CONDITIONAL NATURE OF AGREEMENT.

Notwithstanding any provision of this Agreement to the contrary, all obligations of the State hereunder, including, without limitation, the continuance of payments hereunder, are contingent upon the availability and continued appropriation of funds. In no event shall the State be liable for any payments hereunder in excess of such available appropriated funds. In the event of a reduction or termination of appropriated funds by any state or federal legislative or executive action that reduces, eliminates or otherwise modifies the appropriation or availability of funding for this Agreement and the Scope for Services provided in EXHIBIT B, in whole or in part, the State shall have the right to withhold payment until such funds become available, if ever, and shall have the right to reduce or terminate the Services under this Agreement immediately upon giving the Contractor notice of such reduction or termination. The State shall not be required to transfer funds from any other account or source to the Account identified in block 1.6 in the event funds in that Account are reduced or unavailable.

5. CONTRACT PRICE/PRICE LIMITATION/ PAYMENT.

5.1 The contract price, method of payment, and terms of payment are identified and more particularly described in EXHIBIT C which is incorporated herein by reference.

5.2 Notwithstanding any provision in this Agreement to the contrary, and notwithstanding unexpected circumstances, in no event shall the total of all payments authorized, or actually made hereunder, exceed the Price Limitation set forth in block 1.8. The payment by the State of the contract price shall be the only and the complete reimbursement to the Contractor for all expenses, of whatever nature incurred by the Contractor in the performance hereof, and shall be the only and the complete compensation to the Contractor for the Services.

5.3 The State reserves the right to offset from any amounts otherwise payable to the Contractor under this Agreement those liquidated amounts required or permitted by N.H. RSA 80:7 through RSA 80:7-c or any other provision of law.

5.4 The State's liability under this Agreement shall be limited to monetary damages not to exceed the total fees paid. The Contractor agrees that it has an adequate remedy at law for any breach of this Agreement by the State and hereby waives any right to specific performance or other equitable remedies against the State.

6. COMPLIANCE BY CONTRACTOR WITH LAWS AND REGULATIONS/EQUAL EMPLOYMENT OPPORTUNITY.

6.1 In connection with the performance of the Services, the Contractor shall comply with all applicable statutes, laws, regulations, and orders of federal, state, county or municipal authorities which impose any obligation or duty upon the Contractor, including, but not limited to, civil rights and equal employment opportunity laws and the Governor's order on Respect and Civility in the Workplace, Executive order 2020-01. In addition, if this Agreement is funded in any part by monies of the United States, the Contractor shall comply with all federal executive orders, rules, regulations and statutes, and with any rules, regulations and guidelines as the State or the United States issue to implement these regulations. The Contractor shall also comply with all applicable intellectual property laws.

6.2 During the term of this Agreement, the Contractor shall not discriminate against employees or applicants for employment because of age, sex, sexual orientation, race, color, marital status, physical or mental disability, religious creed, national origin, gender identity, or gender expression, and will take affirmative action to prevent such discrimination, unless exempt by state or federal law. The Contractor shall ensure any subcontractors comply with these nondiscrimination requirements.

6.3 No payments or transfers of value by Contractor or its representatives in connection with this Agreement have or shall be made which have the purpose or effect of public or commercial bribery, or acceptance of or acquiescence in extortion, kickbacks, or other unlawful or improper means of obtaining business.

6.4. The Contractor agrees to permit the State or United States access to any of the Contractor's books, records and accounts for the purpose of ascertaining compliance with this Agreement and all rules, regulations and orders pertaining to the covenants, terms and conditions of this Agreement.

7. PERSONNEL.

7.1 The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.

7.2 The Contracting Officer specified in block 1.9, or any successor, shall be the State's point of contact pertaining to this Agreement.

Contractor Initials SGH
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8. EVENT OF DEFAULT/REMEDIES.

8.1 Any one or more of the following acts or omissions of the Contractor shall constitute an event of default hereunder ("Event of Default"):

8.1.1 failure to perform the Services satisfactorily or on schedule;

8.1.2 failure to submit any report required hereunder; and/or

8.1.3 failure to perform any other covenant, term or condition of this Agreement.

8.2 Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

8.2.1 give the Contractor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) calendar days from the date of the notice; and if the Event of Default is not timely cured, terminate this Agreement, effective two (2) calendar days after giving the Contractor notice of termination;

8.2.2 give the Contractor a written notice specifying the Event of Default and suspending all payments to be made under this Agreement and ordering that the portion of the contract price which would otherwise accrue to the Contractor during the period from the date of such notice until such time as the State determines that the Contractor has cured the Event of Default shall never be paid to the Contractor;

8.2.3 give the Contractor a written notice specifying the Event of Default and set off against any other obligations the State may owe to the Contractor any damages the State suffers by reason of any Event of Default; and/or

8.2.4 give the Contractor a written notice specifying the Event of Default, treat the Agreement as breached, terminate the Agreement and pursue any of its remedies at law or in equity, or both.

9. TERMINATION.

9.1 Notwithstanding paragraph 8, the State may, at its sole discretion, terminate the Agreement for any reason, in whole or in part, by thirty (30) calendar days written notice to the Contractor that the State is exercising its option to terminate the Agreement.

9.2 In the event of an early termination of this Agreement for any reason other than the completion of the Services, the Contractor shall, at the State's discretion, deliver to the Contracting Officer, not later than fifteen (15) calendar days after the date of termination, a report ("Termination Report") describing in detail all Services performed, and the contract price earned, to and including the date of termination. In addition, at the State's discretion, the Contractor shall, within fifteen (15) calendar days of notice of early termination, develop and submit to the State a transition plan for Services under the Agreement.

10. PROPERTY OWNERSHIP/DISCLOSURE.

10.1 As used in this Agreement, the word "Property" shall mean all data, information and things developed or obtained during the performance of, or acquired or developed by reason of, this Agreement, including, but not limited to, all studies, reports, files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, computer programs, computer printouts, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.

10.2 All data and any Property which has been received from the State, or purchased with funds provided for that purpose under this Agreement, shall be the property of the State, and shall be returned to the State upon demand or upon termination of this Agreement for any reason.

10.3 Disclosure of data, information and other records shall be governed by N.H. RSA chapter 91-A and/or other applicable law. Disclosure requires prior written approval of the State.

11. CONTRACTOR'S RELATION TO THE STATE. In the performance of this Agreement the Contractor is in all respects an independent contractor, and is neither an agent nor an employee of the State. Neither the Contractor nor any of its officers, employees, agents or members shall have authority to bind the State or receive any benefits, workers' compensation or other emoluments provided by the State to its employees.

12. ASSIGNMENT/DELEGATION/SUBCONTRACTS.

12.1 Contractor shall provide the State written notice at least fifteen (15) calendar days before any proposed assignment, delegation, or other transfer of any interest in this Agreement. No such assignment, delegation, or other transfer shall be effective without the written consent of the State.

12.2 For purposes of paragraph 12, a Change of Control shall constitute assignment. "Change of Control" means (a) merger, consolidation, or a transaction or series of related transactions in which a third party, together with its affiliates, becomes the direct or indirect owner of fifty percent (50%) or more of the voting shares or similar equity interests, or combined voting power of the Contractor, or (b) the sale of all or substantially all of the assets of the Contractor.

12.3 None of the Services shall be subcontracted by the Contractor without prior written notice and consent of the State.

12.4 The State is entitled to copies of all subcontracts and assignment agreements and shall not be bound by any provisions contained in a subcontract or an assignment agreement to which it is not a party.

13. INDEMNIFICATION. The Contractor shall indemnify, defend, and hold harmless the State, its officers, and employees from and against all actions, claims, damages, demands, judgments, fines, liabilities, losses, and other expenses, including, without limitation, reasonable attorneys' fees, arising out of or relating to this Agreement directly or indirectly arising from death, personal injury, property damage, intellectual property infringement, or other claims asserted against the State, its officers, or employees caused by the acts or omissions of negligence, reckless or willful misconduct, or fraud by the Contractor, its employees, agents, or subcontractors. The State shall not be liable for any costs incurred by the Contractor arising under this paragraph 13. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the State's sovereign immunity, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

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14. INSURANCE.

14.1 The Contractor shall, at its sole expense, obtain and continuously maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following insurance:

14.1.1 commercial general liability insurance against all claims of bodily injury, death or property damage, in amounts of not less than $1,000,000 per occurrence and $2,000,000 aggregate or excess; and

14.1.2 special cause of loss coverage form covering all Property subject to subparagraph 10.2 herein, in an amount not less than 80% of the whole replacement value of the Property.

14.2 The policies described in subparagraph 14.1 herein shall be on policy forms and endorsements approved for use in the State of New Hampshire by the N.H. Department of Insurance, and issued by insurers licensed in the State of New Hampshire.

14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or any successor, a certificate(s) of insurance for all insurance required under this Agreement. At the request of the Contracting Officer, or any successor, the Contractor shall provide certificate(s) of insurance for all renewal(s) of insurance required under this Agreement. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference.

15. WORKERS' COMPENSATION.

15.1 By signing this agreement, the Contractor agrees, certifies and warrants that the Contractor is in compliance with or exempt from, the requirements of N.H. RSA chapter 281-A *("Workers' Compensation")*.

15.2 To the extent the Contractor is subject to the requirements of N.H. RSA chapter 281-A, Contractor shall maintain, and require any subcontractor or assignee to secure and maintain, payment of Workers' Compensation in connection with activities which the person proposes to undertake pursuant to this Agreement. The Contractor shall furnish the Contracting Officer identified in block 1.9, or any successor, proof of Workers' Compensation in the manner described in N.H. RSA chapter 281-A and any applicable renewal(s) thereof, which shall be attached and are incorporated herein by reference. The State shall not be responsible for payment of any Workers' Compensation premiums or for any other claim or benefit for Contractor, or any subcontractor or employee of Contractor, which might arise under applicable State of New Hampshire Workers' Compensation laws in connection with the performance of the Services under this Agreement.

16. WAIVER OF BREACH. A State's failure to enforce its rights with respect to any single or continuing breach of this Agreement shall not act as a waiver of the right of the State to later enforce any such rights or to enforce any other or any subsequent breach.

17. NOTICE. Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses given in blocks 1.2 and 1.4, herein.

18. AMENDMENT. This Agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto and only after approval of such amendment, waiver or discharge by the Governor and Executive Council of the State of New Hampshire unless no such approval is required under the circumstances pursuant to State law, rule or policy.

19. CHOICE OF LAW AND FORUM.

19.1 This Agreement shall be governed, interpreted and construed in accordance with the laws of the State of New Hampshire except where the Federal supremacy clause requires otherwise. The wording used in this Agreement is the wording chosen by the parties to express their mutual intent, and no rule of construction shall be applied against or in favor of any party.

19.2 Any actions arising out of this Agreement, including the breach or alleged breach thereof, may not be submitted to binding arbitration, but must, instead, be brought and maintained in the Merrimack County Superior Court of New Hampshire which shall have exclusive jurisdiction thereof.

20. CONFLICTING TERMS. In the event of a conflict between the terms of this P-37 form (as modified in EXHIBIT A) and any other portion of this Agreement including any attachments thereto, the terms of the P-37 (as modified in EXHIBIT A) shall control.

21. THIRD PARTIES. This Agreement is being entered into for the sole benefit of the parties hereto, and nothing herein, express or implied, is intended to or will confer any legal or equitable right, benefit, or remedy of any nature upon any other person.

22. HEADINGS. The headings throughout the Agreement are for reference purposes only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

23. SPECIAL PROVISIONS. Additional or modifying provisions set forth in the attached EXHIBIT A are incorporated herein by reference.

24. FURTHER ASSURANCES. The Contractor, along with its agents and affiliates, shall, at its own cost and expense, execute any additional documents and take such further actions as may be reasonably required to carry out the provisions of this Agreement and give effect to the transactions contemplated hereby.

25. SEVERABILITY. In the event any of the provisions of this Agreement are held by a court of competent jurisdiction to be contrary to any state or federal law, the remaining provisions of this Agreement will remain in full force and effect.

26. ENTIRE AGREEMENT. This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire agreement and understanding between the parties, and supersedes all prior agreements and understandings with respect to the subject matter hereof.

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EXHIBIT A
SPECIAL PROVISIONS

This contract is funded in part by a grant from the Department of the Interior, U. S. Fish and Wildlife Service, Wildlife and Sport Fish Restoration Program. LandVest, Inc. and all sub-contractors must comply with federal regulation and the following provisions, as applicable:

A. EQUAL EMPLOYMENT OPPORTUNITY

This federally assisted construction contract is subject to Executive Order 11246, as amended by Executive Order 11375 and Implementing Regulations at 41 CFR Part 60.

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto,

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and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

B. WAGE RATES / DAVIS-BACON ACT

When required by Federal program legislation, all prime construction contracts in excess of $2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act, as amended (40 U.S.C. 3141-3144, and 3146-3148) and supplemented by Department of Labor Regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination.

Davis-Bacon wage rates and requirements do not apply to this project.

C. GOVERNMENT-WIDE DEBARMENT AND SUSPENSION

This contract is subject to Executive Orders 12549 and 12689 "Debarment and Suspension." The contractor must comply with the applicable provisions of the OMB guidance in Sub-part C of 2 CFR Part 180, as adopted by the Department of Interior at 2 CFR Part 1400 Non-procurement Debarment and Suspension. A contract award (see 2 CFR 180.220) cannot be made to parties listed on the government-wide exclusions in the System for Award Management (SAM), in accordance with 2 CFR 180. Before entering into a covered transaction the contractor must notify the contracting state agency if you know that you or any of your principals are presently excluded or disqualified from participation in federally funded transactions.

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Certification Regarding Debarment and Suspension – Lower Tier Covered Transactions
By entering into a contract the contractor certifies, per Subpart C of 2 CFR Part 180, that neither it nor its principles (officers, directors, owners, or partners) are presently debarred, suspended, proposed for debarment, declared ineligible, voluntarily excluded, or otherwise excluded by any federal department or agency from participating in transactions supported in whole or in part by Federal funds.

D. BYRD ANTI-LOBBYING AMENDMENT (31 U.S.C. 1352)

As required by 31 USC 1352 and implemented by Department of Interior regulation (43 CFR 18 New Restrictions on Lobbying) contractors and any sub-contractors that apply or bid for an award exceeding $100,000 shall file the required certification, and disclosure if applicable. Each tier shall certify to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose, if required, any lobbying with non-Federal funds that takes place in connection with obtaining any Federal contract, grant or other covered award. Such disclosures shall be made with a completed "Disclosure of Lobbying Activities" (Form SF-LLL) and forwarded from tier to tier. The form shall be submitted within 15 days following the end of the calendar quarter in which there occurs any event that requires disclosure.

Certification Regarding Lobbying

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

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E. CLEAN AIR ACT (42 U.S.C. 7401-7671q.) AND THE FEDERAL WATER POLLUTION CONTROL ACT AS AMENDED (33 U.S.C. 1251-1387)

The contractor and sub-contractors must comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387).

F. ENHANCEMENT OF RECIPIENT AND SUBRECIPIENT EMPLOYEE WHISTLEBLOWER PROTECTION

In accordance with 41 U.S.C. 4712, an employee of a non-Federal entity or contractor under a Federal award or subaward may not be discharged, demoted, or otherwise discriminated against as a reprisal for disclosing to a person or body information that the employee reasonably believes is evidence of gross mismanagement of a Federal award, subaward, or a contract under a Federal award or subaward, a gross waste of Federal funds, an abuse of authority relating to a Federal award or subaward or contract under a Federal award or subaward, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to a Federal award, subaward, or contract under a Federal award or subaward.

(a) Contracts over the simplified acquisition threshold, currently $150,000, and all employees working on such contracts are subject to the whistleblower rights and remedies established at 41 USC 4712.

(b) Contractors awarded contracts over the simplified acquisition threshold related to this project shall inform their employees in writing, in the predominant language of the workforce, of the employee whistleblower rights and protections under 41 USC 4712.

(c) The contractor shall insert this clause, including this paragraph (c), in all subawards or subcontracts over the simplified acquisition threshold.

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EXHIBIT B
SCOPE OF SERVICES

The Scope of Services is agreed to be as follows between LandVest, Inc., and the New Hampshire Fish and Game Department (NHFG).

LandVest, Inc., shall:

1) Collect and prepare a forest inventory for the Connecticut Lakes Natural Area WMA that will be used to guide management for the next 20 year period. The CLNA is a 25,000 +/- acres property, identified as Tax Map N F8 and S B6, Lots 26-NC. The Property was surveyed in 2002, recorded at the Coos County Registry of Deeds on 3/29/2002 (Plan #1793).

   The forest inventory will be designed by placing a grid across the entire ownership. Approximately one point per 7.5 acres will be cast on the commercially manageable areas, and one point per 13 acres in non-commercially managed areas. Statistical confidence is based on the amount of variability found within a sample. This forest inventory is designed to a target sample error of 10% at a 95% confidence level based on total volume for tracts where forest management is permitted. For non-managed tracts, the cruise is designed to target a sample error of 10% at a 90% confidence level based on basal area. These targets were used to design the cruises for the respective tracts. Actual cruise statistics will be included in the final cruise report.

   Final number of inventory points may vary based on layout, boundary line encounters, and map/stand adjustments. Prism Basal Area Factor will be variable (Exhibit B-1) and specified at a later time. The Basal Area Factor will be used to determine the trees to measure from point center. All trees, live and standing dead, 4.55 inch or greater at Diameter Breast Height (DBH) determined to be in by the prism will be measured. Living trees 4.55 inches at DBH will be evaluated in 8-foot sections to a 4-inch top for forest products on the commercially managed acres only. Basal Area will be collected in the Nature Preserve.

2) Conduct the forest inventory following **LandVest Cruise Procedures and Specifications** as incorporated herein as **Exhibit B-1**.

3) Objectives for the comprehensive forest inventory include:

   - Collect information to be used to identify and update forest/habitat structure composition goals set in the CLNA Stewardship Plan as required by the conservation easement held by The Nature Conservancy
   - Collect information to guide management under the state lands management process and to be used in the state lands Geographic Information Systems.
   - Collect the information needed for long-term wildlife habitat monitoring as identified by the Monitoring Chapter in the Stewardship Plan.
   - Collected data will be used to update and refine the forest stand type maps created in 2003.
   - Collected information will be summarized and reported in a way that can be displayed, compared and summarized to the data collected in 2005 inventory.

Contractor Initials SGH
Date 3/3/23

4) Inventory Process and Timeline:

Activity	Scope	Target date	FY
Initial stand typing	prep for field work	May 2023	23
Initial data transformation	prep for field work	May 2023	23
Inventory fieldwork A	data collection June	June 2023	23
Inventory fieldwork B	data collection July	July 2023	24
Inventory fieldwork C	data collection August	August 2023	24
Inventory fieldwork D	data collection September	September 2023	24
Inventory wrap up/products	data collection/product develop	by June 2024	24
Final stand typing	finalize new stand typing	by June 2024	24
Final transformations	finalize data transformations	by June 2024	24
Final inventory product	all data and report completion	by June 2024	24

5) Field Data Collection

LandVest, Inc. will make all preparations necessary to begin field data collection on the CLNA in April and May of 2023. Estimated start date of fieldwork is May 30, 2023. Fieldwork will take approximately 6 months to complete. Data review, volume calculations, and report preparation will take an additional 6-12 months to complete.

6) Data Management Quality Assurance and Quality Control

To ensure contract and specification compliance, LandVest, Inc. conducts internal audits on all of its inventory projects. LandVest, Inc. will audit a minimum of 5% of the plots and a sample of every crew member. Each crew member will be audited as soon as possible after joining the project. This will ensure that the data collected and provided under this project will meet or exceed the state's expectations of quality and value. Project Managers, David Degruttola and Chris Lantry as well as Contract lead Rick Denial will conduct audits. These are senior LandVest, Inc. staff with decades of comparable inventory and audit experience.

LandVest, Inc. intends to use its own staff and possibly 1-2 experienced subcontract cruisers to complete this inventory project. LandVest, Inc. will request approval of subcontractors as required by NH Fish and Game.

All cruisers will participate in a field training to review cruise procedures for this project. LandVest, Inc. implements built-in quality control into its cruise data collection software. This allows cruisers to identify possible data entry errors or omission prior to leaving the plot. Additionally, data is reviewed as it comes in by a LandVest, Inc. administer who is trained to review cruise data, identify errors, and pass notes made by cruisers to project managers. LandVest, Inc. collects all field data spatially and tabularly in a GIS database which is backed up nightly.

7) Upon completion of the forest inventory LandVest, Inc. will provide all data in an agreed upon format/database with an electronic report summarizing the project outcomes.

Contractor Initials SGH
Date 3/3/23

EXHIBIT C
METHOD OF PAYMENT

Method of payment shall be as follows:
Upon the completion of each "activity" below, LandVest, Inc. shall submit an invoice(s) not to exceed the amount designated for that activity. Total cost of this project shall not exceed $208,915.00. The following appropriation code shall be referenced on the invoice: 20-07500-21550000-304-500841 Research and Management. Invoices will be paid within 30 days of approval.

Invoicing	Activity	FY23	FY24	Total
May	Initial stand typing	$4,860.00		
May	Initial data transformation	$4,037.50		
June	Inventory fieldwork A	$37,780.00		
July	Inventory fieldwork B	$37,780.00		
August	Inventory fieldwork C		$37,780.00	
September	Inventory fieldwork D		$37,780.00	
Dec-June 24	Inventory wrap up/products		$20,000.00	
Dec-June 24	Final stand typing		$4,860.00	
Dec-June 24	Final transformations		$4,037.50	
Dec-June 24	Final inventory product		$20,000.00	
TOTAL		**$84,457.50**	**$124,457.50**	**$208,915.00**

Contractor Initials SGH
Date 3/3/23

State of New Hampshire
Department of State

CERTIFICATE

I, David M. Scanlan, Secretary of State of the State of New Hampshire, do hereby certify that LANDVEST, INC. is a Delaware Profit Corporation registered to transact business in New Hampshire on September 03, 1991. I further certify that all fees and documents required by the Secretary of State's office have been received and is in good standing as far as this office is concerned.

Business ID: **158562**

Certificate Number: **0006221975**

IN TESTIMONY WHEREOF,

I hereto set my hand and cause to be affixed the Seal of the State of New Hampshire, this 3rd day of May A.D. 2023.

David M. Scanlan

Secretary of State

Certificate of Authority # 1 *(Corporation, Non-Profit Corporation)*

Corporate Resolution

I, Christine Bourgeois, **hereby certify** that I am duly elected Clerk/Secretary/Officer of
(Name)
LandVest, Inc. I hereby certify the following is a true copy of a vote taken at
(Name of Corporation)

a meeting of the Board of Directors/shareholders, duly called and held on March 29, 2022,

at which a quorum of the Directors/shareholders were present and voting.

VOTED: That Steven G. Hawkes, Vice President (may list more than one person) is
(Name and Title)

duly authorized to enter into contracts or agreements on behalf of

LandVest, Inc. with the State of New Hampshire and any of
(Name of Corporation)

its agencies or departments and further is authorized to execute any documents

which may in his/her judgment be desirable or necessary to effect the purpose of

this vote.

I hereby certify that said vote has not been amended or repealed and remains in full force and effect as of the date of the contract to which this certificate is attached. This authority **remains valid for thirty (30)** days from the date of this Corporate Resolution. I further certify that it is understood that the State of New Hampshire will rely on this certificate as evidence that the person(s) listed above currently occupy the position(s) indicated and that they have full authority to bind the corporation. To the extent that there are any limits on the authority of any listed individual to bind the corporation in contracts with the State of New Hampshire, all such limitations are expressly stated herein.

DATED: 3/6/2023 **ATTEST:** Christine Bourgeois CFO
(Name & Title)

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 5/8/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Fred C. Church Insurance
41 Wellman Street
Lowell MA 01851

CONTACT NAME: Laura Uden
PHONE (A/C, No, Ext): 800-225-1865 FAX (A/C, No): 978-454-1865
E-MAIL ADDRESS: luden@fredcchurch.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Hartford Fire Insurance Company	19682
INSURER B : National Union Fire Insurance Company of Pittsburg	19445
INSURER C : Transportation Insurance Co.	20494
INSURER D : Continental Casualty Company	20443
INSURER E :	
INSURER F :	

INSURED LANDINC-01
LandVest, Inc.
One Capitol Street, Suite 300
Concord NH 03301

COVERAGES CERTIFICATE NUMBER: 1123931955 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
C	X COMMERCIAL GENERAL LIABILITY			6016817394	8/1/2022	8/1/2023	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 500,000
							MED EXP (Any one person)	$ 15,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
D	AUTOMOBILE LIABILITY			6016817413	8/1/2022	8/1/2023	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
D	X UMBRELLA LIAB X OCCUR			6016817380	8/1/2022	8/1/2023	EACH OCCURRENCE	$ 10,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 10,000,000
	DED X RETENTION $ 10,000							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			08WECAA6FD8	8/30/2022	8/30/2023	X PER STATUTE / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N N	N/A					E.L. EACH ACCIDENT	$ 500,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 500,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000
B	Errors & Omissions			015423269	8/1/2022	8/1/2023	Each Occurrence Aggregate	$6,000,000 $6,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Evidence of Insurance

CERTIFICATE HOLDER

NH Fish and Game Department
11 Hazen Drive
Concord NH 03301

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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APPENDIX 1

LandVest®

FOREST RESORCES DIVISION

CRUISE PROCEDURES and SPECIFICATIONS

For

State of New Hampshire
NH Fish and Game Department
Vegetative Inventory

February 13, 2023

PROPOSED

Richard Denial PMP CF
Director of Inventory and Analytics

LandVest Forest Resources Division

One Capitol Street, Suite 300
Concord, NH 03301

OVERVIEW AND PURPOSE:

This document was created LandVest to document the proposed cruising procedure and method manual for the 2023-24 State of New Hampshire Fish and Game Department Vegetation Inventory of Wildlife Management Areas in Pittsburg and Clarksville, NH. Once approved by NH Fish and Game, these specifications will serve as the basis for practices to be used in the field, on each plot, and in the overall gathering of data by all cruisers.

This cruise will use a combination of types of inventory points: Each point with be either a full inventory point (F) or a BA only (B) point.

- Maps have unique symbols for each type of point and points will us a numbering system to assist cruises eliminate confusion as the nature of any given point.

Cruise Layout

The points will be laid out using a grid configuration determined following proposal approval.

Summary- If there is a question refer to the full manual section.

All Points

- Use TRUE North Bearings
- Overhead flag and cruiser initials, plot number and date.
- Typing
- Regeneration Tally- No level calls
- Calipers used for all DBH Measurements
- All diameter measurements to the nearest 1" class
- Trees tallied 4.55 inches and over (1-inch size class in prism plot)
- 1st tree (North) marked with point number.
- DBH line on all tallied trees
- Risk calls

Product Level Detail

Full Inventory (all plots except points in Nature Preserve Management Unit)

- Products
  - 4.55 inch tree is in the 5 inch class thus requires product calls.
- Top diameter calls on all merchantable stems if product calls do not continue to a 4" top diameter.

Basal Area Only Inventory (all points in Nature Preserve Management Unit and points falling in a CLNA_Habitat_SMA)

- No product data will be collected on points that fall in the Nature Preserve Management Area Unit)

STANDARD PROCEDURES FOR ALL INVENTORY POINTS

POINT LOCATION and MONUMENTATION:

1. **CRUISE NAVIGATION:**
   This cruise will utilize **True North** bearings.

2. **POINT LOCATION:**
   Cruise point location shall be by Tablet with GPS activated.
   - Cruiser will set proximity alarm at 25' and take the point when alarm sounds.

PROPOSED

Off-Set Procedures: For points that fall near the boundary of a non-cruised strata such as a wetland or boundary line, the Walkthrough Method (see Appendix) will be used.

Boundary Line Encounters: Points that fall outside of property boundaries or in a non-commercial stratum will be dropped. Cruisers do not need to look for boundary lines but if encountered take a way point.

Non-Commercial Types:

- If point falls in mapped non-commercial type, point is dropped. This should be rare.
- If point falls in new non-commercial or unmapped noncommercial feature such as a new or expanded beaver pond, drop the point and make note to have map adjusted.
- If point falls in non-mapped opening that is part of the strata such as a landing or unmapped parking lot, take the point where it lands.

Check Cruise Tolerance: GPS located points must fall within +/- 30 feet of mapped location. Recognizing that GPS accuracy can vary by unit, day and even time of day, check cruisers will use discretion to determine evidence of point location bias.

Check Cruise Value: 1 point

3. **POINT MONUMENTATION:**
   A. All plots shall have a pink flag hung at or above eye level as close to point center as possible. This flag shall be labeled with the following information: Plot #, Cruiser's initials, and Date.
   B. The plot center must be monumented with a stout, preferably live stick with pink flagging tied to it the goal being to last up to 2 years.
   C. .

Check Cruise Tolerance: Overhead flag and point center marker must be present and labeled accurately and completely. Any failure of the above is an error.

Check Cruise Value: 1 point.

POINT TYPE:

This Cruise uses multiple BA Factor Prisms and varying data collection based on plot number. It is the responsibility of the cruiser to pay close attention to what the specific procedures for each plot visited.

Check Cruise Tolerance: None

Check Cruise Value: Plot Failure. Cruiser will be required to revisit points completed that day. Any additional plots mis cruised will result in re-visiting all plots since previous check cruise.

POINT TALLY (ALL POINTS):

At a minimum, record: Point Number, Cruiser's Initials, and Date.

Check Cruise Tolerance: All Data must be recorded accurately and completely.

Check Cruise Value: 1 point.

PROPOSED

FIXED RADIUS PLOT 1/4-acre 58.9'R) (ALL POINTS)

The intent of this plot is to look at the surrounding ~1/4 acre. No Limiting distance is required.

STAND TYPE DATA (ALL POINTS):

Record the forest type at the point. Stand Typing is based on the main crown canopy. Stand type should use observation data from around the point, not just the trees that are tallied on plot.
LandVest removed some types from the list that will not be observed on the project. List may be further condensed after SAF type description review prior to field data collection.

SAF Stand Type

1. Balsam Fir (Type15)
2. Black Spruce (Type 12)
3. Black Spruce-Tamarack (Type 13)
4. White Spruce (Type 107)
5. Tamarack (Type 38)
6. Aspen (Type 16)
7. Pin Cherry (Type 17)
8. Paper Birch (Type 18)
9. Paper Birch-Yellow Birch (New)
10. Red Spruce (Type 32)
11. Red Spruce-Balsam Fir (Type 33) 3
12. Paper Birch-Red Spruce-Balsam Fir (Type35)
13. Red Spruce- Yellow Birch (Type 30)
14. Red Spruce-Sugar Maple-Beech (Type 31)
15. Northern White Cedar (Type 37)
19. Eastern White Pine (Type 21)
20. White Pine-Red Pine (New)
21. White Pine-Red Maple (New)
24. White Pine-Hemlock (Type 22)
25. Eastern Hemlock (Type 23)
26. Hemlock-Yellow Birch (Type 24)
27. Hemlock-Mixed Hardwood (New)
28. Sugar Maple (Type 27)
29. Sugar Maple-Beech-Yellow Birch (Type 25)
30. Sugar Maple-Basswood (Type 26)
31. Black Cherry-Maple (Type 28)
32. Beech-Sugar Maple (Type 60)
33. Beech (New)
34. Beech-Red Maple (New)
35. Red Maple (Type 108)
36. Gray Birch-Red Maple (Type 19)
37. Black Ash-American Elm-Red Maple (Type 39)

FIXED RADIUS PLOT 24'R) (ALL POINTS)

The intent of this plot is to look at the surrounding ~1/4 acre. No Limiting distance is required.

Vegetative Profile. Each of the below will be described using dropdown menus on tablets for each of the 3 profiles:

1) **Overstory (>30')**
2) **Midstory (6'-29')**
3) **Understory (1'-5')**

Stand Size Class – Code Definition

1 – Under 1 inch DBH
2 – 1-4.9 inches DBH

PROPOSED

3 – 5-10.9 inches DBH
4 – 11- 14.9 inches DBH
5 – 15 inches DBH +
6 – Multiple size classes (3+) (Uneven aged stands)
Two Size Classes (ie 3&4)

Profile Crown Closure –
0-5%, 6%-30%, 31%-70%, 71%-90%, 91%+

Profile Composition
>75 HW, 50-75 HW, 30-75 SW, >75 SW

Average Profile Height (Restricted to the height limits of the profile)

Record to the nearest 10'. No Average Height Profile required for Understory Profile.

Check Cruise Tolerance: +/- 20%

Check Cruise Value: 1 point

Presence of Insect, disease, Wildlife habitat and use. Each of the below will be described using dropdown menus on tablets for each of the 2 categories:

Presence of Insect, disease (EAB, Beech bark, Anthracnose, Sugar maple borer, gypsy moth, forest tent, wooly adelgid, black knot, etc)
Record each occurrence with level of severity.

None
Low – 1-10%
Medium—10-60%
Severe- >60%

Check Cruise Tolerance: None

Check Cruise Value: 2 points per observation. 1 for species, 1 for abundance

Presence of Wildlife damage and habitat use (browse, teeth scrapes, bear claw, beaver damage, porcupine etc)
Record each occurrence with level of severity.
None
Low – 1-10%
Medium—10-60%
Severe- >60%

Check Cruise Tolerance: None

Check Cruise Value: 2 points per observation. 1 for species, 1 for abundance

Non-Commercial Species Profile. Each of the below will be described using dropdown menus on tablets for each of the 2 profiles:

Shrub
The following refers to understory, including all dwarf shrubs, vines, and shrubs that are at least 1 foot tall. The three most abundant shrubs should be identified. If none, select "none" or only 2, select none in associated dropdowns. Use an ocular estimate of the entire plot.

PROPOSED

Tally shrub understory as:
None
Sparse - < 10%
Medium– 10-60%
Dense> 60%

Check Cruise Tolerance: None

Check Cruise Value: 2 points per observation. 1 for species, 1 for abundance

Fern/Grasses/Sedges
The following refers to understory, including all dwarf shrubs, vines, and shrubs that are at least 1 foot tall. The below categories should be identified by general (no species/genus identification required) groupings below. If none, select "none" or only 1, select none in associated dropdowns. Use an ocular estimate of the entire plot. Use an ocular estimate of the entire plot.

Tally forest floor as: (General categories, not species needed)

Grass/Sedges
None
Sparse - < 10%
Medium– 10-60%
Dense> 60%

Fern
None
Sparse - < 10%
Medium– 10-60%
Dense> 60%

COURSE DOWN WOODY DEBRIS TRANSECTS: (ALL POINTS)

Locating and Establishing Line Transects

1. Establish two transects originating at the plot center and each extending out 24.0 feet horizontal distance.
2. Place transects along 2 cardinal directions.
3. On the first plot, place the first transect heading North (0 degrees) and the second heading East (90 degrees).
4. At the next survey plot, rotate the cardinal directions clockwise and place the first CWD transect heading East (90 degrees) and the second heading South (180 degrees).
5. Continue this pattern of rotating transects clockwise for all survey points.

Recording data

1. Using the tally rules (shown below), measure and record the required data for each feature that quantifies coarse woody debris.

   a. Species - Record the code indicating the species of the CWD piece. Species identification may be uncertain for some pieces. If it is not possible to identify the species, attempt to estimate if it is softwood or hardwood. Search for the species code that has the most detail for the identified piece. If species cannot be determined, enter the code *unknown*.

b. Diameter at the Point of Intersection - At the point of intersection and determine if the piece is ≥5.0 inches thus a valid tally piece. Measure the diameter of the piece perpendicular to the logs

PROPOSED

length. Record the piece's diameter at the transect line (at the point where the transect intersects the central longitudinal axis of the piece). Record the diameter to the nearest inch.

c. Diameter at the Small End - Record the diameter at the piece's small end. The diameter is recorded to the nearest inch. The diameter at the small end occurs either at (1) the actual end of the piece, if the end has a diameter ≥3.0 inches, or (2) at the point where the piece tapers down to 3.0 inches in diameter. If the end is splintered or decomposed into the forest floor, measure the diameter at the point where it best represents the overall log volume.

d. Diameter at the Large End - Record the diameter at the piece's large end. The diameter is recorded to the nearest inch. The large end will occur either at a broken or sawn end, at a fracture, or at the root collar. If the end is splintered or decomposed into the forest floor, measure the diameter at the point where it best represents the overall log volume.

e. Length - Measure the length of the piece (to the nearest foot) along its centerline between the points where the small and large end diameters were measured. For than 3 feet long, record 2 feet for the piece. The minimum length requirement to be measured is .5 feet.

Check Cruise Tolerance: Length: +/- 2', Diameter =/- 1"

Check Cruise Value: 4 points for each occurrence: 1 Length, 3 Diameter

TREE DATA (Prism varies by WMA Unit):

1. **BAF:** This cruise will utilize a **different prism** depending on WMA Unit, refer to Cruise Map and Read Only Plot Information. Tally all trees that fall in prism for trees at least 4.55 inches DBH (5-inch size class).
2. **CALIPERS:** DBH shall be measured using Calipers.
3. **LIVE & DEAD TREES:** Collect data for live and dead trees
4. **STARTING POINT FOR FIRST TREE TO TALLY and TALLY ORDER**:
   A. Cruisers shall always start at the first tree at or to the east of north. The first tree must be marked with a "1".
   B. Trees shall be tallied in a tree-by-tree movement clockwise.
      i. For multiple trees which are in a direct line from point center, the tree closest to PC shall be collected first, then additional trees collected in the order that they radiate from PC.
      ii. If a tree is missed, data shall be collected at the end of the plot and noted in the notes section on the data recorder to identify its real location on the point.

   Check Cruise Tolerance: Tree #1 must be located and labeled correctly. Trees must be collected in clockwise order. Trees collected out of order, but noted correctly on cruise card or DATA RECORDER, will not be considered an error.

   Check Cruise Value: 1 point

5. **BORDERLINE TREES:** Any tree that cannot be definitively determined to be in or out using the prism shall be measured for horizontal Limiting Distance. See Appendix for limiting distance calculations and tables. DBH shall be measured to the nearest 0.1" for the calculation and distance shall be measured with a steel tape. If a borderline tree is found to be out, the tree shall have an "X" marked through the DBH line. Borderline trees shall be marked with a "T" a DBH to indicate that the tree was checked.

PROPOSED

Check Cruise Tolerance: Missed or extra trees found to be in or out by more than 1'.

Check Cruise Value: Variable dependent on number of calls and type of tree.

6. **SPECIES (ALL POINTS):** Each cruiser will use the species codes included in the Mobile Map setting file. Any failures to utilize the correct species will be an error.

   Check Cruise Tolerance: Species must be identified and recorded correctly.

   Check Cruise Value: 1 point

7. **LIVE/DEAD STATUS (ALL POINTS):** Record Live (L) or Dead (D) for each tree recorded.

   Check Cruise Tolerance: Status must be identified and recorded correctly.

   Check Cruise Value: 1 point

8. **CANOPY POSITION:** Local position of the individual stems live crown
   This is the functional canopy position of the specific tree and applies only to the position of the live crown of that stem. i.e. a pole sized stem can be dominant even if the stand type is something like an TH5C if the pole stem is fully unrestricted in growth and dominant over it's true competition. Similarly, if a sawtimber sized tree has a dead top, and the only live crown is in the mid-canopy, the canopy position can be Intermediate or Overtopped.

   A. Dominant (D)
   B. Codominant (C)
   C. Intermediate (I)
   D. Suppressed(S)

   Check Cruise Value: 1 point

9. **DIAMETER (ALL POINTS):** Diameter must be taken on all live trees with a DBH of 4.55 inches or greater. Diameter measurement height must be established on the uphill side of the tree using normally accepted DBH rules. See Appendix for examples. This cruise requires diameter measurement **to the nearest 1 inch using calipers. DBH measurement must be made with the caliper opening facing the point center.** Mark the tree with a horizontal line/dot with paint (Orange or Pink) at the location as to where you located DBH. If this mark is not visible from plot center, then make a vertical mark on the tree facing plot center.

   Check Cruise Tolerance: Height of diameter must be established correctly, and breast height marked facing PC. DBH tolerance is **+/- 1 size class.** DBH location tolerance is +/- 2 inches.

   Check Cruise Value: 1 point

10. **RISK LEVEL (ALL POINTS):**): This data call will be used to make Risk calls for the entire tree, not a segment call. This call applies to form, defect, and vigor.

    1) Low- Trees with good vigor, have little to no defect. Allowable defects include crook, sweep, catfaces and burls- good potential to increase in value. i.e. growing stock.

    2) Moderate- Trees that have moderate to low vigor. These may be intermediate or slightly suppressed trees. Allowable defects include small face scar, moderate animal damage, and significant forks . – likely stable value or possible increase in ten years

3) High- Trees that have a reduced crown ratio, dead branches, cracks, open wounds, large seams, fruiting bodies, or are significantly suppressed- some risk of value loss in ten years in sub merchantable stems, this code will indicate low likelihood of attaining value.

4) Very High- Trees that are have low crown ratio, broken tops, severe multiple wounds, highly likely to drop in value in ten years.
Check Cruise Tolerance: The checker thinks the call is unreasonable.

Check Cruise Value: 1 point

11. **CAVITIES TREES-** Living and dead trees exhibiting cavities used by wildlife.

Code	Hole Size
1	Large diameter hole (8+ inches)
2	Medium diameter hole (4 – 7 inches)
3	Small diameter hole (1 – 3 inches)

Check Cruise Tolerance: Tolerance will be at the discretion of the check cruiser. Consistently missing cavity trees will result in errors.

Check Cruise Value: 1 point

FULL POINTS PRODUCT CODES (ALL PLOTS NOT IN THE NATURE PRESERVE WMA Unit (Points in the Nature Preserve WMA will be BASAL AREA ONLY POINTS)

Trees will be placed in 8' product categories based on total stem quality and DBH.

PRODUCT	SPECIES	MIN. DBH CLASS	MIN. TOP DIA. ISB	MIN. LENGTH	DESCRIPTION
SAWTIMBER	ALL HW	11"	10"	8 feet	Minimum 2 sides clear, maximum 25% internal defect, (max 4" sweep)
	SP-FIR &RP	6"	5"	8' feet	Sound, Straight, (Max 1-2" Sweep) free of Excessive knots, max 10% internal rot. Can call 8' section after 16'
	HEM/ TAM	10"	8"	8' feet	Sound, Straight, max (1-2" Sweep) 10% internal defect. Max 3" Live and 2" dead knots. >20" DBH Pulp
	PINE	10"	8"	8' feet	Sound, Straight, (Max 4" Sweep) Max 3" live or 2" dead knots, max 25% internal defect
	CEDAR	10"	8"	8' feet	Sound, straight (max 4" sweep), Free of Excessive knots.
TIE/PALLET	ALL HW	10"	9"	8 feet	Straight and Sound, No internal defect or rot, 0 CLF. No sweep under 12 inch top up to 4" sweep greater than 12" top
	PINE (WP only)	10"	8"	8 feet	Falls into this category if, straight (Max 2" sweep) and sound, but excessively limby
PULPWOOD	ALL SPECIES	5"	4"	8 feet	Any segment not meeting product specs (codes 1-4) and whose volume is 50% or greater sound wood. 24" maximum diameter.
CULL	ALL SPECIES	5"	4"	8 feet	Any segment or tree that does not meet product spec (codes 1-5) and whose volume is less than 50% sound. If entire tree, tally species, diameter, one cull segment (7) and a 4" top DIB.

- Often, product breaks will occur outside of the segment intervals. Use the product calls **that most accurately account for the volume of products in that tree**. If 90% of a segment meets the specifications for a product, then the segment is that product.
  - Example 1 - If 7' of saw then 1' of pallet call saw
  - Example 2 - if 6' of saw then 2' of pulp call pulp
  - Example 3 - if 16 feet of saw and 6' of pallet to a crotch, call saw, saw, pulp
  - Example 4 - if 16 feet of saw and 7 feet of pallet to a crotch call saw, saw, pallet.

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- The goal is to capture a representation of the less than 8' segments that would naturally be merchandized into longer logs during harvesting.

- **Merchantable Height and Product Calls**: The total number of segments shall be estimated by rounding up or down based on the mid-point of the top segment. EXAMPLE: A tree that has 44' of merchantable height shall have five 8' segments; a tree with 44.1' of merchantable height shall have six 8' segments. The projected portion of rounded-up trees shall be assumed to be of the same grade as the visible portion of that segment.
- **Stump Jump:** Stump jumping allows the cruiser to disregard a butt scar and begin product calls above the scar. Stump jumping is allowed up to 3' from the ground. If the defect is above 3' from the ground product calls must start at the normal stump height. If employed the cruiser must draw a paint line on the tree at the height chosen to start product calls.

Check Cruise Tolerance: While there should be in most cases a clear and distinct proper segment call, the Check Cruiser may find that a call is border-line and in his mind can make a reasonable determination that while the cruiser's call is different than the checker's, it is a valid call within the terms of the specific product call. An error will occur when there is a clearly missed call.

Check Cruise Value: 1 point per product call.

FIXED RADIUS PLOT 1/400-acre 5.9'R (ALL POINTS):

A fixed radius subplot will be taken at each plot location. The radius from point center will be 5.9 feet. Cruisers can use a logger's tape, measured string, or DBH stick/pole with 5.9' marked on it to denote the plot radius. Plot radius is measured at ground level. Trees are in if the pith of the tree at the stump is within 5.9' of point center.

For this tally, the cruiser should identify if the canopy is open or closed above the plot. If the area directly above the plot is open to view from above and cruiser would consider trees in the small tree tally free to grow, <50% of the plot or greater, the plot is open. If the area directly above the plot is closed to view from above and cruiser would consider trees in the small tree tally not free to grow, <50% of the plot or greater, the plot is open.

Check Cruise Value: 1 point for each.

Small Tree Tally

Species will be counted by DBH and level.

Trees with a DBH of 0.51"-4.49" will be counted by 1" diameter class by level (1"-4"). The diameter call should be estimated with the cruiser occasionally checking their eye for accuracy.

Level Calls: AGS are sapling trees that have good form are free to grow
UGS are sapling trees that have poor form and/or are suppressed.

For species, DBH, and level.

Check Cruise Tolerance: Tolerance will vary according to the count found by the check cruiser, as follows:

Counts up to 20, tolerance is +/- 1
Counts 21 - 50, tolerance is +/- 3
Counts 51 - 100, tolerance is +/- 7
Counts 101-200, tolerance is 15
Counts 201-300, tolerance is 25

PROPOSED

Average tree height per grouping will have a tolerance of 5'

Check Cruise Value: 1 point for each species grouping. 1 Error will be given for each species/DBH/Level grouping outside of tolerance.

Regeneration Tree Tally

The same plot will be used to inventory regeneration from 1' tall to 1" DBH. The number of stems by commercial species will be counted or estimated if the number is over 10 stems.

Check Cruise Value: 1 point for each species grouping. 1 Error will be given for each species grouping outside of tolerance.

OBSERVATION GPS COLLECTION (traveling point to point)

Cruiser should observe and collect additional GPS data as they travel from point to point. Points of interest include: boundary lines, unmapped non-forested areas, rare/threatened/endangered fauna, flora/habitat, invasive species, significant windthrow, rapture nests, vernal pools, significant wildlife damage, winter yards, etc

CHECK CRUISE PROCEDURES and SPECIFICATIONS:

LandVest Project Forester or designee will check a minimum of 5% of each cruiser's points. The purpose of the check cruise is to evaluate the cruiser's compliance with all protocols of the cruise; the accuracy of the data collected; and to identify any problem areas, misunderstandings, patterns, inconsistencies and/or bias. Cruisers will be notified as soon as possible as to the results of each check cruise. The score of the current check as well as a running score will be provided to the cruiser.

In addition to the score values assigned above, the check cruiser will evaluate the data and procedures to determine any bias on the part of the cruiser. Evidence of bias may include: marginal calls consistently rounded up or down, DBH consistently high or low, point locations consistently in lower stocked or open areas, etc. A bias penalty ranging from 0 to 5 points per cruise point may be assigned if necessary. This will be in addition to any errors on the point. If a cruiser is deemed to be biasing or negatively impacting the accuracy of the cruise results through inconsistent, incomplete, biased or generally inaccurate work, regardless of the cruise checker's technical score, the cruiser could be failed. All cruisers must be deemed to be objectively implementing and meeting all cruise protocols and specifications.

The final acceptable error rate for this cruise will be 5%. The error rate for individual checks may exceed the acceptable rate. Check cruiser will determine the appropriate course of action based upon the actual errors discovered. The check cruiser may determine that points need to be revisited or that additional checks will need to be completed before the significance of the error is known.

PROPOSED

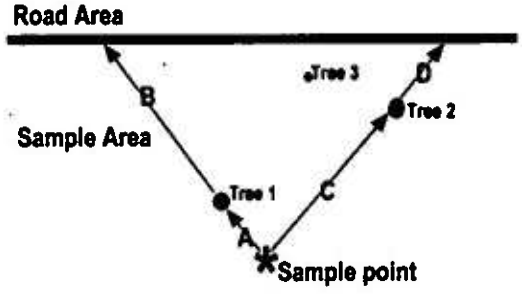
APPENDIX

THE WALKTHROUGH METHOD

Boundary overlap for this cruise will be dealt with through the use of the "walkthrough method". The method is applied for all tallied trees near the boundary of the sampled area. Cruisers first measure the distance between point center and the tally tree. They then "walk through" the tree the same distance on the same heading. If their ending location falls outside the sample area, the tree is tallied twice. If the location falls within the sampled area, the tree is tallied once as normal.

Figure A1 illustrates proper implementation of the method in its simplest form. Both Trees 1 and 2 in Figure A1 are large enough to be tallied. In most cases, it is unnecessary to actually walk the second distance. The cruiser simply needs to compare the distance between point center and the tree, and the distance between the tree and the boundary. This is especially useful where the "out" area is water.

Figure A1. Walkthrough Method Basics



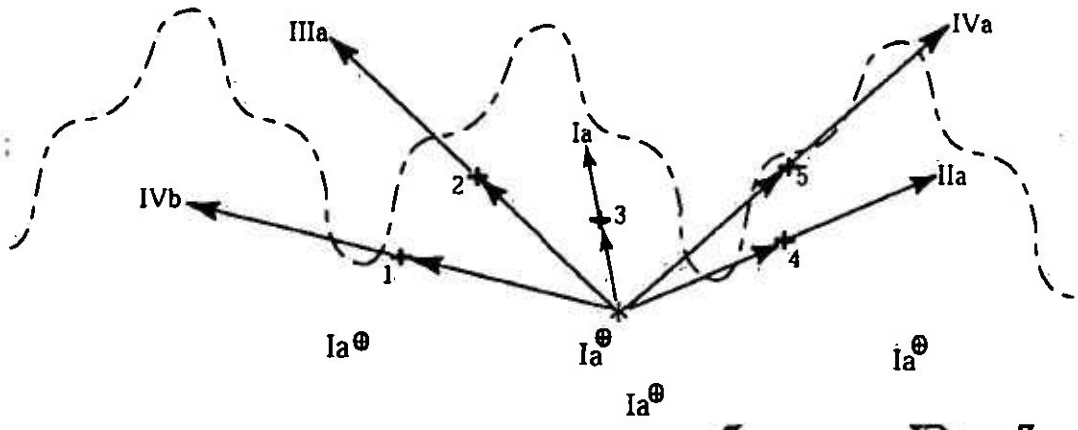
In the case of Tree 1, the cruiser measures the distance from point center to the center of Tree 1 at DBH (A). The cruiser also measures the distance from the center of Tree 1 to the road boundary (B). If distance A is smaller than distance B; that is, if the tree is closer to point center than the boundary, then Tree 1 is tallied normally. In many cases where the distances between point center and the tree, and the tree and the boundary line, are obvious, no measurement is necessary.

In the case of Tree 2, the cruiser again measures the two distances between point center and the tree (C), and the tree and the boundary (D). In this case, Tree 2 is closer to the boundary line (C>D) than to the sample point. The tree is tallied twice.

In the case of Tree 3, the tree is too small to be tallied by the prism, so the walkthrough method need not be applied. The method is identical in the case of fixed radius plots.

The vast majority of boundary overlap cases are covered by the examples illustrated in Figure A1. However, it is conceivable in rare cases for a cruiser to walk out of the sample area and back in one or more times. The following key should be used in such cases. Figure A2 illustrates the results described by the key. Double-tally trees should be recorded twice. Signify double-tally trees in the field by marking two vertical lines below the tree's DBH line.

Figure A2. Graphic Illustration of the Walkthrough Method

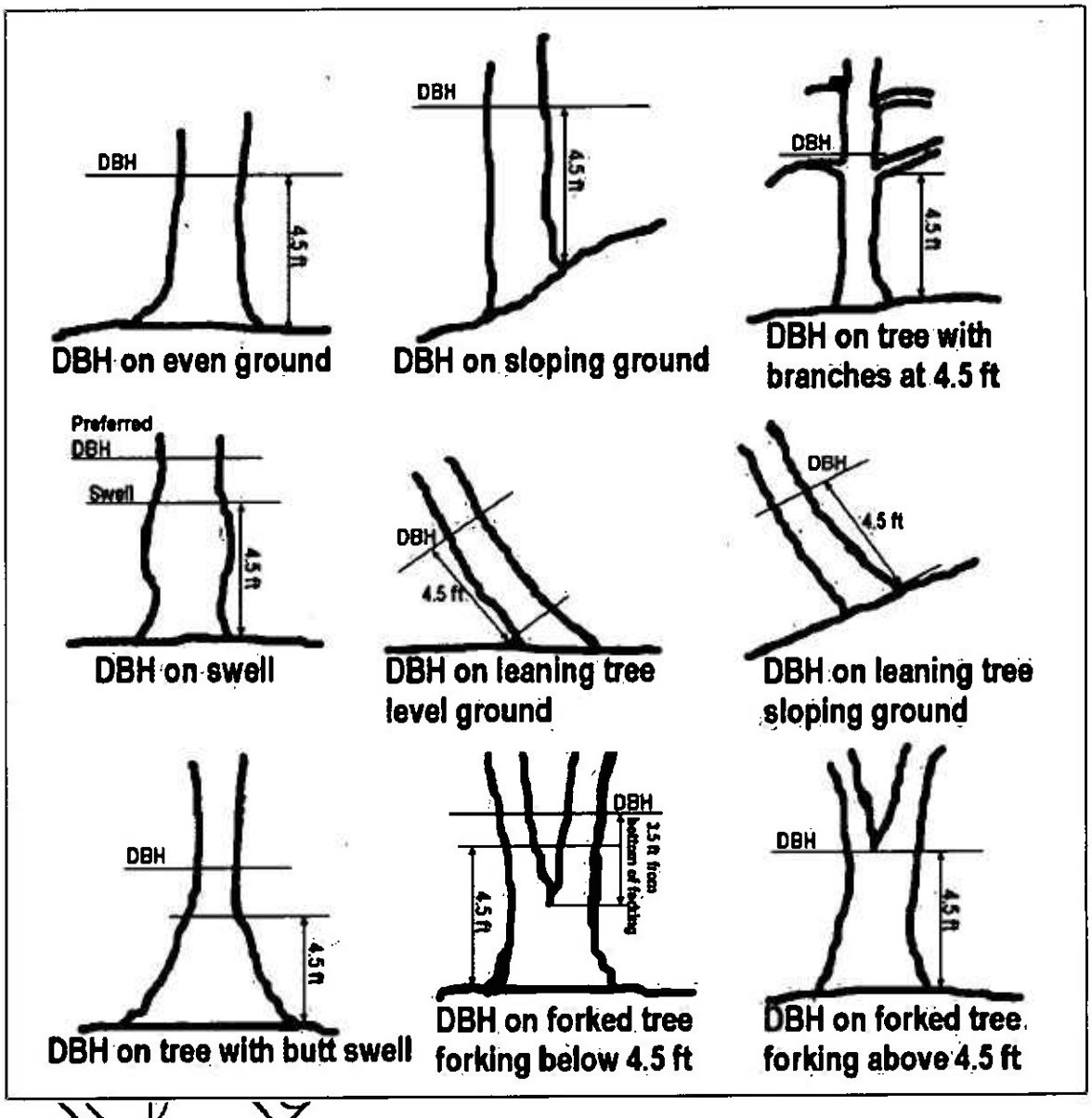


Five sample objects (+), lying close to the boundary, have been tallied from a sample point (•). The arrows indicate the layout of the walkthrough points for each object; the outcome on the key is indicated for each walkthrough point. Objects 1, 3, and 4 are tallied normally; objects 2 and 5 are doubled-tallied. Four objects (⊕) lie "close to the boundary" but in positions where they would be single-tallied, and no measurements would be needed.

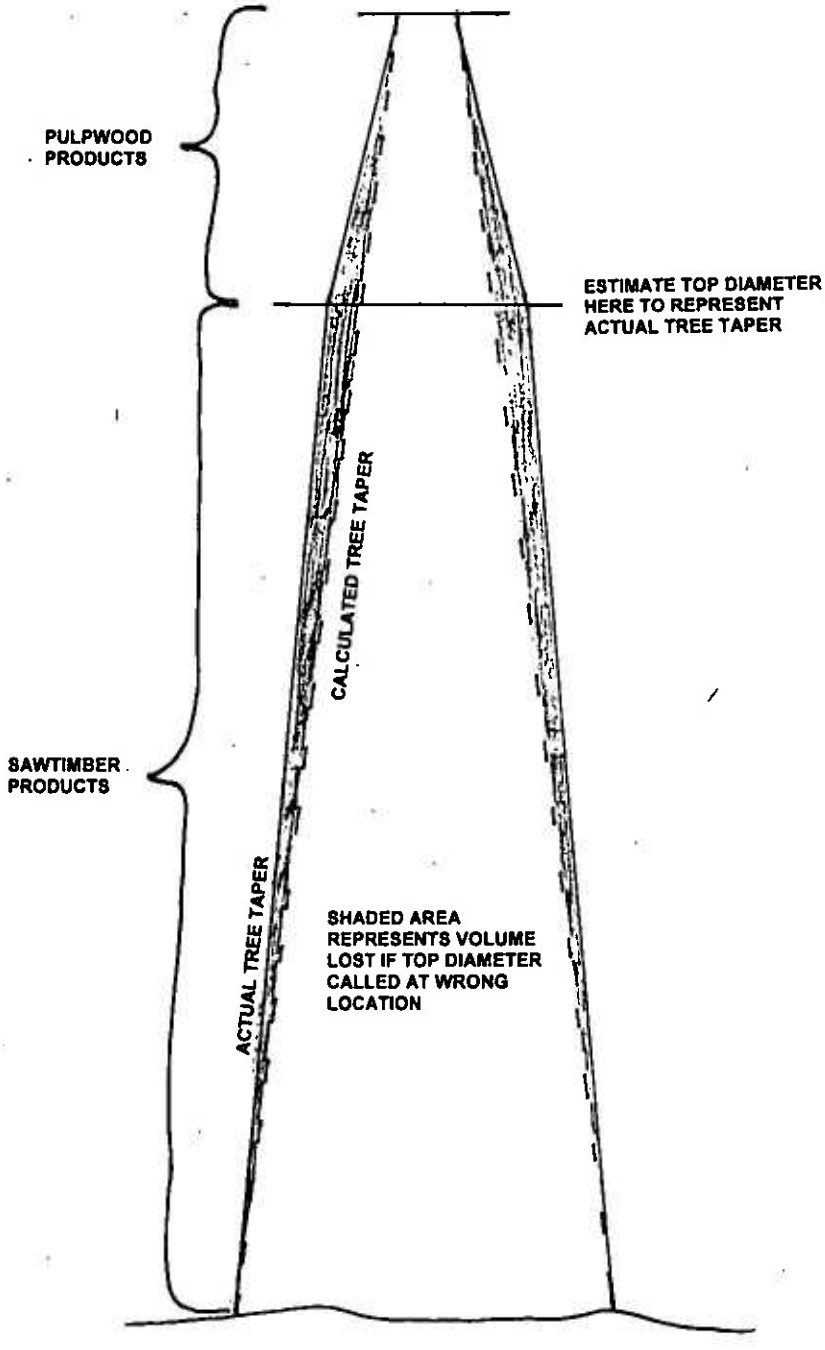
KEY

I	Is it possible that the tallied object is closer to the boundary than to the sample point?	
	Ia. NO – No action needed. Tally the object normally.	**Ib. YES** – Proceed to II.
II	Measure the distance from the sample point to the object – call this distance x. Now measure the distance from the object to the boundary, continuing on the same bearing. Call this distance y. Is y less than x?	
	NO – No action needed. Tally the object normally.	**YES** – Proceed to III.
III	Does the boundary curve back across the walkthrough line?	
	– Walkthrough point must be outside the tract. Double-tally the object.	**YES** – Proceed to IV.
IV	Move to the walkthrough point, so that the distance to the object equals the previously measured distance x along the same bearing, or to a point where that location can be clearly identified. Is the walkthrough point inside the tract?	
	NO – Double-tally the object.	**YES** – Tally the object normally.

DBH ESTABLISHMENT EXAMPLES



TOP DIAMETER DIAGRAM



LIMITING DISTANCE

The basic formula for calculating Limiting Distance is:

LD = DBH (to 0.1") x Slope Correction Factor x Limiting Distance Factor

However, there are acceptable variations on the formula to save time.

Variation 1:

Utilizes Table LD 1 below to eliminate one multiplier. This method is most useful on flat ground where the Slope Correction Factor is rarely needed.

LD = (A) x Slope Correction Factor
Where (A) is (DBH x LDF) from the appropriate cell from Table LD 1

Variation 2:

Utilizes the column labeled "MULT" (multiplier) in Table SC 1.

LD = DBH x (B)
Where (B) is (SCF x LDF)

PROPOSED