

New Hampshire Fish and Game Department

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HEADQUARTERS: 11 Hazen Drive, Concord, NH 03301-6500 (603) 271-3421 FAX (603) 271-1438

www.WildNH.com e-mail: info@wildlife.nh.gov TDD Access: Relay NH 1-800-735-2964

November 4, 2022

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, for \$13,384.80 to prepare timberland appraisal reports on two (2) properties located in Springfield, NH that NHFG is seeking to purchase in fee. Effective upon Governor and Executive Council approval through February 28, 2023. Funding is 100% Federal.

Funding is available in the Wildlife Habitat Conservation account, as follows:

03 75 75 751520-2155 Wildlife Program - Wildlife Habitat Conservation

020-07500-21550000-033-500150

Land Acquisition & Easements

FY23 \$13,384.80

EXPLANATION

The NH Fish and Game Department has entered into Purchase and Sales Agreements for two (2) parcels of land in Springfield, NH: the Jennifer Shaw Lot (200+/- acres) and Aaron Ledge, owned by Daniel Thorne (635 acres+/-). The timberland appraisals will be critical in the determination of the fair market value by a licensed appraiser, contracted separately. These parcels have a shared boundary line of over 3,000 ft. which, if successfully purchased, would create a 835+/- acre wildlife management area in an area of the State where the Department does not have a large presence. Upon acquisition the properties will be managed for wildlife and be forever available for public hunting, fishing, trapping, and other wildlife-related recreational activities.

Request for quotes were solicited through email working from a list of foresters known to do timber appraisals in NH. The only response was received by LandVest, Inc. See attached results.

Respectfully submitted,

Scott R. Mason Executive Director Kathy Ann LaBonte

Chief, Business Division

REGION 1
629B Main Street
Lancaster, NH 03584-3612
(603) 788-3164
FAX (603) 788-4823
email: req1@wildlife.nh.gov

PO Box 417

New Hampton, NH 03256
(603) 744-5470

FAX (603) 744-6302
email: req2@wildlife.nh.gov

REGION 3
225 Main Street
Durham, NH 03824-4732
(603) 868-1095
FAX (603) 868-3305
email: reg3@wildlife.nh.gov

REGION 4

15 Ash Brook Court
Keene, NH 03431
(603) 352-9669
FAX (603) 352-8798
email: reg4@wildlife.nh.gov

Request for Proposal send via Email' to the following timber companies and foresters

Company	Aaron	Shaw		
Land Vest	murban@landvest.com, rbradbury@landvest.com	received	\$8,325.00	\$5,059.80
New England Forestry Consultants, Inc.	slagueux@neforestryconsultants.com	No response	24	
Martin Forestry Consulting, LLC	martinforestry@gmail.com	No response		
FORECO: Forest Resource Consultants	ronklem1@gmail.com	No response		
Full Circle Forestry, LLC	jsnitkin.fcf@gmail.com	No response		
Bay State Forestry Service	brian4str@yahoo.com	No response		
Leo Maslan Forestry Services	maslan.leo2@gmail.com	No response		
Charles Neibling	charlieniebling@gmail.com	No response		į.

Friday, October 7, 2022

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

IDENTIFICATION. 1.1 State Agency Name 1.2 State Agency Address NH Fish and Game Department 11 Hazen Drive, Concord NH 03301 1.3 Contractor Name 1.4 Contractor Address LandVest, Inc. One Capital Street, Suite 300, Concord NH 03301 Contractor Phone 1.6 Account Number 1.7 Completion Date 1.8 Price Limitation Number 20-07500-21550000-033-February 28, 2023 \$13,384.80 603-228-2020 500150 1.9 Contracting Officer for State Agency 1.10 State Agency Telephone Number Scott R. Mason, Executive Director 603-271-3511 1.11 Contractor Signature 1.12 Name and Title of Contractor Signatory Steven G. Hawkes, Vice President LandVest, Inc. 1.14 Name and Title of State Agency Signatory State Agency Signature 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) On: 1.17 Approval by the Governor and Executive Council (if applicable) G&C Item number: **G&C** Meeting Date:

Contractor Initials DA Date Melez

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 as indicated in block 1.17, 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. 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 affected 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. 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, 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 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. The State shall have no liability to the Contractor other than the contract price.

- 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 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.

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. 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 race, color, religion, creed, age, sex, handicap, sexual orientation, or national origin and will take affirmative action to prevent such discrimination.
- 6.3. 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 all rules, regulations and orders, and 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 Unless otherwise authorized in writing, during the term of this Agreement, and for a period of six (6) months after the Completion Date in block 1.7, the Contractor shall not hire, and shall not permit any subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the Services to hire, any person who is a State employee or official, who is materially involved in the procurement, administration or performance of this Agreement. This provision shall survive termination of this Agreement.
- 7.3 The Contracting Officer specified in block 1.9, or his or her successor, shall be the State's representative. In the event of any dispute concerning the interpretation of this Agreement, the Contracting Officer's decision shall be final for the State.

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) days from the date of the notice; and if the Event of Default is not timely cured, terminate this Agreement, effective two (2) 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.
- 8.3. No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event of Default, or any subsequent Event of Default. No express failure to enforce any Event of Default shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other Event of Default on the part of the Contractor.

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) 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) 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. The form, subject matter, content, and number of copies of the Termination Report shall be identical to those of any Final Report described in the attached EXHIBIT B. In addition, at the State's discretion, the Contractor shall, within 15 days of notice of early termination, develop and

submit to the State a Transition Plan for services under the Agreement.

10. DATA/ACCESS/CONFIDENTIALITY/PRESERVATION.

- 10.1 As used in this Agreement, the word "data" shall mean all 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, lêtters, 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 Confidentiality of data shall be governed by N.H. RSA chapter 91-A or other existing law. Disclosure of data 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 The Contractor shall not assign, or otherwise transfer any interest in this Agreement without the prior written notice, which shall be provided to the State at least fifteen (15) days prior to the assignment, and a written consent of the State. For purposes of this paragraph, 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.
- 12.2 None of the Services shall be subcontracted by the Contractor without prior written notice and consent of the State. 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. Unless otherwise exempted by law, the Contractor shall indemnify and hold harmless the State, its officers and employees, from and against any and all claims, liabilities and costs for any personal injury or property damages, patent or copyright infringement, or other claims asserted against the State, its officers or employees, which arise out of (or which may be claimed to arise out of) the acts or omission of the

Contractor Initials SOF Date 11/2/22 Contractor, or subcontractors, including but not limited to the negligence, reckless or intentional conduct. 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 sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

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 his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than ten (10) days prior to the expiration date of each insurance policy. 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 his or her 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. 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.
- 17. 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.
- 18. CHOICE OF LAW AND FORUM. This Agreement shall be governed, interpreted and construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns. 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. Any actions arising out of this Agreement shall be brought and maintained in New Hampshire Superior Court which shall have exclusive jurisdiction thereof.
- 19. CONFLICTING TERMS. In the event of a conflict between the terms of this P-37 form (as modified in EXHIBIT A) and/or attachments and amendment thereof, the terms of the P-37 (as modified in EXHIBIT A) shall control.
- 20. THIRD PARTIES. The parties hereto do not intend to benefit any third parties and this Agreement shall not be construed to confer any such benefit.
- 21. 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.
- 22. SPECIAL PROVISIONS. Additional or modifying provisions set forth in the attached EXHIBIT A are incorporated herein by reference.
- 23. 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.
- 24. 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.

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:

This contract is subject to U.S. Executive Orders 12549 and 12689 "Debarment and Suspension." LandVest, Inc. 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 LandVest, Inc. 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.

By entering into a contract LandVest, Inc. 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.

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) Prepare two separate timberland appraisals/forest inventories that will be critical in the determination of the fair market values of the following properties:

Aaron Ledge

635+/- acres owned by Daniel K. Thorne and locally known as Aaron's Ledge. Identified as Tax Map 40, Lots 713 and 385. The Property was surveyed in 1994, recorded in 2015 at DR04-0166. Further described in a Quitclaim Deed into Daniel K. Thorne recorded July 7, 2022, at Book 2201, Page 4.

Inventory for Aaron Ledge

A parcel level forest inventory for the Aaron's Ledge parcel will be performed. The cruise will be designed to place an evenly spaced grid across the ownership. One point per 6 acres (+/- 105 points)

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Date 11/2/22

will be cast. Statistical confidence is based on the amount of variability found within a sample. This cruise is designed to target a 10% allowable error at an 80% confidence interval.

Final number of designed data points may vary from the estimate based on layout, boundary line encounters, and map adjustments. A 15 Basal Area Factor prism will be used to determine the trees to measure from point center. All trees, live and standing dead, 6 inch or greater at Diameter Breast Height (DBH) determined to be in by the prism will be measured. Living trees 5.51 inches at DBH will be evaluated in 8-foot sections to a 4-inch top for forest products.

Shaw Lot

200+/- acres owned by Jennifer Lyn Shaw, best described as Tax Lot 35, Lot 150-425 and is further described in a Warranty Deed into Jennifer Lyn Shaw recorded June 29, 2015, at Book 1947, Page 304. This property does not been recently surveyed.

Inventory for Shaw Lot

A parcel level forest inventory for the Shaw Lot parcel will be performed. The cruise will be designed to place an evenly spaced grid across the ownership. One point per 5 acres (+/- 40 points) will be cast. It is difficult to get exceptional statistics on small parcels without putting in a lot of points. Statistical confidence is based on the amount of variability found within a sample. This cruise was designed to target a 20% allowable error at an 80% confidence interval.

Final number of designed data points may vary from the estimate based on layout, boundary line encounters, and map adjustments. A 15 Basal Area Factor prism will be used to determine the trees to measure from point center. All trees, live and standing dead, 6 inch or greater at Diameter Breast Height (DBH) determined to be in by the prism will be measured. Living trees 5.51 inches at DBH will be evaluated in 8-foot sections to a 4-inch top for forest products.

- 2) LandVest Cruise Procedures and Specifications as Exhibit B-1, and are incorporated herein.
- 3) LandVest's objectives for a comprehensive inventory include:
 - Quantify, at present, the forest product volumes for the purpose of a timberland appraisal;
 - Derive a current market value of the standing timber based upon the volumes measured and current market rates;
 - Provide timberland values to be utilized for the determination of the fair market value of the fee title to the property by a licensed real estate appraiser.
- 4) Inventory Process and Timeline for both properties:
 - Cruise Design & Map Preparation
 - Data Collection
 - Data Review
 - Map Adjustments



- Volume Calculation and Reporting
- Value Calculation and Reporting

5) Field Data Collection

LandVest will make all preparations necessary to begin field data collection on both properties in the winter of 2022. Estimated start date of fieldwork is December 30, 2022. Fieldwork will take approximately three weeks to complete. Data review, volume calculations, and report preparation will take an additional three weeks with estimated delivery of report on or before February 28, 2023.

6) Data Management Quality Assurance and Quality Control

To ensure contract and specification compliance, LandVest conducts internal audits on all of its inventory projects. LandVest 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 staff with decades of comparable inventory and audit experience.

LandVest intends to use its own staff and possibly 1-2 experienced subcontract cruisers to complete this inventory project. LandVest 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 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 administer who is trained to review cruise data, identify errors, and pass notes made by cruisers to project managers. LandVest collects all field data spatially and tabularly in a GIS database which is backed up nightly

Deliverables

- Raw plot data in an Excel file with a data dictionary;
- Report detailing methodology, stocking & volume of the standing timber resource and
 acceptable growing stock. Report will also include a timber capital value based on the standing
 volume and current market rates to be used by the licensed real estate appraiser for the property
 appraisal.
- 7) Upon completion of the timberland appraisal report submit an electronic report for both lots by February 28, 2023.
- 8) Disregard any perceived pressure from client or landowner to develop a predetermined value or direction in value.

Contractor Initials SQF Date U/2/22

EXHIBIT C METHOD OF PAYMENT

Method of payment shall be as follows:

Upon the completion of the timberland appraisal reports, LandVest, Inc. shall submit an invoice(s) not to exceed \$13,384.80. The following appropriation code shall be referenced on the invoice: 20-07500-21550000-033-500150 Land Acquisitions & Easements.

Invoices will be paid within 30 days of approval.

Contractor Initials 221 Date 11/2/22

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: 0005889088



IN TESTIMONY WHEREOF.

I hereto set my hand and cause to be affixed the Seal of the State of New Hampshire, this 26th day of October A.D. 2022.

David M. Scanlan Secretary of State

Corporate Resolution

I, <u>Christine Bourgeois</u> , 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. 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: 10.31.2022 ATTEST: Chustur Bouyers (Name & Title) Unistine Bourgers CFO/UOU
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CERTIFICATE OF LIABILITY INSURANCE

7/28/2022

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).

		hts to the certificate holder in		uch endorsement(s).		
PRODUCER				NAME: Danielle Ballou		
Fred C. Church				PHONE (AC. No. Ext): 978-322-7168	FAX (A/C, No): 978-454	-1865
41 Wellman Str Lowell MA 018				ADDRESS: dballou@fredcchurch.com		
				INSURER(S) AFFORDING	COVERAGE	NAIC#
				INSURER A: Hartford Fire Insurance Con	mpany	19682
INSURED	 	U	ANDINC-01	INSURER B : National Union Fire Insurar	nce Company of Pittsburg	19445
LandVest, Inc. One Capitol Str	eet Suite 300			INSURER c : Transportation Insurance C	ю.	20494
Concord NH 03				INSURER D : Continental Casualty Comp	pany	20443
				INSURER E :		
				INSURER F :		
COVERAGES		CERTIFICATE NUMBER: 8893	67080	REVI	SION NUMBER:	
				VE BEEN ISSUED TO THE INSURED NA		
CERTIFICATE N	IAY BE ISSUED OR M	MAY PERTAIN. THE INSURANCE	AFFORD	OF ANY CONTRACT OR OTHER DOCU ED BY THE POLICIES DESCRIBED HEF	REIN IS SUBJECT TO ALL T	HE TERMS,
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SR	TYPE OF INSURANCE	ADDL SUB INSD WV	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMIT	s
c	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER:		6016817394	8/1/2022	8/1/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE	\$ 1,000,000 \$ 500,000 \$ 15,000 \$ 1,000,000 \$ 2,000,000
ŀ	X POLICY PRO- JECT LOC					PRODUCTS - COMP/OP AGG	\$ 2,000,000 \$
	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY X AUTOS ONLY X AUTOS ONLY X AUTOS ONLY		6016817413	8/1/2022	8/1/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	\$ 1,000,000 \$ \$ \$
	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION\$ 10 000		6016817380	8/1/2022	8/1/2023	EACH OCCURRENCE AGGREGATE	\$ 10,000,000 \$ 10,000,000 \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBEREXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	08WECAA6FD8	8/30/2022	8/30/2023	X PER OTH- E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	
4	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

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.

LandVest
One Capitol Street, Suite 300
Concord NH 03301

Authorized representative

The Above Described Policies Be cancelled Before the Expiration Date Thereof, Notice will be Delivered in Accordance with the Policy Provisions.

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Aaron Ledge and Shaw Parcels - Springfield NH



- County
- ☐ City/Town

Map Scale



© NH GRANIT, www.granit.unh.edu Map Generated: 11/4/2022



LandVest

FOREST RESOURCES DIVISION

CRUISE PROCEDURES and SPECIFICATIONS

Aaron's Ledge & Shaw Cruises State of New Hampshire NH Fish and Game Department

October 7, 2022

Maria Smerczynski
Forest Resources Manager, Southern New England
NH Lic # 505

Concord, NH

Rick Denial PMP CF Director of Inventory and Analytics Saranac, NY

OVERVIEW AND PURPOSE:

This document is the LandVest cruising procedure and method manual for all cruisers working on the 2022-23 Aaron's Ledge and Shaw's Cruise Project for the 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.

STANDARD PROCEDURES FOR ALL INVENTORY POINTS

POINT LOCATION and MONUMENTATION (ALL POINTS):

- 1. CRUISE LINE DOCUMENTATION:
 - A. This cruise will utilize True North bearings.
- 2. POINT LOCATION:
 - A. Cruise point location shall be by Tablet with GPS activated.
 - Cruiser will set proximity alarm at 25' and take the point when alarm sounds.
 - B. If Tablet is not available, point can be located by GPS.
 - If GPS is used, the last 1.5 chains (+/-100 feet) to the sample point must be navigated by compass and/or pacing to avoid any bias in the location of plot center. An orange ribbon shall be hung at the "Chain in Point" and labeled with "To PT ______ Bearing ____, Distance ____ "

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 camp lawn, 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, or a plot center wire flag. The goal being to last up to 2 years.

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 TALLY:

1. 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

FOREST MANAGEMENT DATA:

Record the forest type at the point. Record overstory and understory forest type using the following codes and nomenclature: FOREST TYPING Record the Overstory and Understory forest type using the following codes and nomenclature: **Cover Type Species Composition:** More than 75% hardwood Hardwood More than 75%, softwood Softwood S 50-75% Hardwood HW Mixed HS SW Mixed SH 50-75% Softwood Size Classes: .51 to 3.50" OBH (1:3% class) Seedling-Sapling 3.51 to 7.50" DBH (4-7" class) Sapling-Poletimber 7.51 to 11.50" DBH (8-11" class) Poletimber-Sawtimber > 12"DBH (12"+ class) Sawtimber Density/Stocking Levels: Fully stocked to Overstocked Falling near the mid-range of the A and B lines A-B Adequately Stocked Falling_near the mid-range of the B and C lines Inadequately stocked but should reach B line in +/- 10 years Very scattered OS that still plays a role in the mgmt of the stand Nomenclature EX: H3A = Hardwood - Poletimber/Sawtimber - Fully Stocked SH2C = 50-75% Softwood - Sapling/Poletimber - Understocked Mixes (2-3, 3-4, etc.) can be used if the size class is truly in between.

MERCHANTABLE TREE DATA:

- 1. BAF: This cruise will utilize a 15 BAF prism for trees at least 4.51 inches DBH (5-inch size class).
- 2. CALIPERS: DBH shall be measured using Calipers.
- 3. LIVE TREES ONLY: Collect data for all live 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.
 - 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 the vadiate 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 tabe. If a borderline tree is found to be out, the tree shall have an "X" marked through the DBH line. If a borderline tree is found to be in, the tree shall have a vertical line marked through the DBH line. Trees identified as cull do not need to be checked. At the project forester's discretion, evidence of checking can be provided by marking the DBH to the nearest 0.1" indicating it was checked.

Check Cruise Tolerance: Missed or extra trees found to be in or out by more than 1' on saw and 2' on pulp shall be an error. For missed extra saw trees, each call is an error. For pulp trees it is 2 points.

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. DIAMETER (ALL POINTS): Diameter must be taken on all live trees with a DBH of 4.51 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

- 8. LEVEL (ALL POINTS): This data call will be used to make Acceptable (A), Unacceptable (U) and Cull (C) calls for the entire tree, not a segment call.
 - (A) Acceptable any tree which now contains saw or flooring and will maintain that volume for the next 10 years. Also use for any tree which does not now contain saw or flooring but has the stem quality & vigor to predict that it will contain saw or flooring at some point in the future as it increases in diameter to achieve the appropriate size at DBH to achieve flooring or sawlog quality stem sections.
 - (U) Unacceptable—any tree, which now contains saw or flooring, but whose vigor at present demonstrates that it will decline in the next 10 years to the point where it will lose saw or flooring volume. Also use for any tree which does not now contain saw or flooring and does not have the quality or vigor so that it will ever contain saw or flooring as it increases in size.

(C) Cull - The entire tree is cull with no merchantable products.

Check Cruise Tolerance: If check cruiser can determine no valid reason for the call

Check Cruise Value: 1 point

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

PRODUCT	SPECIES	MIN. DBH CLASS	MIN. TOP	MIN:-	DESCRIPTION
VENEER	AIIHW	13"	12"	8'	4CLF, Straight and Sound, No Rot, No Defects
CANAGERA	ALL HW	12"	10"	8'	Min 2 CLF, max 25% internal defect, Straight (max 4" sweep)
SAWTIMBER	All SW	10"	/ 81 \		Min 2 CLF, max 25% internal defect, Straight (max 4" sweep)
TOTALLET	ALL HW	10"	8: 1	₹8'	Straight (max 4" sweep) and Sound, Minimal internal defect or rot, 0-1 CL
TIE/PALLET	PINE	10"	\ 8"\ 1		Straight (max 4" sweep) and Sound, Minimal internal defect or rot, 0-1 CLI
PULPWOOD	ALL SPECIES	5"	1	1 8	24" maximum diameter, call pulpwood above sawtimber to merhcantable hgt.
CULL	ALL SPECIES	5"	136	8,	If Entire Tree, tally species, level 'C' & Dia.

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.

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.

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.



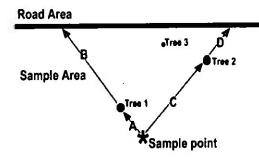
APPENDIX

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



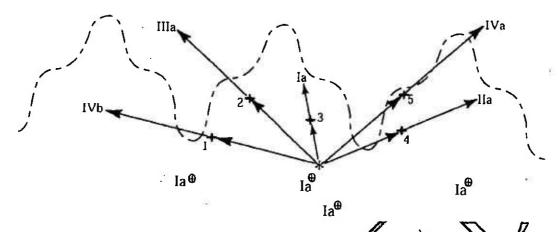
In the case of Tree 1, the cruiser measures the distance from point center to the center of Tree 1 at DBH (A). The cruiser also measures the distance from the center of Tree 1 to the road boundary (B). If distance A is smaller than distance B; that is, if the tree is closer to point center than the boundary, 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 (2). 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

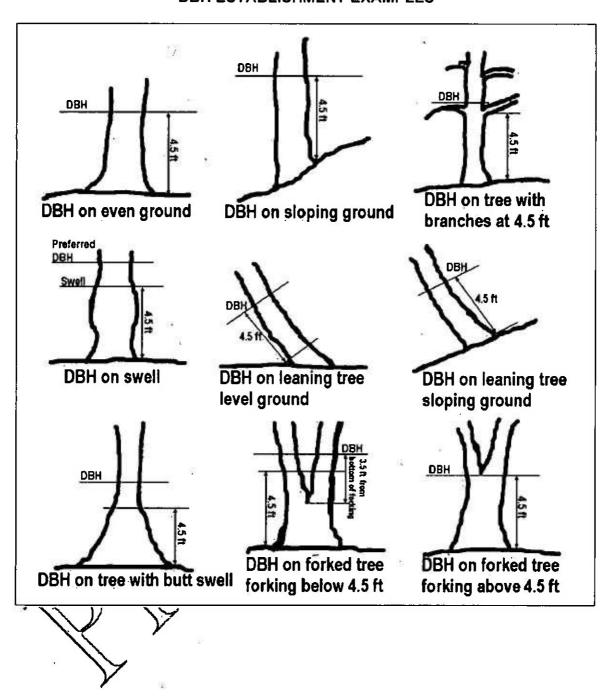
	Is it possible that the tallied object is closer to to la. NO – No action needed. Tally the object normally.	Ib. YES - Proceed to II.	
1 	Measure the distance from the sample point to the object – call the the boundary, continuing on the same bearing	s distance x. Now measure the distance from the obje	ect t
400	NO - No action needed. Tally the object normally.	YES - Proceed to III.	
ĬIII	Does the boundary curve back ac	ross the walkthrough line?	Œ
	- 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 e bearing, onto a point where that location can be clearly id	quals the previously measured distance x along the s entified its the walkthrough point inside the tract?	am
)			

SPECIES CODES

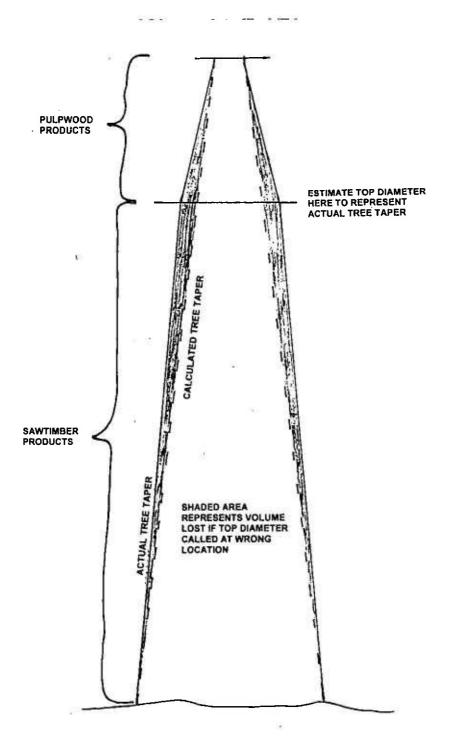
QA QUAKING ASPEN BW BASSWOOD BF BALSAM FIR AB BEECH BC BLACK CHERRY BA BLACK/BROWN ASH SP SPRUCE WC NORTHERN WHITE CEDAR EH HEMLOCK SM HARD (SUGAR) MAPLE OH OTHER HARDWOOD OS OTHER SOFTWOOD RM RED (SOFT) MAPLE RP RED PINE RO RED OAK SC SCOTCH PINE WO WHITE OAK HI HICKORY TA (TAMARACK WA WHITE BIRCH-PAPER PB BIRCH WP WHITE PINE (WP WHITE PINE (XB YÈLLOW BIRCH			
BF BALSAM FIR AB BEECH BC BLACK CHERRY BA BLACK/BROWN ASH SP SPRUCE WC NORTHERN WHITE CEDAR EH HEMLOCK SM HARD (SUGAR) MAPLE OH OTHER HARDWOOD OS OTHER SOFTWOOD RM RED (SOFT) MAPLE RP RED PINE RO RED OAK SC SCOTCH PINE WO WHITE OAK HI HICKORY TA TAMARACK WA WHITE BIRCH-PAPER BIRCH PB BIRCH WP WHITE PINE	QA	QUAKING ASPEN	
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			1
YB YELLOW BIRCH			
	, Y.B	YEULOW BIRCH	J
	11		



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 S©1

 $LD = DBH \times (B)$

Where (B) is (SCF x,LDF)