

TIMBER INVENTORY

CLIENT *Morris Estate*

PROPERTY *Morris Tract (#15672)*

LOCATION *Campbell County, Virginia*

REPORT DATE *June 30, 2016*



PROPERTY OF MORRIS ESTATE
284.68 ACRES
EFFECTIVE DATE: JUNE 27, 2016





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June 30, 2016

Herbert & Shirley Morris Estate
c/o Mr. Russell McBride
Damascus Realty & Auctions
P.O. Box 776
Damascus, Virginia 24236

RE: Timber Inventory of the Morris Estate property identified as Tax Map 72 Parcel 3 and Tax Map 73 Parcel 3 and referred to as Morris Tract (#15672) located in Campbell County, Virginia (F&W Project # 70-2693).

Dear Mr. McBride:

As requested, we have completed the timber inventory and timber valuation of the Morris Estate property, Morris Tract (#15672) located in Campbell County, Virginia effective June 27, 2016. The purpose of this inventory is to provide timber volumes for a timber valuation. The product specifications used for the inventory are included.

The inventory is based on 102 plots systematically established over the property. In the merchantable stands, 102 plots were established over the 159.88 merchantable acres, for an average of 1.57 acres per plot. This sampling intensity resulted in a mean of 74.10 tons per acre \pm 8.0% at a 90% confidence level for the timber in the merchantable stands. The property contains 58.01 acres of premerchantable hardwood stands. After visiting these stands, it was determined that there was no commercial timber value thus the stands were not inventoried.

The timber prices used were based on sales handled by the Charlottesville office of F&W Forestry over the past year.

There are 284.68 total acres on the property inventoried consisting of 217.89 forested acres of which 159.88 acres are merchantable and 58.01 acres are in premerchantable natural hardwood. The 58.01 premerchantable acres have no commercial timber value. Our opinion of value for the timber on 217.89 forested acres on the Morris Tract (#15672) is \$190,000 or \$872.00 per forested acre.

The values in this report should not be used for any purpose for which a state-certified appraisal is required or for which the Uniform Standards of Professional Appraisal Practice should be followed. This value represents our opinion of the current timber value as outlined above.

If you have any questions, please do not hesitate to contact us.

A handwritten signature in black ink that reads 'E. Glen Worrell, Jr.'.

E. Glen Worrell, Jr., CF, ACF
Charlottesville Branch Manager
Virginia Real Estate Broker

Enclosures

EXECUTIVE SUMMARIES

Inventory Executive Summary

Client: Morris Estate
Property Owner: Morris Estate
Property Name: Morris Tract (#15672) Entire Tract
Location: Campbell County, Virginia
Area: 284.68 Acres
Effective Date: June 27, 2016

Land

Timbered

Upland	217.89	Acres
Total	217.89	Acres

Non-Timbered

Water	1.17	Acres
Road	1.28	Acres
Homesite/Cemetery	2.41	Acres
Open Field	61.93	Acres
Total	66.79	Acres

Total Land 284.68 Acres

Total Premerchantable Area with no Timber Value	58.01	Acres
Total Merchantable Area	159.88	Acres
Total Other Area	66.79	Acres
Total Tract Area	284.68	Acres

Merchantable Timber

Species	Product	Quantity	Unit
Pine			
	Pulpwood	3,412.60	Tons
	Large Sawtimber - Virginia Pine	79.90	Tons
	Virginia Pine - Grade 1 (CNS)	42.90	Tons
	Large Sawtimber - Shortleaf Pine	344.50	Tons
	Shortleaf Pine - Grade 1 (CNS)	60.70	Tons
	Topwood	60.80	Tons
	Total Pine	4,001.40	Tons
Hard Hardwood			
	Pulpwood (wo/tops)	2,117.90	Tons
	Hard Hardwood Sawtimber	298.80	Tons
	Northern Red Oak Sawtimber	179.60	Tons
	Southern Red Oak Sawtimber	420.60	Tons
	Misc. Red Oak Sawtimber	211.50	Tons
	White Oak Sawtimber	1,410.20	Tons
	Chestnut Oak Sawtimber	931.50	Tons
	Total Hard Hardwood	5,570.10	Tons
Soft Hardwood			
	Pulpwood (wo/tops)	1,260.00	Tons
	Soft Hardwood Sawtimber	124.30	Tons
	Yellow-Poplar Sawtimber	953.00	Tons
	Total Soft Hardwood	2,337.30	Tons
Grand Total		11,908.80	Tons

For more detailed volume information see the "Volume Summary" section of this report.



Timber Valuation Executive Summary

Client: Morris Estate
Property Owner: Morris Estate
Property Name: Morris Tract (#15672) - Tract Summary
Location: Campbell County, Virginia
Area: 284.68 Acres
Effective Date: June 27, 2016

Land

Timbered (includes cutover acreage)

Upland	217.89	Acres
Total	217.89	Acres

Non-Timbered

Water	1.17	Acres
Road	1.28	Acres
Homesite/Cemetery	2.41	Acres
Open Field	61.93	Acres
Total	66.79	Acres

Total Land 284.68 Acres

Total Premerchantable Area with no Timber Value	58.01	Acres
Total Merchantable Area	159.88	Acres
Total Cutover Area	0.00	Acres
Total Site Prepared Not Planted Area	0.00	Acres
Total Other Area	66.79	Acres
Total Tract Area	284.68	Acres

Merchantable Timber

Species	Product	Quantity	Unit	Unit Value	Total Value
Pine					
	Pulpwood	3,412.60	Tons	\$ 12.50	\$ 42,657.50
	Large Sawtimber - Virginia Pine	79.90	Tons	\$ 15.00	\$ 1,198.50
	Virginia Pine - Grade 1 (Chip-N-Saw)	42.90	Tons	\$ 13.00	\$ 557.70
	Large Sawtimber - Shortleaf Pine	344.50	Tons	\$ 20.00	\$ 6,890.00
	Shortleaf Pine - Grade 1 (Chip-N-Saw)	60.70	Tons	\$ 16.00	\$ 971.20
	Topwood	60.80	Tons	\$ 12.50	\$ 760.00
	Total Pine	4,001.40	Tons		\$ 53,034.90
Hard Hardwood					
	Pulpwood (wo/tops)	2,117.90	Tons	\$ 6.00	\$ 12,707.40
	Hard Hardwood Sawtimber	298.80	Tons	\$ 22.00	\$ 6,573.60
	Northern Red Oak Sawtimber	179.60	Tons	\$ 28.00	\$ 5,028.80
	Southern Red Oak Sawtimber	420.60	Tons	\$ 25.00	\$ 10,515.00
	Misc. Red Oak Sawtimber	211.50	Tons	\$ 23.00	\$ 4,864.50
	White Oak Sawtimber	1,410.20	Tons	\$ 28.00	\$ 39,485.60
	Chestnut Oak Sawtimber	931.50	Tons	\$ 23.00	\$ 21,424.50
	Total Hard Hardwood	5,570.10	Tons		\$ 100,599.40
Soft Hardwood					
	Pulpwood (wo/tops)	1,260.00	Tons	\$ 8.00	\$ 10,080.00
	Soft Hardwood Sawtimber	124.30	Tons	\$ 20.00	\$ 2,486.00
	Yellow-Poplar Sawtimber	953.00	Tons	\$ 25.00	\$ 23,825.00
	Total Soft Hardwood	2,337.30	Tons		\$ 36,391.00
Total Merchantable Timber		11,908.80	Tons		\$ 190,025.30

Total Tract Timber Value \$ 190,025.30
Rounded To \$ 190,000.00
Timber Acres 217.89 Per Acre \$ 872.00

For more detailed volume information see the "Volume Summary" section of this report.



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INTRODUCTION

OBJECTIVE

The objective of this report is to estimate the current timber volume and value for the timber on the property.

FUNCTION

The function of this report is to provide timber volumes and valuation for a valuation for the Morris Estate property known as Morris Tract (#15672) located in Campbell County, Virginia.



METHODOLOGY

INVENTORY DESCRIPTION

EFFECTIVE DATE OF THE INVENTORY

The inventory is effective as of June 27, 2016.

DATA COLLECTION DATE

The inventory began on June 24, 2016 and was completed on June 27, 2016.

INVENTORY PERSONNEL

The inventory was carried out by: Christopher Reid (#171), David Colli (#437), Charles Carpenter (#549) and Sean Nolan (#634). Glen Worrell (#173) is the project manager for this inventory.

INVENTORY DESIGN

MERCHANTABLE TIMBER

Definition, Sample Numbers, Intensity, Type, Size and Grid

Merchantable stands, both natural and planted, are defined as those greater than or equal to 15 years of age as of June 27, 2016. A total of 102 VPR-type samples were placed on the property. Samples were located on a rectangular grid measuring 4 chains-by-4 chains (1 chain = 66 feet), resulting in one sample per 1.6 acres. A detailed description of the cruise intensity and other specifications are provided in Appendix A. All field data is identified by individual plot number and was recorded individually onto hand held data recorders (HDRs).

Sample Data Collected

- (1) On every plot the following measurements were recorded: species, product, and DBH. Tree diameters were tallied to the nearest 1-inch diameter class (e.g., 5" class = 4.6 to 5.5).
- (2) On every 2nd plot merch height (for large sawtimber trees only) and total height were assigned.
- (3) All trees in the 2-inch diameter class and larger were measured (≥ 1.6 inches).

PREMERCHANTABLE TIMBER

Definition, Sample Numbers, Intensity, Type, Size, and Grid

Premerchantable stands, both planted and natural, are defined as stands less than 15 years of age as of June 27, 2016. There are two stands on the property that are premerchantable, but after inspecting them it was determined that there was no commercial timber value thus the stands were not inventoried.



CRUISE INSTRUCTIONS

A copy of the cruise instructions provided to the field foresters is included in Appendix A.

PLOT MONUMENTING

All plots were marked with flagging at eye level and the actual center point on the ground, with the plot and cruiser numbers written on eye level flagging. The points of entry into and exit from the woods were also marked, as well as where woods roads were crossed. GPS units were used to determine plot placement. In the event plots were not marked in the field, they were noted on individual forester's cruise maps.

ACREAGE DETERMINATION

Tract Acres

Tract acres for the Morris Tract (#15672) were obtained from a survey prepared by Russell E. Nixon dated October 23, 2015 and provided by the client.

Stand Acres

The acreages of the individual stands were calculated as follows:

- (1) Initial estimates of the stand acreages were obtained by the use of F&W's GIS system applied to the stand boundaries on the type map.
- (2) These initial acreages were then summed and the difference between the total of the stand acres and the total tract acreage was calculated.
- (3) This acreage difference was then allocated to each of the stands proportionately based on the stand's size.

REGIONAL PRODUCT SPECIFICATIONS

The regional product specifications are the volume units and product dimensions in common use in the area. Timber in this region is commonly traded in tons although some hardwood still trades in thousand board feet (MBF). For this report, all volumes are reported in tons. The product specifications for this inventory are included in Appendix B.

DATA PROCESSING

DATA ORGANIZATION

Sampled Stands

Samples were entered into the inventory database by the stand, compartment, and tract in which they fell. Strata specific height regressions were calculated based on the entire ownership.

Unsampled Stands

Stand volumes were predicted in merchantable stands that did not receive plots during the inventory. These volumes were averaged from similar stands on the same compartment. If a compartment did not contain a similar stand type from which to predict, the nearest compartment containing that stand type was used.



VOLUME AND WEIGHT CALCULATIONS

Volumes were calculated using published volume equations appropriate for the species and physiographic region, if available. If appropriate equations were not available for the particular species and physiographic region, equations for similar species and physiographic regions were substituted.

TIMBER VALUATION

MERCHANTABLE TIMBER

Objective

Provide value estimates, effective June 27, 2016 for merchantable timber (15 years of age and older) for the Morris Tract (#15672).

Process

Using the timber volumes determined as outlined above, apply appropriate unit prices by product.

Timber Prices

Timber prices can change quickly. For this valuation, trend prices were used to represent the average price of the various products over the past 12 months. The trend prices were derived using data from timber sales handled by F&W during the period and then adjusted to reflect the quality, quantity, and access conditions of the Morris Tract (#15672). The unit prices used for valuation are reported in the following table.

TABLE 1. TIMBER PRICES

Product Description	Unit	Unit Price
<i>Pine Products:</i>		
Pine Pulpwood	Tons	\$12.50
Large Pine – Virginia Pine	Tons	\$15.00
Virginia Pine – Grade 1 (Chip-N-Saw)	Tons	\$13.00
Large Sawtimber – Shortleaf Pine	Tons	\$20.00
Shortleaf Pine – Grade 1 (Chip-N-Saw)	Tons	\$16.00
Pine Topwood	Tons	\$12.50
<i>Hardwood Products:</i>		
Hard Hardwood Pulpwood	Tons	\$6.00
Hard Hardwood Sawtimber	Tons	\$22.00
Northern Red Oak Sawtimber	Tons	\$28.00
Southern Red Oak Sawtimber	Tons	\$25.00
Mics. Red Oak Sawtimber	Tons	\$23.00
White Oak Sawtimber	Tons	\$28.00
Chestnut Oak Sawtimber	Tons	\$23.00
Soft Hardwood Pulpwood	Tons	\$8.00
Soft Hardwood Sawtimber	Tons	\$20.00
Yellow-Poplar Sawtimber	Tons	\$25.00

PREMERCHANTABLE TIMBER

After a field inspection it was determined that there was no commercial value in the 58.01 acres of approximate 10 year old mixed hardwood stands.



PROPERTY DESCRIPTION

TRACT LOCATION AND ACREAGE

The Morris Estate property, Morris Tract (#15672) is located in Campbell County, Virginia. This property contains a total of 284.68 acres. Total tract acres used in this report were obtained from a survey provided by the client.

TOPOGRAPHY & DRAINAGE

The property is located within the piedmont physiographic region. Below is a table listing the stands and land types, acres, percent of acres, and comments on the land types.

TABLE 2. SUMMARY OF FOREST TYPE AND ACRES.

Stand No.	Forest Type	Acreage	Percent	Comments
1	NUMH-1950	66.84	23.5	Well hardwood stand
2	NUMH-2005	36.34	12.8	Young hardwood
3	Open	61.93	21.6	Open Fields
4	Homesite	2.10	0.7	Home
5	Cemetery	0.31	0.1	Cemetery
10	NUMP/MH-1995	61.49	21.6	Natural pine and mixed hardwood
11	NUVP-1965	2.00	0.7	Mature Virginia pine
12	NUMH-1960	15.91	5.6	Hardwood timber with scattered pine
13	NUMH-1950	13.64	4.8	Streamside Management Zone
14	NUMH-2005	21.67	7.6	Young hardwood
15	Road	1.17	0.4	Easement through property
16	River	1.25	0.4	Water
	Total	284.68	100.00	



ASSUMPTIONS AND LIMITING CONDITIONS

No responsibility is assumed for matters legal in character nor is any opinion rendered as to title.

Whereas the information in this report is considered to be reliable to the best knowledge of the forester, it is not guaranteed.

Possession of this report, or any copy thereof, does not carry with it the right of publication, reproduction, and/or the right to use in court nor may it be used by anyone other than the addressee for any purpose whatsoever without the expressed written consent of the forester.

The forester, by reason of this report, is not required to give testimony or attendance in court with reference to the property described herein, unless prior written consent and arrangements have been made.

Neither all nor any part of the contents of this report or copy thereof, shall be conveyed to the public through advertising, public relations, news, sales, or other media, without the written consent and approval of the author, particularly as to volumes and acres, the identity of the forester, or the firm with which he is connected.

The volumes, weights, and tree counts contained herein are based on sample points placed across the property and expanded, using published weight and volume equations, to estimate the volume for the entire property. The volumes, acreages, and other information can vary from actual for statistical reasons, weight variances from published equations, form difference from published equations, changes in markets, the mill to which the products are delivered, the logger that harvests the trees, or other reasons.

The actual variability in volume may be greater than that expressed by the reported statistical accuracy for reasons such as non-sampling coverage error. Non-sampling coverage error is a non-sampling error that arises because of a failure to include some units, or entire sections, of the defined survey population in the actual sampling frame. The likelihood for such additional variation increases as the total number of samples decreases and/or the acres per plot ratio increases. There is no statistical formula to quantify this variability; however, such additional variability is inherent in all timber inventory estimates.

Rounding differences between reporting programs may result in minor volume differences between the executive summary, volume, and other reports.

The tract acreages and tract boundaries relied upon in this inventory report are believed to be from reliable sources; however, the tracts were not surveyed, and it was necessary to rely on information furnished by others as to said data; therefore, the volumes, acreages, and other information reported are subject to the correctness and verification of said data.

The individual stand acreages in this report are based on polar planimetry, digitizing, or calculated by a GIS system, and then conformed to the reported tract acreages or other sources and are believed to be reliable; however, the individual stands were not surveyed and the boundaries of stands were mapped from field pacing or aerial photographs and are subject to pacing errors, scale errors, or photo interpretation errors.

The designations of stand origin, land type, dominant and secondary species, year of origin, and other land class designations are based on field observations or on information provided by others and are believed to be reasonably accurate; however, it is not possible to visit all stands or all parts of any stand, and the designations are our



estimates of the stand characteristics based on those portions of the stand observed, on aerial photograph observations, or other sources.

The forester has visually inspected, as far as possible, the land and timber; however, it was not possible to personally observe conditions beneath the soil or hidden defects or foreign material in the timber. Therefore, no representations are made herein as to those matters, and unless specifically considered in this report, the volumes and acreages reported are subject to any such conditions that would cause a change in volumes or acreages.




CERTIFICATION

We certify that, to the best of our knowledge and beliefs,...

- ✦ The statements of fact contained in this report are true and correct.
- ✦ The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and is our personal, unbiased professional analyses, opinions, or conclusions.
- ✦ We have no present or prospective interest in the property that is the subject of this report, and have no personal interest or bias with respect to the parties involved.
- ✦ No one provided significant professional assistance to the undersigned other than employees of F&W Forestry Services, Inc. and contractors engaged by F&W Forestry Services, Inc.
- ✦ **The values in this report should not be used for any purpose for which a state-certified appraisal is required or for which the Uniform Standards of Professional Appraisal Practice should be followed.**

Respectfully submitted,



E. Glen Worrell, Jr., CF, ACF
Charlottesville Branch Manager
Virginia Real Estate Broker



E. GLEN WORRELL, JR.

EDUCATION

Graduated with a Bachelor of Science degree in Forestry, option -- Business, from Virginia Polytechnic Institute and State University in 1992.

Obtained Master of Science degree in Forest Resource Economics from Virginia Polytechnic Institute and State University in 1997.

EMPLOYMENT

- 1987-1992 Laboratory Assistant, Department of Forestry, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
- 1989-1990 Cooperative Education Work Program, Virginia Department of Forestry, Waverly, Virginia.
- 1992-1994 Graduate Research Assistant, Department of Forestry, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
- 1994-1995 Field Forester, National Resources Consultants, Inc., Charlottesville, Virginia.
- 1995-1996 Executive Vice-President, National Resources Consultants, Inc., Charlottesville, Virginia.
- 1996-2001 Manager, National Resources Consultants, Virginia Branch of F & W Forestry Services, Inc., Charlottesville, Virginia.
- 2001-Present Manager, F & W Forestry Services, Inc., Charlottesville, Virginia.

REGISTRATIONS/CERTIFICATIONS

Society of American Foresters Certified Forester #2043; West Virginia Registered Forester #363, North Carolina Registered Forester #1339, Maryland Licensed Forester, #620; Virginia Real Estate Broker # 0225-052411; Virginia Certified Prescribed Burn Manager #64; South Carolina Prescribed Burn Manager #783.



APPENDICES



APPENDIX A: CRUISE INSTRUCTIONS

CRUISE INSTRUCTIONS : FORM I - 4

Job #	70-2693	Date	June 22, 2016
Tract(s)	Morris Tract (#15672)	Client	Morris Estate
Purpose	Timber Inventory		

CRUISE SPECIFICATIONS								
Strata type	Ages	Grid Line*Plot	Plot Type	Plot Size BAF/Acre	Min. DBH Pine Hwd	Radial Growth	Intensive Plot Meas. Freq.	Duel Plots
Pre-Merch Pine	0-9	4 X 4	Fixed	1/40			Tally	
Pre-Merch Pine and Hardwood	10-14	4 X 4	Fixed	1/40	2" 2"		2nd	NO
Merch Pine and Hardwood	15+	4 X 4	BAF	10	2" 2"		2nd	NO

	F & W Standard	Non-Standard (Attached)
Mapping Codes	x	
Species Codes	x	
Product Specifications		See below

***** Do Not Inventory *****	
Cypress Heads/Ponds	
15-19 Yr-Old Sm. Sawtimber	
Cutover Hardwood < Age 20	
SMZ	
Other	

Required Forms	
Tract Inspection Form	None
ESA Forms	None
Other	None

Inventory the Following Species, Product and Grade Combinations							
Product	Grade	100	200	300	400	500	600
4		x		x		x	x
1		x		x		x	x
2							
3		x		x		x	x
9		x	x	x	x	x	x

***** Special Instructions *****	
Use species code 310 for Cypress.	
Cruise Small ST as Product 3 Grade 1	
Total height on Hardwood to 4" top.	
Total height on Pine to tip.	



FIELDS TO ENTER ON HDR

MEASUREMENTS FOR EVERY PLOT											
Species	Product	Grade	DBH	Merch Height	Total Height	Crown Class	Radial Growth	Age	No. Trees	Damage	Condition
100	x	x	x								
300	x		x								
500	x	x	x								
600	x	x	x								

MEASUREMENTS FOR HEIGHT PLOTS											
Species	Product	Grade	DBH	Merch Height	Total Height	Crown Class	Radial Growth	Age	No. Trees	Damage	Condition
100	x	x	x	x	x						
300	x		x	x	x						
500	x		x	x	x						
600	x		x	x	x						

MEASUREMENTS FOR HEIGHT AND GROWTH PLOTS											
Species	Product	Grade	DBH	Merch Height	Total Height	Crown Class	Radial Growth	Age	No. Trees	Damage	Condition
100							x				
300											
500											
600											

Additional Instructions

***** Tally heights on all trees for species not well represented in the inventory (i.e. hardwoods in a pine plantation) *****

Tally Small Sawtimber as Product 3 Grade 1



APPENDIX B: PRODUCT SPECIFICATIONS

PRODUCT SPECIFICATIONS - F&W JOB #70-2693

PINE PRODUCT	DBH		CRUISE TO:		MINIMUM	MINIMUM	FORM	
	MINIMUM	MAXIMUM	MERCH HT	TOTAL HT	TOP DOB	LENGTH	CLASS	COMMENTS
PULPWOOD	4.60	22.59	-	Tip	3.00	16		
SMALL SAWTIMBER	8.60	12.59	-	Tip	6.00	24		WHOLE TREE MUST BE REASONABLY STRAIGHT, FIRST 20' MUST BE STRAIGHT AND CLEAR OF ANY DEFECT > 2" DEEP. CRUISE TO SPECIFIED TOP, UNLESS SEVERE CROOK, SWEEP, OR DEFECT FORCES AN EARLIER CUTOFF.
LARGE SAWTIMBER	12.60	+	8.00	Tip	8.00	16		WHOLE TREE MUST BE REASONABLY STRAIGHT. DEDUCT FOR DEFECT, ANY SWEEP > 6" IN A 12' SECTION, AND CROOK. STOP AT FIRST LIVE WHORL THAT HAS LESS THAN 8' OF CLEAR MATERIAL ABOVE IT.

HARDWOOD PRODUCT	DBH		CRUISE TO:		MINIMUM	MINIMUM	FORM	
	MINIMUM	MAXIMUM	MERCH HT	TOTAL HT	TOP DOB	LENGTH	CLASS	COMMENTS
HARD PW	5.60	22.59	4.00	4.00	4.00	16		
SOFT PW	5.60	22.59	4.00	4.00	4.00	16		
HARD ST	11.60	+	10.00	4.00	10.00	16		MUST BE FREE OF ROTTEN BRANCHES, HOLES AT STUMP, BAD SWEEP OR CROOK.
SOFT ST	11.60	+	10.00	4.00	10.00	16		MUST BE FREE OF ROTTEN BRANCHES, HOLES AT STUMP, BAD SWEEP OR CROOK.

CYPRESS PRODUCT	DBH		CRUISE TO:		MINIMUM	MINIMUM	FORM	
	MINIMUM	MAXIMUM	MERCH HT	TOTAL HT	TOP DOB	LENGTH	CLASS	COMMENTS
PULPWOOD	6.00	22.59	-	Tip	3.00	24		
SMALL SAWTIMBER	8.60	12.59	-	Tip	5.00	24		WHOLE TREE MUST BE REASONABLY STRAIGHT, FIRST 20' MUST BE STRAIGHT AND CLEAR OF ANY DEFECT > 2" DEEP. CRUISE TO SPECIFIED TOP, UNLESS SEVERE CROOK, SWEEP, OR DEFECT FORCES AN EARLIER CUTOFF.
LARGE SAWTIMBER	12.60	+	8.00	Tip	8.00	16		WHOLE TREE MUST BE REASONABLY STRAIGHT, FIRST 20' MUST BE STRAIGHT AND CLEAR OF ANY DEFECT > 2" DEEP. STOP AT FIRST LIVE WHORL THAT HAS LESS THAN 8' OF CLEAR MATERIAL ABOVE IT.

Pine Cord Conversion

Hardwood Cord Conversion

1. POLES ARE TREES OF ABOVE AVERAGE STRAIGHTNESS AND QUALITY THAT HAVE 2.75 TO 3 TIMES THEIR DBH IN CLEAR, STRAIGHT STEM. ONCE THEY ARE CLASSIFIED

AS A POLE, CRUISE THEM TO THE SMALL OR LARGE SAWTIMBER SPECS, WHICHEVER IS APPROPRIATE.

2. JUMP BUTTING IS PERMISSIBLE IF DEFECT IS WITHIN 1st 10 FEET OF STEM.

3. LOGS MUST BE STRAIGHT ENOUGH TO SQUARE INTO A CANT IN 8, 10, 12, 14, 16, OR 18' SECTIONS.

4. IF DEFECT IS LESS THAN 4' OF THE STEM, DEDUCT NO LENGTH. IF > 4', ROUND TO NEAREST 1/2 LOG.

5. CRUISE THE DOMINANT FORK OF A TREE IF THE STEM IS >=75% OF THE TREE BEFORE THE FORK. OTHERWISE, TOP THE TREE AT THE FORK.

APPENDIX C: MAPS AND VOLUMES

