

# Beltrami County NRM Timber Appraisal

<b>Appraised By:</b> Nick Ronning <b>Appraisal Date:</b> 02/07/2024	<b>Sale Type:</b> REGULAR AUCTION SALE <b>Auction Date:</b> 04/04/2024 <b>Access:</b> Public Access	<b>Appraisal Number:</b> Polaris Hardwoods <b>Permit Number:</b> 224015 <b>Expiration Date:</b> 04/04/2026
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**Legal Description**

RE Code	Sec.	Twp.	Rge.	School	City/Twp	Subd
	4	149	33	31	Nebish	SWNW
	5	149	33	31	Nebish	SW 1/4

Block 1 Species	Volume	Units	Unit Price	Value	Comments	Bolt %	Bid
Aspen pulp	490	Cords	\$24.00	\$11,760.00	Includes < 2% BG		^
Birch Pulp & Bolts	220	Cords	\$10.00	\$2,200.00	Should be some bolts, if sound		^
Basswood pulp	95	Cords	\$10.00	\$950.00			^
Balsam pulp	85	Cords	\$10.00	\$850.00			#
Ash pulp	20	Cords	\$10.00	\$200.00			^
Maple pulp	20	Cords	\$10.00	\$200.00			^
Oak pulp	20	Cords	\$10.00	\$200.00			^
White Spruce pulp	10	Cords	\$10.00	\$100.00	Includes Black Spruce		#

\$16,460.00    **Subtotal**

**Total Cords: 960 Total MBF: 0**

\$16,460.00    **Total**

\$2,469.00    **15% Down Payment**

Bid Symbols: ^ = Bid Species; # = Non-Bid Species; + = Sold Area Estimate; \* = Sold Area Estimate & Non-Bid Species  
All species woodsrun unless listed otherwise.

**Species Scaled:** Ash pulp, Aspen pulp, Balsam pulp, Basswood pulp, Birch Pulp & Bolts, Maple pulp, Oak pulp, White Spruce pulp

**Species SAE:**

<b>Operability:</b>	Late Sumer to Break Up: Aug 1 - Breakup	<b>Soil Type:</b>	Loam, Fine Sandy Loam, Loamy Fine Sand, Muck
<b>Topography:</b>	rolling		
<b>Acres:</b>	67		

**DRAIN**

<b>Type:</b> REGULAR AUCTION SALE	<b>Acres Cut:</b> 67.00
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Total: 67.00

**Harvest Specifications**

Access
• Latitude/Longitude – Primary access location is Lat. 47.747N, by Long. 94.893W. Easy Access off Polaris Road. North part of sale is Cedar with Ash and Aspen. Will require hard freeze to operate. Haul Road around north end of sale will also require hard freeze to truck or skid. Parts of sale can be operated dry summer/fall but long skids would be needed. No new haul roads will be built.

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## Cutting and Skidding

- Logging Damage - Logging damage is injury to 30% or more of the crown; or bark damage exposing cambium of 50 sq.in. or more; or damage causing lean of more than 5 degrees from original. Damage to reserve trees, as identified on the Appraisal form, may be subject to a \$25/tree penalty
  - Reserve tree cutting penalty - Cutting any marked or designated leave tree without pre-approval by the Forester may be subject to a \$50.00/tree penalty. On area estimate sales, reserve trees approved for cutting by the Forester must be measured or field scaled for billing at contract rates.
  - Stay within Boundaries - Unless approved in advance by the Forester, all harvest activities shall be confined to within the marked boundary. Access roads, skid trails and landing areas proposed for use outside the harvest boundary must be approved prior to use. Failure to comply with these requirements may be subject to a \$100 penalty per incident.
  - Stumps – Average stump heights below 12" and as low as possible.
- Trees in Thinning area must be limbed and topped before skidding to minimize damage to reserve trees.

## Harvest and Reserves

Blue Paint Boundary. Sale consists of a seed tree regen cut to the north and a Hardwood Thinning to the west.

Regen Cut: Reserve only Blue Painted Trees, Pine, Cedar, and Birch smaller than 8" DBH. Must cut all Aspen and Balm with live buds.

Hardwood Thinning: Cut Red Marked trees + Cut Aspen and All BG with live buds. Cut All BF & SP > 3 sticks. Cut Ash and Birch > 6"DBH.

Vertical Red Marks = Skid Trails to be cut out about 12 feet wide.

Hardwood Thinning: Reserve and do not damage: All Blue Painted trees, Unmarked Hardwoods, Pine, Cedar. Damaged Reserve Trees will not be added to sale. Logger may choose to reserve smaller diameter aspen for future harvest.

## Landings, Access Roads, and Skid Trails

- General Road/trail BMP - A combination of road drainage BMPs may be applicable which will provide erosion protection.
- Landings Approved – Landing locations must be approved in advance by the Forester. Sale plan includes 4 landings

## Site, Soil, and Water Protection

- Small wetlands –there are numerous small wet areas inside, adjacent to and between harvest areas. Filter Strips must be protected from soil disturbance. Frozen operations preferred, dry firm acceptable, limited use of mats or corduroy must be approved by Forester.

## Slash Disposal

Lop and Scatter Slash to within 2' of ground. Scattered Slash Piles (20'x20'x10') for birds and small mammals are encouraged.

## Tree Size, Marketing, and Special Conditions

- 4 inch TDIB – Utilize all material from butt to a 4" top diameter inside bark.
- No excess culling – Cutting long Butts or oversize tops to produce higher quality product must be done to retain marketable lengths of lower value pulp or firewood. Culling which leaves excessive amounts of wood in unmarketable lengths may be subject to a \$10.00 per piece penalty, unless the material is loaded and hauled off site based upon an estimated cord volume.

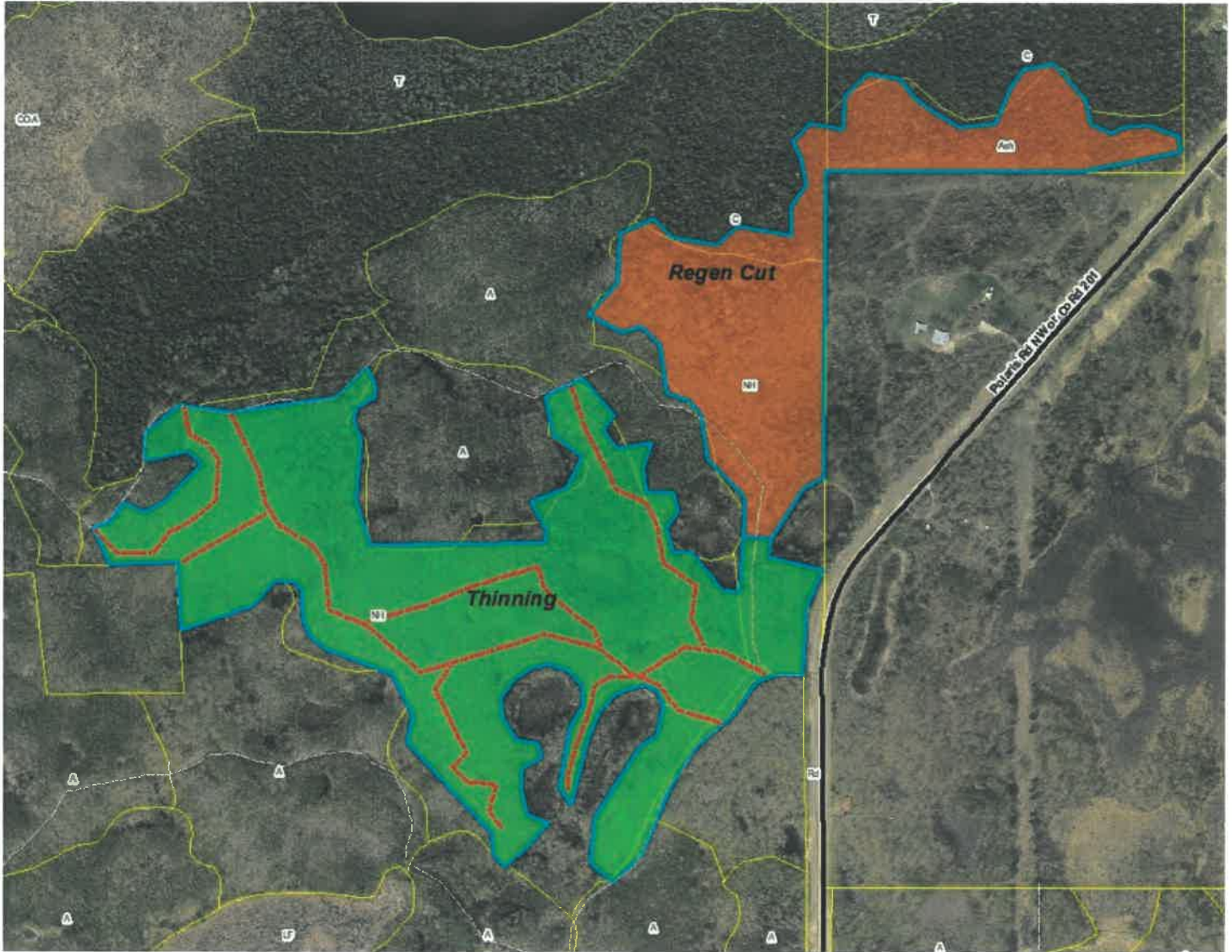
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Nick Ronning  
**Appraisal Date:**  
02/07/2024

**Sale Type:**  
REGULAR AUCTION SALE  
**Auction Date:** 04/04/2024  
**Access:** Public Access

**Appraisal Number:** Polaris Hardwoods  
**Permit Number:**  
**Expiration Date:** 04/04/2026

**Site Map:**



Appraisal examined and approved by

*[Signature]*  
Forester

*2/15/2024*  
Date

Appraisal examined and approved by

*Richard A. Moore*  
Land Department

*2/15/2024*  
Date

## STAND HARVEST PRESCRIPTIONS

<b>Timber Sale Name:</b>	Polaris Hardwoods						
<b>Description:</b>							
<b>RE Code</b>	<b>Sec.</b>	<b>Twp.</b>	<b>Rge.</b>	<b>School</b>	<b>City/Twp</b>	<b>Subd</b>	
	4	149	33	31	Nebish	SWNW	
	5	149	33	31	Nebish	SW 1/4	
<b>Block:</b>	1						
<b>Stand Details</b>							
<b>Section</b>	<b>Township</b>	<b>Range</b>	<b>Timber Type</b>	<b>Acres</b>	<b>Stand Age</b>	<b>NPC</b>	<b>Harv Meth Desc</b>
4	149	33	1	8		FPn63	Clear Cut w/Reserves
5	149	33	1	59		FPn63	Clear Cut w/Reserves
4	149	33	20	8	84	MHn44	Intermediate Thin
5	149	33	20	59	84	MHn44	Intermediate Thin
4	149	33	20	8	102	MHn44	Seed Tree
5	149	33	20	59	102	MHn44	Seed Tree
<b>*NPC</b>	FPn63 - Northern Cedar Swamp, MHn44 - Northern Wet-Mesic Boreal Hardwood-Conifer Forest						
<b>No Basal Data</b>							
<b>Current Site Conditions</b>	<p>Current CTYPE is Ash, Aged approximately 50 years, with SI 57, and overall BA of 105 sq.ft./ac. This stand is a mix of Aspen, Ash, and Cedar.</p> <p>Current CTYPE is Northern Hardwoods, Aged approximately 102 years, with SI 54, and overall BA of 90 sq.ft./ac.</p> <p>Current CTYPE is Northern Hardwoods, Aged approximately 84 years, with SI 71, and overall BA of 97 sq.ft./ac.</p> <p>67 cruise plots yielded a standard error of 10.6% which means 9 of 10 cruises would have an appraised volume within 10.6% of this appraisal. Given the major variation between: short branchy hardwoods and tall straight aspen or basswood, distribution of cut and reserve trees, and other factors, your final volume may be vary. Species breakdowns could vary widely from appraisal.</p>						
<b>Insect/Disease</b>	EAB - harvest to reduce potential of EAB infestation in Ash. Cut all ash to encourage replacement by other species.						
<b>Timber Objectives</b>	Overall timber sale objective is to harvest Aspen, Birch, and declining Hardwoods before it's too late, while keeping and regenerating a significant part of the stand as Northern Hardwoods. Retain and regenerate Oak. Improve health, vigor, and economic value of stand through periodic thinnings. Replace Ash with Aspen and hardwood species.						
<b>Regeneration</b>	All cut species should regenerate naturally.						
<b>Riparian</b>	There is a one acre wetland surrounded by tag alder within sale boundaries. Do not operate within this wetland. There are numerous other wetlands within sale area. Do not skid through them. Filter Strips must be protected from scarification. RMZ and Filter Strip mostly excluded from harvest boundary or protected by sale design.						
<b>Wetlands</b>	<p>type 1 - seasonally flooded (pot holes)</p> <p>type 7 - wooded swamp (hardwood &amp; conifer)</p> <p>Wetland and lowland brush areas are either excluded from the harvest block or protected by ERZ within block. Be sure to minimize scarification in filter strip per BMP guidelines.</p>						
<b>Soil Types</b>	Shooker Loam, Fine Sandy Loam, Loamy Fine Sand, Muck, and Mucky Peat. All soils subject to rutting. Soils must be firm or frozen. Stop operations if rutting is likely.						

## STAND HARVEST PRESCRIPTIONS

<b>Wildlife</b>	Scattered slash piles (20'x20'x10') for birds and small mammals are encouraged. Dead and den trees and snags will be reserved unless they pose a safety hazard. Project has specific design to provide aspen age class diversity and mast production. Project spacing of habitat elements is beneficial to wildlife. Project timing is beneficial to wildlife. Reserve clumps - Reserve clumps are maintained at the edge of the stand for habitat connectivity & to help them be wind firm. Stand managed as extended rotation favoring mature forest species. The balsam fir and other understory conifer are being reserved for cover. The reserved species will serve as a mast production for wildlife.
<b>Visual Sensitivity</b>	There are no visual concerns for this harvest area
<b>Natural Heritage</b>	Database was checked and no resources found.
<b>Cultural Resources</b>	Database was checked and no resources found.

# STAND HARVEST PRESCRIPTIONS

## Harvest Methods

### **Clear Cut w/Reserves**

retain marked or designated trees or clumps (Clear Cut)

### **Intermediate Thin**

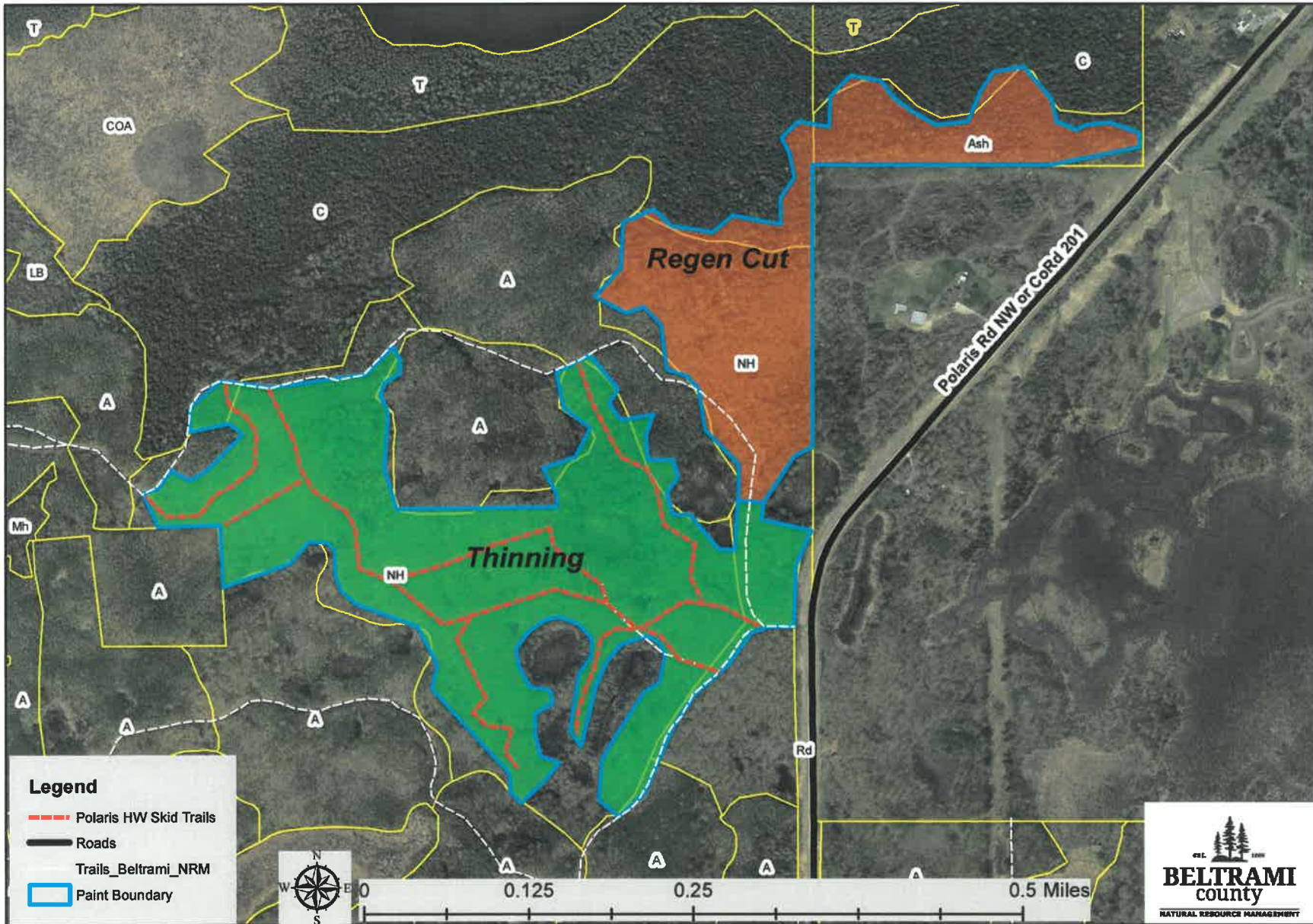
Thin as designated (Thinning)

### **Seed Tree**

Harvest as marked (Full Harvest)

# Polaris Hardwoods Timber Sale Map

## Section 4 & 5 - T149 - R33 Nebish Township



# Polaris Hardwoods Timber Sale Map

## Section 4 & 5 - T149 - R33 Nebish Township

