



**DEPARTMENT OF NATURAL RESOURCES  
STATE OF MICHIGAN  
TIMBER SALE PROSPECTUS #7249**

**SCHEDULED SALE DATE AND TIME: 2:00 p.m. (local time) on May 17, 2023.**

**LOCATION: SHINGLETON MGMT UNIT, PO BOX 67, M 28 WEST, SHINGLETON, MI 49884.**

**CONTACT NAME: Robert Burnham**

**PHONE NUMBER: (906) 420-1645**

**PROSPECTUS NOTE:** The bidder is advised to inspect the sale area and review the location, estimated volumes, operating costs and contract terms of proposed sales. Please be aware that some landowners may request 60 days or more notice for access across their land.

Notice is hereby given that bids will be received by the Unit Manager, SHINGLETON MANAGEMENT UNIT, for certain timber on the following described lands:

GNA2 Flat Iron South (41-822-22) / T41N, R18W, SEC. 5 , SESW.

T41N, R18W, SEC. 6 , NWSW,S1/2SW.

T41N, R18W, SEC. 7 , NW,NWNE,S1/2NE.

T41N, R18W, SEC. 8 , NENW,S1/2NW,W1/2NE,N1/2SW.

T41N, R19W, SEC. 1 , SESW,NESE,S1/2SE.

T41N, R19W, SEC. 12, NW,NE,N1/2SW,NWSE.

Delta County, Advertised Price \$473,793.35, 444.4 Acres, Hardwood, Red Pine.

**SALE NOTE:** This is a Good Neighbor Authority timber sale on national forest land. This timber sale was set-up and is being advertised by the Michigan DNR for the US Forest Service. The contract will be awarded and administered by the MDNR.

Within Payment Unit(s) 1 and 2, cutting, skidding, and hauling are limited to frozen conditions (generally December 1 to April 15) because of sensitive soils.

Within Payment Unit(s) 10, 12 & 13, cutting & skidding are not permitted during the period of April 15 to July 15 because of bark slippage.

KK Road is a snowmobile trail and is shown on Timber Sale Map. See Sale Spec 5.2.41 for restrictions.

The Forest Service is planning to replace bridge over Fishdam River on Forest Service Rd 2222; work is planned for summer 2023; if the work is delayed, all trucking will need to be west to Highway 13.

Additional Habitat Work is required. See Sale Spec 5.2.4.4 and 5.2.4.6 for details.

A recreation site such as a trail, pathway, or campground is within the sale area or the vicinity. Certain restrictions/specifications may be applicable including time restrictions. Access may be through other public land.

## TIMBER SALE INFORMATION

### GNA2 Flat Iron South (41-822-22)

T41N, R18W, SEC. 5; T41N, R18W, SEC. 6; T41N, R18W, SEC. 7; T41N, R18W, SEC. 8; T41N, R19W, SEC. 1; T41N, R19W, SEC. 12.  
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A timber sale contract for this lump sum, sealed bid timber sale will be awarded to the responsible bidder offering the highest sealed bid price. All units of volume listed below were estimated using the Inventory Manager computer program and the new Michigan taper model. Bids must be at or above the following advertised price for each product and species:

<u>PRODUCTS &amp; SPECIES</u>	<u>ESTIMATED UNITS*</u>	<u>ADVERTISED PRICE</u>
Sawtimber		
Beech	7.3 MBF	\$ 30.00 / MBF
Black Cherry	1.2 MBF	\$ 109.00 / MBF
Red Maple	100.0 MBF	\$ 97.00 / MBF
Sugar Maple	11.4 MBF	\$ 290.00 / MBF
Pulpwood		
Balsam Fir	388 Cords	\$ 10.70 / Cord
Jack Pine	8 Cords	\$ 27.65 / Cord
Mixed Aspen	1,976 Cords	\$ 24.05 / Cord
Mixed Hardwood	2,095 Cords	\$ 14.70 / Cord
Mixed Spruce	49 Cords	\$ 19.30 / Cord
Paper Birch	11 Cords	\$ 16.85 / Cord
Red Pine	5,800 Cords	\$ 64.80 / Cord
White Pine	32 Cords	\$ 24.20 / Cord

\* The total volume is statistically estimated within plus (+) or minus (-) 6.19 percent. There are an estimated 10,259 cords on this timber sale, plus or minus 635 cords at the 95% confidence level. The estimated units are final and not subject to adjustment. Prospective bidders are urged to examine this timber and to make their own estimates of quantity and quality.

### **BOND AND PAYMENT SCHEDULE:**

1. A bond in the amount of \$23,689.67 to insure faithful performance of the conditions of the contract will be deposited by the successful bidder within 21 days of the sale award.
2. Cutting in any sale or unit without the required advance payment would be considered a trespass.
3. Total payment must be paid in advance or according to the following schedule:
  - (a) Ten percent (10%) of the sale value must be paid within 21 days of the sale award.
  - (b) The 10% down payment will be credited towards the first unit cut.

(c) Payment for each of the following units must be made before cutting begins in that unit:

PAYMENT UNIT NUMBER	PERCENT OF TOTAL SALE VALUE
01	8.9%
02	0.1%
03	3.3%
04	8.8%
05	0.1%
06	3.7%
07	0.6%
08	11.7%
09	15.0%
10	1.4%
11	0.7%
12	1.5%
13	2.0%
14	2.9%
15	4.2%
16	10.4%
17	8.0%
18	3.3%
19	11.2%
20	2.2%

4. If no cutting takes place, the 10% down payment will not be refunded.

5. Operations on the contract issued will terminate on 12/31/2025.

### **SALE STATISTICS**

Volumes were calculated in cubic feet using the Michigan taper model. Cubic foot volume includes all wood inside bark for the product indicated. For display purposes, cubic feet were converted to cords and MBF using a simple conversion factor, e.g. 79 cubic feet per cord and 185 cubic feet per MBF. The cubic foot volumes are precise; the cords and MBF volumes are not. Cubic foot volume cannot be directly converted to cords or boards with precision.

### **SALE VOLUMES**

The total estimated sale volume may not equal the sum of the species/products due to the nature of statistical calculations associated with double sampling methodology.

VOLUME			STATISTICAL RANGE IN CORDS	
TOTAL CUBIC FEET	TOTAL CORDS	PERCENT ERROR	MINIMUM	MAXIMUM
810,454	10,259	6.19%	9,624	10,894

## VDU VOLUMES

A VDU is a Volume Determination Unit. Volumes and their associated statistics are calculated at the VDU level and summarized to the sale level. There is often a one to one relationship between a VDU and a Payment Unit, but not always, depending on the cruise design. Refer to the VDU TO PAYMENT UNIT table.

	VOLUME			RANGE IN CORDS	
VDU	TOTAL CUBIC FEET	TOTAL CORDS	PERCENT ERROR	MINIMUM	MAXIMUM
6	2,235	28	146.15%	13	70
7	10,203	129	53.06%	61	198
8	249,649	3,160	8.13%	2,903	3,417
9	149,223	1,889	15.73%	1,592	2,186
10	2,273	29	951.34%	245	303
11	21,495	272	29.70%	191	353
16	207,466	2,626	9.71%	2,371	2,881
17	56,972	721	22.51%	559	884
18	78,139	989	17.39%	817	1,161
19	16,031	203	26.41%	149	257
20	16,767	212	49.21%	108	317
<b>TOTAL:</b>	<b>810,454</b>	<b>10,259</b>		<b>8,493</b>	<b>12,025</b>

## VDU TO PAYMENT UNIT

When a VDU is associated with more than one Payment Unit (PU), the VDU volumes are assigned to the PU based on acres of the VDU within the PU.

VDU	VDU ACRES	PU	PU ACRES
6	1.7	5	1.7
7	10.3	7	10.3
8	135.3	3	10.4
		4	28.0
		6	11.8
		8	37.4
		9	47.7
9	50.7	1	50.7
10	1.8	2	1.8
11	13.4	20	13.4
16	111.1	15	12.5
		16	31.1
		17	23.9
		18	9.9
		19	33.7
17	27.2	14	27.2
18	72.7	12	31.1
		13	41.6
19	13.2	10	13.2
20	7.0	11	7.0
<b>TOTAL:</b>	<b>444.4</b>		<b>444.4</b>

**DESCRIPTION OF TIMBER BY PU (PU)**

PU	MARKET GROUP	PRODUCT	QUANTITY	UNIT	ACRES	ADVERTISE PRICE
1	Red Maple	Sawtimber	2.7	MBF	50.7	\$42,138.65
	Balsam Fir	Pulpwood	222	Cords		
	Mixed Aspen		1,519	Cords		
	<i>B. T. Aspen</i>		102	Cords		
	<i>Balsam Poplar</i>		53	Cords		
	<i>Quaking Aspen</i>		1,364	Cords		
	Mixed Hardwood		202	Cords		
	<i>Black Cherry</i>		15	Cords		
	<i>Red Maple</i>		187	Cords		
2	Balsam Fir	Pulpwood	12	Cords	1.8	\$378.30
	Mixed Hardwood		17	Cords		
	<i>Red Maple</i>		17	Cords		
3	Red Maple	Sawtimber	1.5	MBF	10.4	\$15,465.55
	Sugar Maple		0.5	MBF		
	Balsam Fir	Pulpwood	1	Cords		
	Jack Pine		1	Cords		
	Mixed Aspen		3	Cords		
	<i>B. T. Aspen</i>		1	Cords		
	<i>Quaking Aspen</i>		2	Cords		
	Mixed Hardwood		23	Cords		
	<i>Beech</i>		1	Cords		
	<i>Red Maple</i>		21	Cords		
	<i>Sugar Maple</i>		1	Cords		
	Paper Birch		1	Cords		
	Red Pine		227	Cords		
4	Red Maple	Sawtimber	3.9	MBF	28.0	\$41,639.15
	Sugar Maple		1.3	MBF		
	Balsam Fir	Pulpwood	4	Cords		
	Jack Pine		2	Cords		
	Mixed Aspen		7	Cords		
	<i>B. T. Aspen</i>		2	Cords		
	<i>Quaking Aspen</i>		5	Cords		
	Mixed Hardwood		63	Cords		
	<i>Beech</i>		2	Cords		
	<i>Red Maple</i>		58	Cords		
	<i>Sugar Maple</i>		3	Cords		
	Paper Birch		2	Cords		
	Red Pine		612	Cords		
5	Red Maple	Sawtimber	1.4	MBF	1.7	\$707.60
	Sugar Maple		0.7	MBF		
	Mixed Aspen	Pulpwood	8	Cords		
	<i>B. T. Aspen</i>		8	Cords		
	Mixed Hardwood		12	Cords		
	<i>American Elm</i>		2	Cords		
	<i>Red Maple</i>		4	Cords		
	<i>Sugar Maple</i>		6	Cords		
6	Red Maple	Sawtimber	1.7	MBF	11.8	\$17,537.85
	Sugar Maple		0.5	MBF		
	Balsam Fir	Pulpwood	1	Cords		
	Jack Pine		1	Cords		
	Mixed Aspen		3	Cords		
	<i>B. T. Aspen</i>		1	Cords		
	<i>Quaking Aspen</i>		2	Cords		
	Mixed Hardwood		26	Cords		
	<i>Beech</i>		1	Cords		

**DESCRIPTION OF TIMBER BY PU (PU), CON'T**

PU	MARKET GROUP	PRODUCT	QUANTITY	UNIT	ACRES	ADVERTISE PRICE
6 con't	<i>Red Maple</i>	<i>Pulpwood</i>	24	<i>Cords</i>		
	<i>Sugar Maple</i>		1	<i>Cords</i>		
	Paper Birch		1	Cords		
	Red Pine		258	Cords		
7	Balsam Fir	Pulpwood	20	Cords	10.3	\$2,799.55
	Mixed Aspen		61	Cords		
	<i>B. T. Aspen</i>		6	<i>Cords</i>		
	<i>Quaking Aspen</i>		55	<i>Cords</i>		
	Mixed Hardwood		2	Cords		
	<i>Red Maple</i>		2	<i>Cords</i>		
	Mixed Spruce		43	Cords		
	<i>Black Spruce</i>		3	<i>Cords</i>		
	<i>White Spruce</i>		40	<i>Cords</i>		
	Red Pine		4	Cords		
8	Red Maple	Sawtimber	5.3	MBF	37.4	\$55,648.15
	Sugar Maple		1.7	MBF		
	Balsam Fir	Pulpwood	5	Cords		
	Jack Pine		2	Cords		
	Mixed Aspen		10	Cords		
	<i>B. T. Aspen</i>		3	<i>Cords</i>		
	<i>Quaking Aspen</i>		7	<i>Cords</i>		
	Mixed Hardwood		84	Cords		
	<i>Beech</i>		3	<i>Cords</i>		
	<i>Red Maple</i>		77	<i>Cords</i>		
	<i>Sugar Maple</i>		4	<i>Cords</i>		
	Paper Birch		3	Cords		
	Red Pine		818	Cords		
9	Red Maple	Sawtimber	6.7	MBF	47.7	\$70,855.75
	Sugar Maple		2.2	MBF		
	Balsam Fir	Pulpwood	6	Cords		
	Jack Pine		2	Cords		
	Mixed Aspen		12	Cords		
	<i>B. T. Aspen</i>		4	<i>Cords</i>		
	<i>Quaking Aspen</i>		8	<i>Cords</i>		
	Mixed Hardwood		108	Cords		
	<i>Beech</i>		4	<i>Cords</i>		
	<i>Red Maple</i>		98	<i>Cords</i>		
	<i>Sugar Maple</i>		6	<i>Cords</i>		
	Paper Birch		3	Cords		
	Red Pine		1,042	Cords		
10	Beech	Sawtimber	0.7	MBF	13.2	\$6,749.30
	Red Maple		21.3	MBF		
	Sugar Maple		0.8	MBF		
	Balsam Fir	Pulpwood	2	Cords		
	Mixed Hardwood		128	Cords		
	<i>American Elm</i>		4	<i>Cords</i>		
	<i>Beech</i>		4	<i>Cords</i>		
	<i>Red Maple</i>		109	<i>Cords</i>		
	<i>Sugar Maple</i>		8	<i>Cords</i>		
	<i>Yellow Birch</i>		3	<i>Cords</i>		
	Red Pine		39	Cords		
11	Beech	Sawtimber	2.1	MBF	7.0	\$3,396.40
	Red Maple		1.3	MBF		
	Balsam Fir	Pulpwood	4	Cords		
	Mixed Aspen		2	Cords		

**DESCRIPTION OF TIMBER BY PU (PU), CON'T**

PU	MARKET GROUP	PRODUCT	QUANTITY	UNIT	ACRES	ADVERTISE PRICE
11 con't	<i>Quaking Aspen</i> Mixed Hardwood <i>Beech</i> <i>Red Maple</i>	<i>Pulpwood</i>	2 212 10 202	<i>Cords</i> Cords <i>Cords</i> <i>Cords</i>		
12	Beech Black Cherry Red Maple Sugar Maple Mixed Aspen <i>B. T. Aspen</i> Mixed Hardwood <i>Beech</i> <i>Black Cherry</i> <i>Red Maple</i> <i>Sugar Maple</i>	Sawtimber    Pulpwood	1.9 0.5 11.4 1.6 6 6 357 301 3 46 7	MBF MBF MBF MBF Cords <i>Cords</i> Cords <i>Cords</i> <i>Cords</i> <i>Cords</i> <i>Cords</i>	31.1	\$7,073.50
13	Beech Black Cherry Red Maple Sugar Maple Mixed Aspen <i>B. T. Aspen</i> Mixed Hardwood <i>Beech</i> <i>Black Cherry</i> <i>Red Maple</i> <i>Sugar Maple</i>	Sawtimber    Pulpwood	2.6 0.7 15.2 2.1 7 7 477 401 4 62 10	MBF MBF MBF MBF Cords <i>Cords</i> Cords <i>Cords</i> <i>Cords</i> <i>Cords</i> <i>Cords</i>	41.6	\$9,417.95
14	Red Maple Balsam Fir Mixed Aspen <i>B. T. Aspen</i> <i>Quaking Aspen</i> Mixed Hardwood <i>Red Maple</i> Mixed Spruce <i>White Spruce</i>	Sawtimber Pulpwood	27.6 105 233 99 134 296 296 4 4	MBF Cords Cords <i>Cords</i> <i>Cords</i> Cords <i>Cords</i> Cords <i>Cords</i>	27.2	\$13,832.75
15	Mixed Aspen <i>B. T. Aspen</i> Mixed Hardwood <i>Red Maple</i> Red Pine White Pine	Pulpwood	4 4 1 1 303 1	Cords <i>Cords</i> Cords <i>Cords</i> Cords Cords	12.5	\$19,769.50
16	Balsam Fir Mixed Aspen <i>B. T. Aspen</i> Mixed Hardwood <i>Red Maple</i> Red Pine White Pine	Pulpwood	1 9 9 4 4 753 2	Cords Cords <i>Cords</i> Cords <i>Cords</i> Cords Cords	31.1	\$49,128.75
17	Mixed Aspen <i>B. T. Aspen</i> Mixed Hardwood <i>Red Maple</i> Red Pine White Pine	Pulpwood	7 7 3 3 578 2	Cords <i>Cords</i> Cords <i>Cords</i> Cords Cords	23.9	\$37,715.25
18	Mixed Aspen	Pulpwood	3	Cords	9.9	\$15,663.05

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PU	MARKET GROUP	PRODUCT	QUANTITY	UNIT	ACRES	ADVERTISE PRICE
18 con't	<i>B. T. Aspen</i>	<i>Pulpwood</i>	3	<i>Cords</i>		
	Mixed Hardwood		1	Cords		
	<i>Red Maple</i>		1	<i>Cords</i>		
	Red Pine		240	Cords		
	White Pine		1	Cords		
19	Balsam Fir	Pulpwood	1	Cords	33.7	\$53,235.20
	Mixed Aspen		10	Cords		
	<i>B. T. Aspen</i>		10	<i>Cords</i>		
	Mixed Hardwood		4	Cords		
	<i>Red Maple</i>		4	<i>Cords</i>		
	Red Pine		816	Cords		
	White Pine		2	Cords		
20	Balsam Fir	Pulpwood	4	Cords	13.4	\$10,641.15
	Mixed Aspen		72	Cords		
	<i>B. T. Aspen</i>		46	<i>Cords</i>		
	<i>Quaking Aspen</i>		26	<i>Cords</i>		
	Mixed Hardwood		75	Cords		
	<i>Beech</i>		10	<i>Cords</i>		
	<i>Black Cherry</i>		2	<i>Cords</i>		
	<i>Red Maple</i>		61	<i>Cords</i>		
	<i>Yellow Birch</i>		2	<i>Cords</i>		
	Mixed Spruce		2	Cords		
	<i>White Spruce</i>		2	<i>Cords</i>		
	Paper Birch		1	Cords		
	Red Pine		110	Cords		
	White Pine		24	Cords		
TOTAL:			119.9	MBF		
TOTAL:			10,359	Cords		



## **Sale Specific Conditions & Requirements**

**Sale Name: GNA2 Flat Iron South**

**Sale Number: 41-822-22 Seq#: 1**

### **1 - Sale Area**

#### **1.2 - Boundaries**

##### **1.2.1 - Painted boundaries (9/19)**

Exterior sale boundary lines against forest service ownership are marked with orange paint. Interior Payment Unit boundaries are marked with orange paint (rings). The painted boundary line trees are not Included Timber and are to be protected unless marked with blue paint.

### **2 - Timber Specifications**

#### **2.1 - Included Timber**

##### **2.1.1 - Clearcut unit(s) with unmerchantable trees (6/14)**

Within Payment Unit(s) 1, cut all maple and aspen trees that are two (2) inches or more at DBH. In addition, cut all other trees that meet minimum piece specifications in 2.1 Utilization, except do not cut paper birch, yellow birch, white pine, and any trees marked in green paint. Special protection areas identified in accordance with condition 3.4.3, within clearcutting unit boundaries, are not Included Timber and are to be protected.

##### **2.1.3 - Cut tree marked unit(s) (12/08)**

Within Payment Unit(s) 3-10, 12, 13, and 15-20, all trees are designated for cutting when marked with blue paint above and below stump height, regardless of merchantability. In addition, within Payment Units 12 and 13, beech is designated for cutting, unless marked in green paint.

##### **2.1.7 - Leave tree marked unit(s) (6/14)**

Within Payment Unit(s) 2, 11, & 14, all trees which meet minimum piece specifications in 2.2 Utilization are designated for cutting, except do not cut trees marked with green paint above and below stump height. In addition, within Payment Unit 2, do not cut paper birch or cedar. Also, within Payment Unit 14, do not cut paper birch, red pine, and white pine. Special protection areas identified in accordance with condition 3.4.3, within clearcutting unit boundaries, are not Included Timber and are to be protected.

#### **2.2 - Utilization**

##### **2.2.3 - Stump heights (4/07)**

Stump heights within the sale area shall not exceed 12 inches for trees greater than 10 inches DBH and 10 inches for trees smaller than 10 inches DBH.

##### **2.2.12 - GNA, cut and remove Included Timber (3/18)**

Unless provided otherwise herein, the DNR agrees to sell and permit Purchaser to cut and remove Included Timber and Purchaser agrees to purchase, cut, and remove Included Timber.

### **3 - Payments**

#### **3.3 - Pre-measured Sales**

##### **3.3.4 - Dividing payment units (7/14)**

Payment Unit(s) with value over \$20,000 may be divided at the request of the Purchaser and upon approval of the Unit Manager. Dividing Payment Units is a contract modification which requires a Timber Sale Contract Amendment.

#### **3.4 - Damaged Timber**

##### **3.4.3 - Special Protection Areas (8/11)**

The Purchaser shall protect special protection areas from damage by the Purchaser's operations. Special protection areas are excluded with an orange boundary line and blue and white striped flagging (see Timber Sale Map). The Purchaser shall not operate in or cut live or dead trees within special protection areas. Trees adjacent to these areas cannot be felled inside of the orange boundaries. If the Purchaser's operations have cut or damaged special protection areas through carelessness, the

Purchaser shall pay \$10,000 as fixed, agreed and liquidated damages for each acre or part thereof cut or damaged. Such payment does not constitute ownership of the undesignated timber.

## **4 - Transportation**

### **4.1 - Construction**

#### **4.1.3 - Slash and earthen piles (8/04)**

Piles or windrows of earth along roads and landings that have been widened or constructed shall be leveled. Slash from road maintenance or construction, including stumps, shall be dispersed throughout the sale.

#### **4.1.4 - Timber removed for construction (12/09)**

Trees cut or damaged in the process of pre-approved road, landing or skid trail construction will be decked in an area separate from other Designated Timber and not removed until measured by the sale administrator. Payment will be made at the specified Purchase Unit Price.

#### **4.1.6 - Road construction (1/09)**

Construction of new roads or improvements of existing roads shall be done in such a way as to minimize the environmental and visual impacts. Merchantable trees shall be cut and utilized unless otherwise directed. Non-merchantable trees shall be severed and laid flat on the ground. Slash shall be scattered, and not left in windrows and kept a minimum of 10 feet back from the road edge. Stumps shall be set upright, not left on edge, and be moved at least 10 feet away from the road edge. Disturbed soil shall be feathered into the woods and not left in berms or windrows.

#### **4.1.7 - Road closure (10/11)**

All new roads built into the sale must be blocked to vehicle traffic within 30 days of completion of hauling. Overgrown roads that are reopened shall be considered new roads. Roads A96J, A94K, A94M, A94O and A94Q will need to be closed after harvesting is complete. In general, this will require constructing double earthen berms at strategic locations. Stumps, brush, and slash must be placed along the remainder of the trail, but at a minimum of 200' from berms. Berms must also be placed at intervals of not over 50 feet and at all junctions. These roads must be rendered impassable to cars and trucks. All stumps from road building and landing construction must be reserved to block any newly constructed roads upon completion of the sale. These stumps must be scattered along the road system to prohibit vehicular movement. Contact the sale administrator for specific details of design and placement.

### **4.2 - Maintenance**

#### **4.2.4 - Grading (10/16)**

For completion of the sale, forest service roads must be graded. In general, this will require a road grader or bull dozer to shape up the roads after forest products have been hauled off site. This includes cleaning of drainage areas, grading, crowning and filling with gravel, if necessary. The grading equipment to be used must be approved by the Unit Manager or his/her representative.

## **5 - Operations**

### **5.1 - Notification**

#### **5.1.1 - Pre-sale conference (10/16)**

A pre-sale conference on site between the Purchaser and sale administrator is required prior to beginning any operations to determine landing and road locations. The Unit Manager or his/her representative must be contacted at least 10 days in advance to schedule the conference.

#### **5.1.4 - Post-sale conference (10/16)**

A post-sale conference on site between the Purchaser and sale administrator is required 5 days prior to the completion of active logging operations to determine clean-up and repair of landings, road edges, and the fulfillment of other contract specifications.

### **5.2 - Conduct of Operations**

#### **5.2.1 - Slash**

##### **5.2.1.2 - Slash Removal**

#### 5.2.1.2.1 - Slash removal, right-of-way (9/16)

All slash must be removed at least 10 feet from the cleared right-of-way of forest service roads. Within 25 feet of forest service roads, slash must be reduced to 1 foot and no higher than 4 feet everywhere else. Slash cannot be windrowed.

### 5.2.2 - Hazard Trees/Snags

#### 5.2.2.1 - Den trees (10/16)

Obvious hollow and/or den trees shall be protected and left standing unless they are a safety hazard.

### 5.2.3 - Operating Restrictions

#### 5.2.3.2 - Operating restrictions (9/11)

Within Payment Unit(s) 1 and 2, unless changed by written agreement, cutting, skidding, and hauling are limited to frozen conditions. In general, this period is typically from December 1 to April 15. This restriction is because sensitive soils.

#### 5.2.3.3 - Bark slippage restriction (3/09)

Within Payment Unit(s) 10, 12 & 13, unless changed by written agreement, cutting and skidding are not permitted during the period of April 15 to July 15. This restriction is because of bark slippage.

#### 5.2.3.6 - Bark beetle restriction (12/08)

In the event drought creates a high risk of pine bark beetle infestation, pine is not to be cut during the period March 1 through July 1, unless all portions of trees greater than two inches in diameter are removed from the sale area, reduced to chips, or treated to the satisfaction of the Unit Manager or his/her representative, within fifteen days of being severed from the stump. Pine log decks, pulpwood piles and treetops that are piled for chipping in the fall or winter within a 1/4 mile of susceptible sites must be removed before March 15. Residual slash must not be placed in piles or rows and must be spread over the site for quick drying. The Department of Natural Resources will exercise this specification if the risk of damage warrants.

### 5.2.4 - Dead and Down Creation

#### 5.2.4.4 - Dead and down creation, grouse (6/18)

To encourage grouse and other wildlife, in Payment Unit(s) 1, cut and leave one, 10" diameter or larger whole tree on the ground per acre, preferably a hardwood species such as aspen or maple for drumming logs. The trees that are felled for drumming logs will be evenly scattered throughout the unit and should be cut as low to the ground as possible.

#### 5.2.4.6 - Dead and down creation, other (9/09)

Within Payment Units 3, 4, 6, 8, 9 and 15-20, one tree per acre must be topped at least 15 feet (preferably 20 feet) off the ground. The top must be left intact on the ground and the remainder of the tree must be left standing. Each of these should be a large red pine. This is being done to create snags in the stands. These should be at least 50 feet from roads and are not marked for harvest. These trees will come from residual trees.

#### 5.2.32 - Decking/landing restoration (9/13)

All decking and landing areas must have the surface area restored to a condition equal to or better than before. This is to ensure the proper regeneration of the stand. Wood debris, chips and "cookies" from trimmings must be removed or scattered away from landing and loading areas and may not be windrowed on the edge. No decking is allowed on KK Rd or Forest Service Road 2222.

#### 5.2.38 - No decking against live trees (2/04)

Cut products may not be decked against unmarked or designated leave trees.

#### 5.2.41 - Snowmobile trail protection (9/11)

KK Road is a snowmobile trail and is shown on the Timber Sale Map. Do not cut or damage posts with orange trail markers or traffic control signs. If the trail is used for hauling, it must be graded to the satisfaction of the Unit Manager or his/her representative prior to December 1st. If the trail road is to be used for hauling during the snowmobile season, then a snow covered base must be left on the trail. Maintain a 20 foot wide slash, debris, and rut free zone daily using the snowmobile trail as the centerline. No decking of forest products will be permitted along the snowmobile trail. All stumps within 20 feet of the snowmobile trail must be cut at ground level.

### 5.4 - Soil Protection

#### 5.4.1 - Rutting restriction, general (7/16)

Operations are to cease immediately if equipment and weather conditions result in rutting of roads and/or skid trails which is 12 inches or greater in depth and 50 feet in length. The Unit Manager or his/her representative may restrict hauling and/or skidding if ruts exceed the specified depth. With the Unit Manager or his/her representative's approval, the Purchaser may return to the area when the risk of rutting has decreased.

#### 5.4.7 - Rutting restriction, Riparian Management Zone (RMZ) (1/09)

Within the Riparian Management Zone (RMZ), operations are to cease immediately if equipment and weather conditions result in rutting of roads and skid trails which is 6 inches or greater in depth and 25 feet in length. RMZ's are areas near stream buffers and an excluded area within Payment Unit 14. The Unit Manager or his/her representative may restrict hauling and/or skidding if ruts exceed the specified depth. With the Unit Manager or his/her representative's approval, the Purchaser may return to the area when the risk of rutting has decreased.

### 5.6 - Debris and Waste Material

#### 5.6.2 - GNA, equipment cleaning (1/16)

(a) Areas, known by the DNR prior to timber sale advertisement, that are infested with invasive species of concern are shown on the Timber Sale Map. A current list of invasive species of concern and a map showing the extent of known infestations is available from the DNR. For purposes of this provision, "Off-Road Equipment" includes all logging and construction machinery, except for log trucks, chip vans, service vehicles, water trucks, pickup trucks, cars, and similar vehicles.

(b) Purchaser shall adhere to the following requirements with regard to cleaning "Off-Road Equipment":

(i) Prior to moving Off-Road Equipment onto the Sale Area, Purchaser shall identify the location of the equipment's most recent operation. Purchaser shall not move any Off-Road Equipment that last operated in an area infested with one or more invasive species of concern onto Sale Area without having cleaned such equipment of seeds, soil, vegetative matter, and other debris that could contain or hold seeds, and having notified the DNR, as provided in (iii). If the location of prior operation cannot be identified, then Purchaser shall assume that the location is infested with invasive species of concern.

(ii) Prior to moving Off-Road Equipment from a cutting unit that is shown on the Timber Sale Map to be infested with invasive species of concern to, or through any other area that is shown as being free of invasive species of concern, or infested with a different invasive species, Purchaser shall clean such equipment of seeds, soil, vegetative matter, and other debris that could contain or hold seeds, and shall notify the DNR, as provided in (iii).

(iii) Prior to moving any Off-Road Equipment subject to the cleaning requirements set forth above, Purchaser shall advise DNR of its cleaning measures and make the equipment available for inspection. DNR shall have 2 days, excluding weekends and State holidays, to inspect equipment after it has been made available. After satisfactory inspection or after such 2 day period, Purchaser may move the equipment as planned. Equipment shall be considered clean when a visual inspection does not disclose seeds, soil, vegetative matter, and other debris that could contain or hold seeds. Purchaser shall not be required to disassemble equipment unless so directed by the DNR after inspection.

(iv) If Purchaser desires to clean Off-Road Equipment on National Forest land, such as at the end of a project or prior to moving to, or through an area that is free of invasive species of concern, Purchaser shall obtain prior approval from the Unit Manager or his/her representative as to the location for such cleaning and measures, if any, for controlling impacts.

(v) Unit Manager or his/her representative may order delay, interruption, or modification of this Contract pursuant to Condition & Requirement 7.3 or 7.3.4.

(c) Nothing contained in this Condition & Requirement shall be interpreted as creating any warranty on the part of the DNR that all locations of invasive species of concern have been described herein, elsewhere in this Contract, or designated on the ground. Following sale advertisement, additional locations may be described or designated, and other species may be added to the list of invasive species of concern. In such event, the Unit Manager or his/her representative may order delay, interruption, or modification of this Contract pursuant to Condition & Requirement 7.3 or 7.3.4.

(d) The parties shall promptly communicate with one another with respect to description or designation of additional locations; discovery of locations of new species or new infestation; and, addition of species to the list of invasive species of concern.

## 5.8 - Protection of Endangered Species

### 5.8.3 - Red shoulder hawk or goshawk (2/16)

In the event that an active red shoulder hawk or goshawk nest is found, the contract may be amended to protect the nest site until the nest is determined to be inactive. The value of the trees in this excluded area will be refunded or credited to the Purchaser. The nest will be buffered with a five-chain radius (eight acre) protection area, centered on the nest tree, in which there will be no cutting or new roads constructed. Avoid human disturbance, including loading and skidding, in the protection area.

An additional zone of five chains (ten chains centered on the active nest tree) will be established in which there is no management activity from April 1 to July 30. Limit biomass harvesting and chipping operations within this ten-chain zone, retain the maximum one-third of residues per the Woody Biomass Harvesting Guidelines (Michigan DNR 2010). Nests determined to be inactive will be protected with a one-chain no-harvest buffer.

## 6 - Safety and Fire Prevention

### 6.2 - Signing

#### 6.2.1 - Road posting (10/20)

The Purchaser is responsible for posting and maintaining caution signs on Forest Service Road 2222 and KK Road prior to beginning operations. The road must be posted at appropriate distances from the sale area to warn of logging activity and truck traffic. Signs must be removed when harvest operations are suspended or completed. The Purchaser will provide these signs.

#### 6.2.2 - Snowmobile trail posting (10/20)

The Purchaser is responsible for posting and maintaining caution signs on KK Road prior to beginning operations during the snowmobile season (approximately December 1 to March 31). The trail must be posted at locations designated on the map at appropriate distances from the sale area approximately 350 feet from the sale area to warn of logging activity and truck traffic. Signs must be removed when harvest operations are suspended or completed. The Purchaser will provide these signs.

## 7 - Other Conditions

### SKIP

#### 7.1.1 - GNA, title (7/16)

General Condition & Requirement 7.1 is inapplicable. The following applies to this contract.

All right, title, and interest in and to any Included Timber shall remain in USDA Forest Service with the State of Michigan acting on behalf of the USDA Forest Service under this GNA contract, until it has been Measured, removed from Sale Area or other authorized cutting area, and paid for, at which time title shall vest in Purchaser. Title to any Included Timber that has been Measured and paid for, but not removed from Sale Area or other authorized cutting area by Purchaser on or prior to Termination Date, shall remain in USDA Forest Service.

### 7.3 - Contract Modifications

#### 7.3.4 - GNA, contract suspension and modification (5/16)

(a) The Unit Manager may, by written order, delay or interrupt authorized operations under this contract or, notwithstanding Condition & Requirement 7.3, modify this contract, in whole or in part:

(i) To prevent environmental degradation or resource damage, including, but not limited to, harm to habitat, plants, animals, cultural resources, or cave resources;

(ii) To ensure consistency with land and resource management plans or other documents prepared pursuant to the National Environmental Policy Act of 1969, 42 USC 4321-4347;

(iii) To conduct environmental analysis, including, but not limited to, engaging in consultation pursuant to the Endangered Species Act of 1973, 16 USC 1531, et seq.; or

(iv) Upon agreement of the Forest Service, due to administrative appeal or litigation, regardless of whether the Unit Manager's order is required by a court order or this contract is named in such a proceeding.

(b) In the event of an order delaying or interrupting Purchaser's Operations under this Condition & Requirement, Purchaser's remedy shall be:

(i) a no cost contract extension,

(ii) reimbursement for Out-of-Pocket Expenses,

however, the foregoing remedies shall be available only to the extent that the Unit Manager's order was the sole and exclusive cause of the delay or interruption of Purchaser's operations.

(c) Remedies awarded to the Purchaser shall not be duplicative, and the Unit Manager shall have the right to structure remedies provided herein to avoid duplicative compensation.

(d) Purchaser agrees that this Condition & Requirement, and the remedies provided herein shall apply regardless of any finding by any court that the DNR failed to comply with any statute, regulation and/or policy in connection with awarding, advertising, or authorizing this sale, or a similar sale.

## 7.5 - Loss

### 7.5.2 - GNA, liability for loss (7/16)

If Included Timber is destroyed or damaged by an unexpected event that changes the nature of Included Timber, such as wind, flood, insects, disease, or similar cause, the Purchaser shall bear the timber value loss resulting from such destruction or damage.

Deterioration or loss of timber value due to delay or interruption under 7.3.4 - GNA, contract suspension and modification, shall be borne by the party holding title. In this event, Included Timber to which USDA Forest Service holds title, Purchaser of the State GNA contract will not be obligated to remove and pay for such timber. This Subsection shall not be construed to relieve either party of liability for negligence.

## 7.10 - Certified Timber

### 7.10.1 - Non-certified timber (2/16)

The area encompassed by this timber sale is not certified to the standards of the Forest Stewardship Council (FSC) or the Sustainable Forestry Initiative (SFI). Forest products from this sale may not be delivered to the mill as "FSC and / or SFI certified". The lands within this sale belong to the National Forest system and are being managed by the State as part of a Good Neighbor Authority (GNA) agreement.

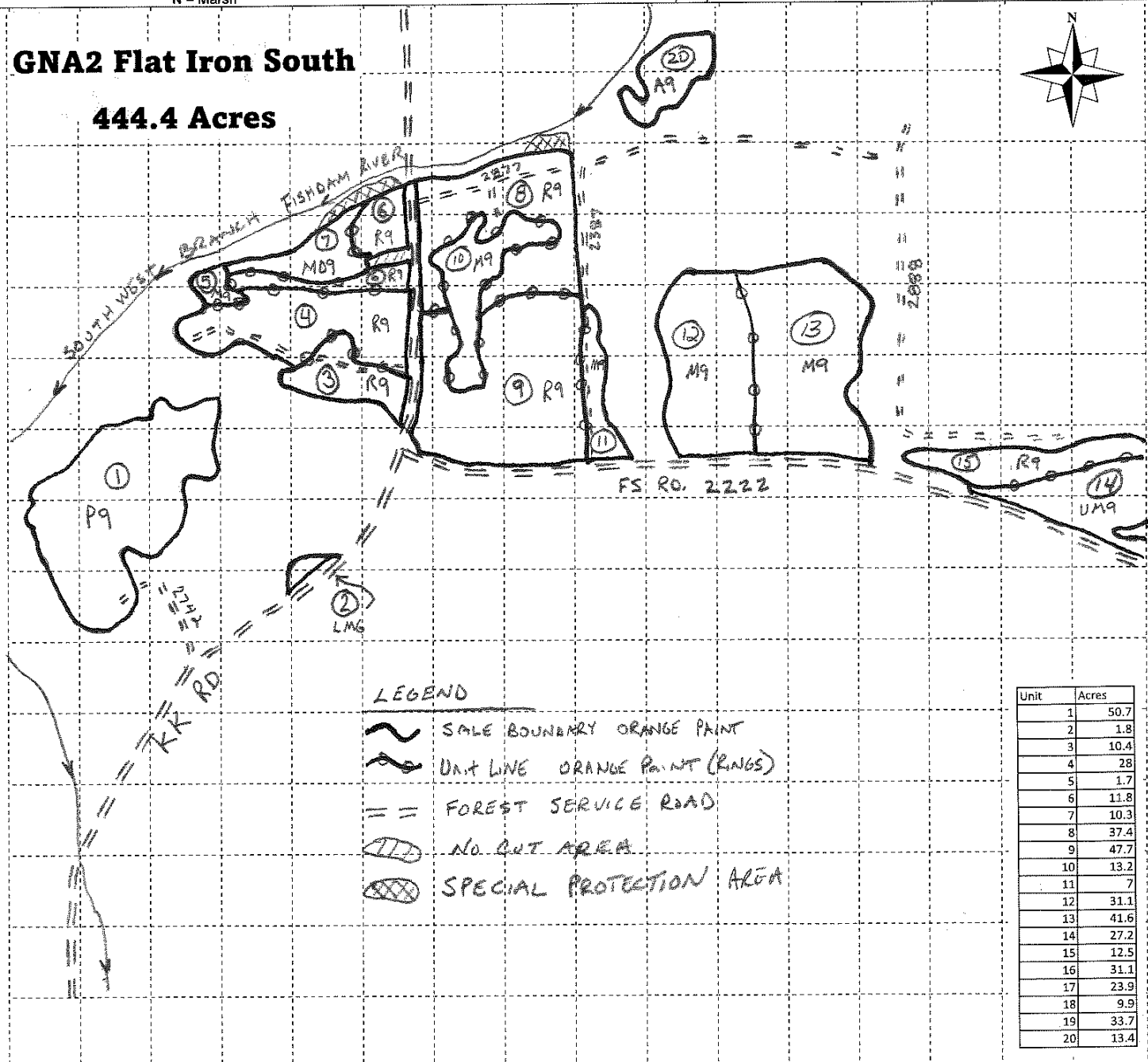
**TIMBER SALE MAP**

This information provided by authority of Part 5, 1994 PA 451, as amended.

Sale Number	Year
41-822-22	2022
Date	Page of
10/6/22	1 2

Forest Management Unit Shingleton	County Delta	Mapped By Kyle Gould	Section(s) and Subdivision(s) 5 SESW 6 NWSW, S1/2SW 7 NW, NWNE, S1/2NE 8 NENW, S1/2NW, W1/2NE, N1/2SW 1 SESW, NESE, S1/2SE 12 NW, NE, N1/2SW, NWSE
Compartment Number 7912- 091,094,096	Township 41N	Range 18W, 19W	Cruised By Grossman Forestry
Scale: 4 inches = 1 mile			

Cover Type				Density	
A = Aspen	J = Jack Pine	O = Oak	U = Upland Brush	0 = Non Stocked	5 = Pole Timber Medium
B = Paper Birch	K = Rock	P = Lowland Poplar	UM = Upland Mix Forest	1 = Seedling Sapling Poor	6 = Pole Timber Well
C = Cedar	L = Lowland Brush	Q = Mixed Swamp Conifer	V = Bog or Marsh	2 = Seedling Sapling Medium	7 = Saw Timber Poor
D = Treed Bog	LM = Lowland Mix Forest	R = Red Pine	W = White Pine	3 = Seedling Sapling Well	8 = Saw Timber Medium
E = Swamp Hardwoods	M = Maple, Beech, Birch	S = Black Spruce	X = Non Stocked	4 = Pole Timber Poor	9 = Saw Timber Well
F = Spruce/Fir	MC = Mixed Conifer	T = Tamarack	Y = Sand		
G = Grass	MD = Mixed Deciduous		Z = Water		
H = Hemlock	N = Marsh				

**GNA2 Flat Iron South****444.4 Acres**

**TIMBER SALE MAP**

This information provided by authority of Part 5, 1994 PA 451, as amended.

Sale Number	Year
<b>41-822-22</b>	<b>2022</b>
Date	Page of
10/6/22	<b>2</b> of <b>2</b>

Forest Management Unit Shingleton	County Delta	Mapped By Kyle Gould	Cruised By Grossman Forestry
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