



## TIMBER SALE PRESCRIPTION

### GENERAL

Date 11/19/2008	Forest, Mineral and Fire Management Unit Atlanta
Timber Sale Number (if applicable) NA	Sale Name (or prescription name) Compartment 157 Contract

### LOCAL CONTACT

Name Tim Paulus	Telephone (989) 733 - 8774
Email Address paulust@michigan.gov	FAX (989) 733 - 8553

**Map of Project Area Attached**

### LEGAL DESCRIPTION

T36N R02E Section(s) 19, 20 & 21 Description: various see attached maps

Year of Entry: 2008 Compartment(s):157 Stand Number(s): 16, 18, 38, 41, 44, 53, 116, 118, 144 & 216

### THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE

Estimated Acres: 230 Source:  OI  GPS  Other \_\_\_\_\_

Payment will be made on the basis of these estimated acres.

### TREATMENT & OBJECTIVE

STAND #	COVER TYPE	ACRES	BA	TREATMENT	MANAGEMENT OBJECTIVE
16	R9	37	180	Shelter Wood	Red Pine
18	R9	45	110	Shelter Wood	Red Pine
38	O6	42	110	Shelter Wood	Oak
41	M6	67	130	Selection Cut	Mixed Hardwoods
44	R9	12	150	Thinning	Red Pine
53	R6	11	140	Thinning	Red Pine
116	R9	4	180	Shelter Wood	Red Pine
118	R9	5	110	Shelter Wood	Red Pine
144	R9	1	150	Thinning	Red Pine
216	R9	6	180	Shelter Wood	Red Pine

### PRESCRIPTION

1. Stands 16, 116 & 216: Red Pine, put in boundary lines, determine area by GPS, mark Red Pine to 110 BA, tally logs and cruise all Aspen, Jack Pine & Red Maple and marked Red Pine pulpwood.
2. Stands 18 & 118: Red Pine, put in boundary lines, determine area by GPS, mark Red Pine to 80 BA and tally logs, cruise all Aspen, Jack Pine & Red Maple and marked Red Pine pulpwood.
3. Stand 38: Oak, put in boundary lines, determine area by GPS, mark Oak to 80 BA, tally logs and cruise marked Oak pulpwood and all Jack Pine, Aspen and Red Maple.
4. Stand 41: Northern HDWDS, put in boundary and unit lines, determine area by GPS, mark to 90 BA and tally logs, cruise pulpwood.
5. Stands 44 & 144: Red Pine, put in boundary lines, determine area by GPS, mark Red Pine to 120 BA and tally logs, cruise marked Red Pine pulpwood and all Jack Pine, Aspen, Birch and Red Maple.
6. Stand 53: Red Pine, put in boundary lines, determine area by GPS, mark Red Pine to 120 BA and tally logs, cruise marked Red Pine pulpwood and all Jack Pine.

**Access:** This area is accessed by Black Mtn Rd and County Rd 489. See attached compartment map.

DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK	ESTIMATED DATE
NA	

### CONTRACT WORK CAN BEGIN

Immediately  Date:

**CONTRACT WORK MUST BE COMPLETED BY** Date 08/15/2009

**PAINT LINE WORK** This is included in the bid     This is not included in the bid**Paint line work to be performed: (See attached map for locations)**

TYPE OF LINE	WORK TO BE DONE	NOT APPLICABLE	PAINT COLOR	
Private boundary	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blue	<input type="checkbox"/> Other:
Sale boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Red	<input type="checkbox"/> Other:
Sale cutting unit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yellow	<input type="checkbox"/> Other:
Stand type line	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Other:

**Exclusions to mark and why**

Contractor will put in all sale and unit boundary lines. Refer to the contract and attached appendix for detailed instructions.

**Standards for marking lines against private land**

See Contract Specifications 1-B,7.a.

**AREA CALCULATION** This is included in the bid     This is not included in the bid

UNIT	METHOD	STANDARD
Sale	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	
Payment Unit	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	
Stand	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	

**Special Instructions:**

All stands and payment units will need the area calculated using a GPS unit as described in the contract. These files need to be turned in as corrected files on a 3.5" disk. The corrected map at a scale of 1:15840 will be used to indicate the plot locations as the cruise map.

**TIMBER CRUISING SPECIFICATIONS** This is included in the bid     This is not included in the bid**Required Basal Area Factor:**  10     20     Other:**Cruise Line Directions** East/West

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
Stands 16, 18, 38, 44, 53	1.1	3 X 3
Stands 116, 118, 144, 216	1.1	3 X 3
Stand 41	0.83	3 X 4
		X
<b>TOTAL NUMBER OF CRUISE POINTS</b>	Approx 222	

**Cruise Special Instructions:**

Refer to the contract and attached appendix for detailed instructions.

Unless otherwise specified, the tally sheets used must be those supplied by the Forest, Mineral and Fire Management Unit.

**TIMBER MARKING SPECIFICATIONS**

This is included in the bid     This is not included in the bid

Precise specifications to be delineated at pre-work meeting with DNR staff

**Total Merchantable Residual BA (Basal Area):** Stands 16, 116, 216: 110 (Minimum 100 to Maximum 120)  
 Stands 18, 38, 118: 80 (Minimum 70 to Maximum 90)    Stands 41: 90 (Minimum 80 to Maximum 100)  
 Stands 44, 53, 144: 120 (Minimum 110 to Maximum 130)

TREATMENT	NUMBER	SIZE	
<b>Regeneration Gaps Per Acre in Stand 41</b>	3-5	Minimum 30 ft	
<b>Girdled Trees Per Acre</b>	0		
PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	X and dot per 8ft log	10 inches	8 inches
Sawbolts	NA	NA	NA
Pulpwood	Slash	4.6 inches	4 inches

TYPE OF WORK	WORK TO BE DONE	NOT APPLICABLE	PAINT COLOR
Trees marked to leave	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Green <input type="checkbox"/> Other
Trees marked to cut	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Orange <input type="checkbox"/> Other

TALLY INTENSITIES	
SPECIES / PRODUCT	RATIO
Sawlogs	1 : 1
Pulpwood: See Cruising section	

**SPECIAL MARKING INSTRUCTIONS**

See attached Appendix and contact LCA for details on retention species.

Unless otherwise specified, the tally sheets used must be those provided by the Forest, Mineral and Fire Management Unit.

**RESTRICTIONS**

1. Forest, Mineral and Fire Management Division must to be able to identify who did what on the timber sale.
2. The contractor may not have more than two markers in one payment unit without prior approval.
3. Each marker should have an assigned area to mark (not strips).

**PAINT**

1. Call Tim Paulus at (989) 733 - 8774, to make arrangements for paint.
2. Paint will be supplied from Onaway Field Office.
3. Contractor's work schedule must coincide with the DNR work schedule for paint supply.
4. The DNR will not be available on weekends or evenings.

**DELIVERABLES**

1. A list of names that marked or cruised each payment unit.
2. A summary of paint used (in quarts).
3. Tally summaries for each payment unit (one summary, regardless of the number of markers) and all of the original tally sheets.
4. GPS files for any GPS work.

## Compartment 157 Contract TIMBER SALE PRESCRIPTION APPENDIX

### When establishing paint lines:

- The attached type map delineates the contract marking area.
- Avoid using dead or badly damaged trees - boundary trees must last for the duration of the timber sale (up to 3-4 years).
- Favor the use of reserved species such as cedar or oak.
- Avoid using small (fast-growing) stems and those exposed to direct sunlight.
- Marking must be done in dry weather and when tree surfaces are not wet.
- Paint the boundary line in such a way that it can be seen both from the inside of the sale area and when walking along the line from either direction (two sides). Each boundary line tree must be stump-marked, at the base of the stump (one side) between the roots extending all the way to the ground.
- Place marks approximately six feet above the base of the tree.
- The contractor will keep track of total quarts of paint used per-sale by color.
- The contractor will use a GPS unit to determine enclosed acreage to the nearest one-tenth acre, unless an alternative method is approved prior by Unit Management.
- GPS units used must be compatible with Pathfinder Office (2.01 or later) and capable of producing a Trimble .COR file format. Supply a disk of the traverse file along with a hard copy of the corrected traverse file.
- Position Mode must be set so that GPS receiver collects data from a minimum of four satellites. This must be recorded in the position properties window after downloading.
- Positions deliver ODS (over determine system) data. 2D position will not be acceptable.
- The GPS receiver must log PDOP. This log must be recorded in the position properties window after downloading.
- PDOP mask must be less than or equal to 8.
- SNR setting must be less than or equal to 4.
- Sale boundaries are to be recorded as an area feature, not a line.
- Payment Unit lines may be recorded as a line feature bisecting the sale.

### When Registered Corners or Witness Trees are discovered:

- Any wooden posts encountered at corners must also be painted/protected.
- Bearing and/or witness trees discovered during the course of sale preparation must be protected. This can be accomplished by painting a ring completely around the tree at 4-6 feet above ground level with either red paint (corner surrounded by state lands) or blue paint (corner on private property boundary line). In addition, tying ribbon on these trees helps alert loggers to their presence. Do not mark any trees for harvest if cutting them is likely to result in damage to corner monuments and/or bearing trees.
- Please report the condition of all corners, posts and bearing trees to the LCA.

### When Cruising:

- Data must be recorded so volume can be determined by stand. If a stand is split into 2 or more payment units, each unit must be recorded separately. In addition, all data must be summarized by species or species grouping by payment unit.
- All saw logs must be 100% tallied by species and diameter.
- Within all marked stands, cruise all marked pulpwood tree species that will yield one or more 100" pulpwood sticks with a minimum top diameter of four (4) inches DIB. Contact LCA to see what grouping of pulpwood is acceptable.
- Within all marked stands, residual basal area (merchantable sized trees by species) at each plot must also be recorded on the cruise sheets. Borderline residual trees do not have to be measured, but every other borderline tree should be counted.
- Plot centers must be marked according to contract specifications and correspond to a legible 1:15840 scale cruise map. Cruise specifications may be altered as necessary by the LCA.

### When marking, prioritize selection of trees to be cut in the following order:

1. Release suitable crop trees. (Refer to The Complete Marker for crop tree specifications.)
2. When appropriate, try to increase the number of lesser occurring species such as beech in areas of high bear use. LCA can provide an explanation of this priority.
3. Remove high-risk, poor quality and trees with poor crowns.
4. Maintain target basal area.
5. Maintain all species diversity.

### Reserved Species:

- Do not mark within 100' of any raptor nest trees. Report these to the LCA as soon as possible and directions will be given at that time.
- Marking of infrequently occurring species should be avoided. Consult the LCA for clarification.