

**TIMBER SALE PRESCRIPTION****GENERAL**

Date	Forest, Mineral and Fire Management Unit
10/30/09	Grayling
Timber Sale Number (if applicable)	Sale Name (or prescription name)
720011001	Compartment 214 Mix

**LOCAL CONTACT**

Name	Telephone
Joan Charlebois	(989) 348-6371 ext: 7443
Email Address	FAX
charleboisj@michigan.gov	(989) 348-8825

 **Map of Project Area Attached****LEGAL DESCRIPTION**

T28N R03W Section(s) 17 Description: Sec 17-W1/2NW, NENW, W1/2SW, W1/2NE, N1/2SE, SESE

Compartment(s): 214 (YOE 2010) stands 35, 39, 50, 53 &amp; 57

**THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE**Estimated Acres: 141 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
35	R6	35	170	Thinning	Red Pine
39	R6	4	210	Thinning	Red Pine
50	R6	98	220	Thinning	Red Pine
53	M6	2	130	Thinning	Northern Hardwood
57	R6	2	220	Thinning	Red Pine

**PRESCRIPTION**

- Stand 35 – Thinning - Mark to cut to a residual BA of 110 sq. ft.
- Stand 39 – Thinning - Mark to cut to a residual BA of 110 sq. ft.
- Stand 50 – Thinning - Mark to cut to a residual BA of 120 sq. ft.
- Stand 53 – Thinning - Mark to cut to a residual BA of 80 sq. ft.
- Stand 57 – Thinning - Mark to cut to a residual BA of 110 sq. ft.

**Access:** From Exit 264 on I-75, go east on CR-612 to Roberts Road, north on Roberts Rd. approximately 2 miles, then east on forest roads in section 17.

DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK	ESTIMATED DATE
Paint & GPS stand boundaries	10/15/09

**CONTRACT WORK CAN BEGIN** Immediately  Date:**CONTRACT WORK MUST BE COMPLETED BY:** July 31, 2010

**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	
Unit Line	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yellow	<input type="checkbox"/> Other:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Red	<input type="checkbox"/> Other:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Blue	<input type="checkbox"/> Other:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Green	<input type="checkbox"/> Other:

Exclusions to mark and why:

**Standards for marking lines against private land**

N/A

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

UNIT	METHOD	STANDARD
Sale	<input 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 type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	
Retention Island	<input type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	

**Special Instructions:**

See Appendix A-1

**TIMBER CRUISING SPECIFICATIONS** This is included in the bid     This is not included in the bidRequired Basal Area Factor:  10     20     Other:

Cruise Line Directions    Uniform north-south/east-west grid

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
stand 50	.7	4 x 3.8
Stands 35, 39, 53 & 57	1	3 x 3.3
<b>TOTAL NUMBER OF CRUISE POINTS</b>	108	

**Cruise Special Instructions:** Cruise all marked species separately.    Separate cruise data by stand.

See Appendix 8 (will be provided upon request) and Appendix B

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):**

Stand 35: 110 (Minimum 100 to Maximum 120)

Stand 39: 110 (Minimum 100 to Maximum 120)

Stand 50: 120 (Minimum 110 to Maximum 130)

Stand 53: 80 (Minimum 70 to Maximum 90)

Stand 57: 110 (Minimum 100 to Maximum 120)

TREATMENT	NUMBER	SIZE
Regeneration Gaps Per Acre	NA	
Girdled Trees Per Acre	NA	

PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	Single slash on two opposite sides	9.1"	8.0"
Sawbolts	N/A		
Pulpwood	Single slash on two opposite sides	4.6"	4.0

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
	1 :

**SPECIAL MARKING INSTRUCTIONS:** For stands 35, 39, 50 & 57, see Appendix F. In stand 50, protect small pockets of hardwood regeneration where possible. In stand 53, thin by removing poorly formed individuals and some large, wolfy beech trees. Favor sugar maple where possible while maintaining species diversity within the stand. See Appendix D.

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 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. Paint will be supplied from the Grayling Field Office.
2. Call (989) 348-6371 ext 7443 (Joan Charlebois) or ext 7447 (Patrick Cotant) to make arrangements for paint.
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.
5. Cruise data entered into POSALE and exported onto a disk or other electronic format. Use the sale name and number from page 1.

## **Grayling Management Unit** **Unit Line Establishment**

1. Establish the Unit Lines as shown on the attached map.
2. Marking must be done in dry weather and when tree surfaces are not wet.
3. Paint each Unit Line in such a way that it can be seen from both adjoining units and when walking along the line from either direction.
4. Place bole marks approximately six feet above the ground, and stump marks at the base of the tree (on one side) between the roots extending onto the ground.
5. The contractor will keep track of total quarts of paint used per sale by color.
6. The contractor will use a GPS unit to record the Unit Line features.
7. GPS units used must be compatible with Pathfinder Office (2.01 or later) or be capable of producing an ArcView-compatible shapefile. Supply electronic and paper copies of the corrected and edited (outlier/erroneous points cleaned up) GPS file.
8. Position Mode must be set so that the GPS receiver collects data from a minimum of four satellites. This must be recorded in the position properties window after downloading.
9. The GPS receiver must log DOPs. This log must be recorded in the position properties window after downloading.
10. PDOP mask must be less than or equal to 8.
11. SNR setting must be greater than or equal to 4.

## Grayling Management Unit Timber Cruising Specifications

1. Cruise designated timber using Appendix 8 Product Standards to determine products and heights of products. Separate cruise data by species/product. Appendix 8 will be provided upon request.
2. Cruise at the sampling intensity specified in the Timber Sale Prescription and apply that rate to the GPS'd stand acreage.
3. Separate cruise data by stand.
4. Use a 10-factor prism.
5. Mark location of plots on the map, using the plot number.
6. Record BA of residual trees. Separate by species if specified under the Timber Sale Prescription's Cruise Special Instructions. Record any mark-to-girdle trees separately. Do not count mark-to-girdle trees toward the specified residual BA target.
7. Unless otherwise agreed to by the contract administrator and the contractor, plot center will be marked by a stake or stick firmly inserted in the ground (not snow) with a ribbon attached to it at a height of not less than two feet above the ground, and labeled with the PU/stand number and plot number. In addition, ribbon at least 12 inches long must be attached to the tree closest to plot center.
8. All cruise sheets must be labeled with the compartment #, stand #, unit #, prism factor, date, individual tree species, and the cruiser's name. If a portable data recorder is used for cruising, submit a summary sheet that details the rest of the required information.
9. The Grayling Management Unit Office will provide cruise sheets.
10. **A copy of the "POSALE" program will be provided to the successful bidder for cruise data entry. Original cruise sheets and an electronic copy of the cruise data exported from POSALE must be delivered upon the completion of the sale.**

**Grayling Management Unit**  
**Individual Tree Marking**  
**Northern Hardwoods Crop Tree Release**

Appendix D

1. Select crop trees.
2. Crop trees are defined as trees that have the potential of making a grade one sawlog when they are mature. A grade one sawlog is any tree capable of producing 16 feet of clear lumber. A crop tree can be ANY species of tree. It is important to manage for the best tree in place at all times
3. Locate at least 50 crop trees per acre spaced approximately 25 to 30 feet apart. For trees less than 8" DBH, mark enough crown competitors to provide seven feet of open space around the crop tree's crown. For trees greater than 8", mark the two most important crown competitors. See the Complete Marker for further reference.
4. After the crop tree has been chosen and properly released, additional trees may have to be removed to reduce the basal area to the desired target. First remove high-risk (ie: Eutypella canker) and cull trees from the stand, followed by commercial subcanopy trees beneath the crop tree. (Commercial trees will be defined as any trees that contain at least one 100" sawlog or pulp stick.) Lastly, remove any other lesser quality intermediate and co-dominant trees from the stand to reduce basal area to the desired goal.
5. Across the sale area, at least two den trees per acre will be left. Trees that have a "platform" crotch structure for raptor nest support located beneath the foliage canopy shall be left.
6. The contractor will keep track of total quarts of paint used per-sale by color.
7. The attached type map delineates the contract marking area.
8. Marking must be done in dry weather and when tree surfaces are not wet.
9. Mark the trees on two opposite sides, approximately 6 feet above the ground.
10. Each marked tree must be stump-marked at the base of the stump (one side), between the roots and extending all the way to the ground.
11. Paint must be applied on moss-free areas.

**Grayling Management Unit**  
**Red Pine Thinning Sale Preparation**  
**Individual Tree Marking**

Appendix F

1. The attached type map delineates the contract marking area.
2. Leave a residual BA as specified in the **Timber Sale Prescription**.
3. Do not selectively mark stems within multiple-stemmed clumps; either mark them all or leave them all.
4. Target for removal high-risk, damaged, declining, poor-form and suppressed red pine trees.
5. Thin from above, focusing on crown spacing and developing potential utility-pole stems.
6. Remove economically mature red pine where BA allows (more detailed instruction to be given at on-site meeting with the contract administrator).
7. The Grayling Management Unit Office will provide paint.
8. The contractor will keep track of total quarts of paint used per sale by color.
9. Marking must be done in dry weather and when tree surfaces are not wet.
10. Mark the trees on two opposite sides. Place marks approximately six feet above the base of the tree.
11. Each marked tree must be stump-marked, at the base of the stump (one side), between the roots and extending all the way to the ground.
12. Paint must be applied on moss-free areas.