



# TIMBER SALE PRESCRIPTION

**GENERAL**

Date	Forest, Mineral and Fire Management Unit
10/25/11	Grayling
Timber Sale Number (if applicable)	Sale Name (or prescription name)
726011201	Comp 188 Block

**LOCAL CONTACT**

Name	Telephone
Tom Barnes	(989) 348-6371 ext: 7449
Email Address	FAX
Barnest2@michigan.gov	(989) 348-8825

Map of Project Area Attached

**LEGAL DESCRIPTION**

T25N R04W Section(s) 4, 8 & 9 Description: Sec 4 - SWSW; Sec 8 - E1/2; Sec 9 - S1/2, NENE, S1/2NE, NWNW, S1/2NW  
 Compartment(s): 188 (2012 YOE) stands 14, 16, 22, 23 and Compartment: 187 (2010 YOE) stand 30

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

Estimated Acres: 543 Source:  Other GIS (IFMAP) Payment will be made on the basis of these estimated acres.

**TREATMENT & OBJECTIVE**

STAND NUMBER	TREATMENT NAME (IFMAP)	COVER TYPE	ACRES	BA Range	TREATMENT	MANAGEMENT OBJECTIVE
14	72188014-Cut	Red Oak	182	51-80	Clearcut w/ Reserves	Oak, Aspen
16	72188016-Cut	Red w/ White Oak	88	81-110	Seed Tree w/ Reserves	Oak, Aspen
22	72188022-Cut	Sugar Maple Assoc.	120	60-160	Group Selection	S. Maple, Hard Mast Assoc.
23 (west)	72188023_1-Cut	White, Black, N. Pin Oak	72	51-80	Clearcut	Oak, Aspen
23 (east)	72188023-Cut	White, Black, N. Pin Oak	73	51-80	Seed Tree	Oak, Aspen
30	72187_OYOE_M6	M6	8	110	Group Selection	Northern Hardwoods

**PRESCRIPTION**

Stand 14 – Clearcut with Reserves:

- Paint boundary lines to create leave islands within the stand that range from 1 to 3 acres in size, totaling 13 to 18 acres.
- Distribute those islands across the stand. Encompass pockets of aspen regen where possible in order to protect that regen.
- Mark-to-leave 1 to 3 oak trees per acre for mast, den trees and vertical structure.
- All pine are designated leave trees and therefore do not need to be marked.

Stand 16 – Seed Tree with Reserves:

- Mark-to-leave 20 BA (+/-10 sq. ft.) for seed trees, favoring oak but also leaving some hardwoods & solitary aspen.
- Paint boundary lines to create 3 leave islands within the stand that are each 1 to 2 acres in size.
- Locate the islands in the west half of the stand, with a priority for encompassing open two-track segments and/or steep hills.
- Final harvest pockets of aspen. Do not mark trees to leave within aspen clones.
- All pine are designated leave trees and therefore do not need to be marked.

Stands 22 & 30 – Group selection:

- Mark-to-cut down to 70 BA (+/-10 sq. ft.). Areas with a high proportion of quality stems can be left up to 90 BA.
- Create 80-100' diameter regeneration gaps, one per acre, marking out all stems 2" DBH and up.
- Focus regen gap creation near 12"+ DBH sugar maple stems and/or areas with a high proportion of poor-quality stems.
- All pine are designated leave trees. Do not mark to cut any pine.
- See the Compleat Marker (will be provided upon request).

Stand 23 (west) – Clearcut

- Mark-to-leave 1 to 3 trees per acre for mast, den trees and vertical structure.
- All pine are designated leave trees and therefore do not need to be marked.

Stand 23 (east) – Seed tree

- Mark-to-leave 20 BA (+/-10 sq. ft.) of oak for seed trees.
- All pine are designated leave trees and therefore do not need to be marked.

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

Private line	12/31/11
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**CONTRACT WORK CAN BEGIN**  Date: 12/31/11 **CONTRACT WORK MUST BE COMPLETED BY:** July 31, 2012

**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	
Payment Unit Boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yellow	<input type="checkbox"/> Other:
Sale Boundary - State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Red	<input type="checkbox"/> Other:
Sale Boundary - Private	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Blue	<input type="checkbox"/> Other:
Leave Islands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Other:

**Exclusions to mark and why:**

See leave islands specified by stand under the page 1 PRESCRIPTION section. Interior well sites do not need to be red-lined but their acreage must be subtracted from the encompassing stand's acreage.

**Standards for marking lines against private land**

N/A - to be done by DNR staff

**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	
Retention Island	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	

**Special Instructions:**

See Appendix A

**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:** North-south or east-west grid, by the spacing specified below if compass and pacing, or by a uniform square, GPS-calculated grid.

CRUISING UNIT	ESTIMATED ACRES	NUMBER OF PLOTS PER ACRE	APPROXIMATE SPACING (CHAINS)
stand 14	182	0.5	4 x 5
stand 16	88	0.7	4 x 3.5
stand 22	120	0.6	4 x 4
stand 23 west	72	0.8	4 x 3
stand 23 east	73	0.8	4 x 3
stand 30	8	1.0	3 x 3
<b>TOTAL NUMBER OF CRUISE POINTS</b>	347 (estimate)		

**Cruise Special Instructions:**

See Appendix B and Appendix 8 (Product Standards, revised 6-24-2011, will be provided upon request).

The type of tally sheet used must meet with the approval of the contract administrator.

**TIMBER MARKING SPECIFICATIONS**

This is included in the bid

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

**Total Merchantable Residual BA (Basal Area):** Refer to page 1 PRESCRIPTION for acceptable residual

TREATMENT	NUMBER	SIZE
Regeneration Gaps Per Acre Girdled Trees Per Acre	See page 1 PRESCRIPTION NA	See page 1 PRESCRIPTION

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	STANDS	PAINT COLOR
Trees marked to leave	<input checked="" type="checkbox"/>	14, 16 & 23	<input checked="" type="checkbox"/> Green <input type="checkbox"/> Other
Trees marked to cut	<input checked="" type="checkbox"/>	22 & 30	<input checked="" type="checkbox"/> Orange <input type="checkbox"/> Other

TALLY INTENSITIES	
SPECIES / PRODUCT	RATIO
	1 :

**SPECIAL MARKING INSTRUCTIONS:**

See page 1 PRESCRIPTION details by stand, the Compleat Marker (will be provided upon request), Appendix D, and Appendix G.

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

**RESTRICTIONS**

1. Forest Management Division staff 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. Paint will be supplied from the Grayling Field Office.
2. Call (989) 348-6371 ext 7449 (Tom Barnes) or ext 7443 (Joan Charlebois) 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) by color.
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 and acreages for line running and area calculation work.
5. Cruise data entered into POSALE and exported onto a disk or other electronic format. Use the sale name/number from page 1.

## **Grayling Management Unit** **Boundary Marking and Area Calculation**

1. Establish sale boundary lines as shown on the attached map. Paint each line so that it can be seen from both inside the sale area and when walking along the line from either direction. Interior well site stands do not have to be red-lined, but their acreage must be subtracted from the encompassing contract stand acres.
2. Establish payment unit lines as shown on the attached map. Paint each payment unit line so that it can be seen from both adjoining payment units and when walking along the line from either direction.
3. Establish leave island lines as directed in the page 1 PRESCRIPTION section. Paint each leave island line so that it can be seen from both outside the leave island and when walking along the line from either direction.
4. Marking must be done in dry weather and when tree surfaces are not wet.
5. Place bole marks approximately five feet above the ground.
6. Each line tree must be stump-marked at its base and extending onto the ground.
7. The contractor will record total quarts of paint used by color.
8. The contractor will use a GPS unit to determine acreage by stand and payment unit to the nearest acre.
9. GPS units must be compatible with Pathfinder Office (2.01 or later) or produce an ArcMap-compatible shapefile. Correct and edit (clean up outlier/erroneous points) the GPS files before submitting the data.
10. Required GPS receiver signal quality settings for data collection: a minimum of four satellites, with a maximum DOP (dilution of precision) of 5.
11. The GPS receiver must log and save DOP and SNR (signal-to-noise-ratio) data.
12. Sale boundaries must be recorded as area features, not lines. Isolated stands must be recorded as separate area features. Retention islands must also be recorded as area features.
13. Payment Unit lines must be recorded as line features.

## Grayling Management Unit Timber Cruising Specifications

1. Cruise designated timber using Appendix 8 Product Standards (revised 6-24-2011) to determine products and heights of products. Record cruise data by species/product.
2. Record BA of residual trees by species.
3. Cruise at the sampling intensity specified in the Timber Sale Prescription and apply that rate to your GPS-determined stand acreage.
4. Separate cruise data by stand and treatments within a stand. In the IFMAP inventory system, a stand may have more than one treatment created within it.
5. Use a 10-factor prism.
6. Mark plot locations on a map, using the plot number.
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 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. **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 completion of the contract field work.** Note: At the cruise data entry screen in POSALE, when prompted to enter the stand acres, enter your actual GPS'd acres (rounded to the nearest whole acre) – NOT the contract's estimated inventory-based acreage. Also, if leave islands were delineated within the sale area, do not include those acres in the entered POSALE stand acres.

## **Grayling Management Unit** **Individual Tree Marking**

1. Marking must be done in dry weather and when tree surfaces are not wet.
2. Place bole marks approximately five feet above the ground, with enough bole-wrap so that the marks can be seen from all sides of the tree.
3. Each tree must be stump-marked at its base and extending onto the ground.
4. Apply paint on moss-free areas.
5. Record total quarts of paint used by color.

## **Grayling Management Unit** **Unexploded Military Ordinance Hazard**

This contract is located in an area that has been used for military training.

There is the potential to encounter unexploded bombs, artillery shells, mortar rounds, mines, grenades and other detonating devices.

If you encounter any questionable man-made object while working in the area, **DO NOT TOUCH IT.**

Flag the spot where you are standing, leave the area undisturbed, and report the location to the contract administrator as soon as possible.

Do not re-enter the area until the contract administrator confirms that the area has been investigated and cleared by the military.