



# TIMBER SALE PRESCRIPTION

**GENERAL**

Date	Forest, Mineral and Fire Management Unit
01/17/11	Grayling
Timber Sale Number (if applicable)	Sale Name (or prescription name)
720041201	Comp 227 RP Thin

**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 R03W Section(s) 21 Description: W1/2NE, NW

Compartment: 227 stands: 22 & 26

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

Estimated Acres: 92 Source:  Other GIS (GDSE) 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
22	72227022-Cut	Planted Red Pine (R9)	68	171-200	Crown Thinning	Planted Red Pine
26	72227026-Cut	Natural Mixed Pine (MC6)	24	51-80	Group Selection	Natural Mixed Pine

**INVENTORY DATA – Stand 22**

SPECIES	% OF CANOPY COVER	SIZE CLASS	AVERAGE DBH	AGE
Red Pine	100%	Log/Pole	10	63
White Pine	trace			
Mixed Hardwoods	trace			

**INVENTORY DATA – Stand 26**

SPECIES	% OF CANOPY COVER	SIZE CLASS	AVERAGE DBH	AGE
Red Maple	4%	Pole	5	
White Pine	5%	Pole/Log	8	
Northern Pin Oak	10%	Pole/Log	8	
Jack Pine	10%	Pole	8	
Scotch Pine	67%	Pole /Log	8	40
White Oak	2%	Pole	8	
Red Pine	2%	Pole/Log	8	
European Aspen	trace			

**PRESCRIPTION**

Stand 22 – Crown Thinning (second entry, was third-row thinned in 1993):

- Mark-to-cut Red Pine down to 120 sq. ft. except do not remove more than half of the BA in any one place.
- Where pocket mortality is occurring, paint and GPS a boundary line that includes a 1/2- to 1-chain buffer past the outermost declining Red Pine stems (faders). These mortality pocket(s) will be mini-clearcuts in which all red pine will be designated for removal. At the time of inventory, one pocket was noted.
- Mark-to-cut within the other species only as needed to create adequate room for harvesting operations.
- See Appendix F.

Stand 26 – Group Selection:

- This stand's harvest will be a designated removal of all species except Red Pine, White Pine and oak.
- No within-stand marking is required.

**Access:** Old 27 south of Grayling to 7 Mile Road, east on 7 Mile Road across the I-75 corridor to Merrio Road.

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

Blue line	done
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**CONTRACT WORK CAN BEGIN**  immediately **CONTRACT WORK MUST BE COMPLETED BY:** August 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 type="checkbox"/> Blue	<input type="checkbox"/> Other:
Mortality Pocket Mini-Clearcuts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Pink	<input type="checkbox"/> Other:

**Exclusions to mark and why:**

N/A

**Standards for marking lines against private land**

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	
Mortality Pockets	<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: see Appendix B.5 regarding 10 vs. 20 BAF

Cruise Line Directions: North-south or east-west grid, by the approximate spacing 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)
22		0.8	3 x 4
122		0.8	3 x 4
222		0.8	3 x 4
322		0.8	3 x 4
26		1	3 x 3

**TOTAL NUMBER OF CRUISE POINTS**    78 (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	NA	
Girdled Trees Per Acre	NA	

PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	Double 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 type="checkbox"/>		<input type="checkbox"/> Green <input type="checkbox"/> Other
Trees marked to cut	<input checked="" type="checkbox"/>	22	<input checked="" type="checkbox"/> Orange <input type="checkbox"/> Other

**TALLY INTENSITIES**

SPECIES / PRODUCT	RATIO
	1 :

**SPECIAL MARKING INSTRUCTIONS:**

See page 1 PRESCRIPTION details and Appendix F.

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.
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 boundaries around mortality pocket(s) as described in the page 1 Prescription. Paint each line so that it can be seen from both inside and outside of the mini-clearcut pocket.
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, and mortality pockets to the nearest tenth-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 and mortality pockets must be recorded as area features, not lines. Isolated stands must be recorded as separate 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 the payment units shown on the contract map.
5. Use a 10-factor prism for stand 26. For stand 22, use the basal area factor (10 or 20) that will average 4 to 8 “in” trees per plot. Use that BAF for all cruising units within stand 22.
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.**
  - Enter each payment unit’s cruise data separately by entering the payment/cruising unit number as the stand number in POSALE.
  - Enter stands 22, 122, 222 & 322 under Stratum 1.
  - Enter stand 26 under Stratum 2.
  - 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) for that payment unit – NOT the contract’s estimated inventory-based acreage.

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

1. Leave a residual BA as specified in the **Timber Sale Prescription**.
2. Thin from above, focusing on crown spacing and developing potential utility-pole stems.
3. Target for removal high-risk, damaged, declining, poor-form and suppressed red pine trees.
4. Do not selectively mark stems within multiple-stemmed clumps; either mark them all or leave them all.
5. Remove economically mature red pine where BA allows.
6. The Grayling Management Unit Office will provide paint.
7. Keep track of total quarts of paint used by color.
8. Marking must be done in dry weather and when tree surfaces are not wet.
9. 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.
10. Each tree must be stump-marked at its base and extending onto the ground.
11. Paint must be applied on moss-free areas.