



TIMBER SALE PRESCRIPTION

GENERAL

Date 3/16/2009	Forest, Mineral and Fire Management Unit Grayling
Timber Sale Number (if applicable)	Sale Name (or prescription name) 241 Hardwood Mix

LOCAL CONTACT

Name Patrick L. Potter	Telephone (989) 348-6371 ext: 7441
Email Address Potterp@michgan.gov	FAX (989) 348-8825

Map of Project Area Attached

LEGAL DESCRIPTION

T28N R03W Section(s) 26 & 35 Description: Sec 26: NENE, W1/2NE, NWSE; Sec 35: SENW, SWNE, W1/2SE, SESW

Compartment(s): 241 (YOE 2009) stands 20, 22, & 44

THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE

Estimated Acres: 111 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
20	M6	43	120	Thinning	Northern Hardwoods
22	M6	12	110	Thinning	Northern Hardwoods
44	M6	56	110	Thinning	Northern Hardwoods

PRESCRIPTION

1. Stands 20, 22, & 44: Mark-to-cut with orange paint down to a residual BA of 70 sq. ft. per acre, releasing crop trees, and creating regeneration gaps in areas that have low quality stems or mid-tolerate species such as yellow birch. All aspen trees are designated for removal and do not need to be marked. Within aspen clones, mark with orange paint all stems of other species that are 2" DBH or greater. Cruise all orange marked trees and aspen trees not marked with green paint.

Access: See attached map.

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

All boundary and unit line establishment and area determination	4/6/2009
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CONTRACT WORK CAN BEGIN

Immediately Date: 4/6/2009

CONTRACT WORK MUST BE COMPLETED BY Date **August 31, 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Red	<input type="checkbox"/> Other:
Sale cutting unit	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yellow	<input type="checkbox"/> Other:
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Green	<input type="checkbox"/> Other:
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> Green	<input type="checkbox"/> Other:

Exclusions to mark and why: See Marking Instructions for individual trees

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 Area feature	See Appendix A
Payment Unit	<input type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other Area feature	See Appendix A
Stand	<input type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	
	<input type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	

Special Instructions:

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)
1 & 2 (stand 20)	1	3 X 3.3
3 (stand 22)	1	3 X 3.3
4 & 5 (stand 44)	0.86	3 X 3.9
TOTAL NUMBER OF CRUISE POINTS	Estimated: 103	

Cruise Special Instructions: Cruise all species separately. Separate cruise data by stand. All aspen trees not marked to leave with green paint are to be cruised.

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): 70 (Minimum 60 to Maximum 80)

TREATMENT		NUMBER	SIZE
Regeneration Gaps Per Acre Girdled Trees Per Acre		See STAND PRESCRIPTION N/A	See Compleat Marker
PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	Slash with dots (#of logs), double slash on opposite side	9.1"	8.0"
Sawbolts	N/A	N/A	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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 :	

SPECIES TO FAVOR: Sugar maple

SPECIES TO REDUCE: Ironwood

SPECIAL MARKING INSTRUCTIONS: Crop Trees: Following the **Compleat Marker**, identify and release crop trees. In addition, those crop trees must be marked with a single green slash on two opposite sides. **For future snags:** In stand 20, do not mark any Hemlock, and leave one mature Aspen for every two acres marked with a single green paint line that encircles the tree. In stands 22 & 44, leave one mature Aspen for every two acres marked with a single green paint line that encircles the tree. Also see Appendix D and the Prescription on page 1.

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. Call Patrick L. Potter at (989) 348 - 6371 ext: 7441, to make arrangements for paint.
2. Paint will be supplied from the Grayling 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. Cruise data entered into POSALE and exported onto a disk.

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 your actual 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 residual BA of trees where applicable. 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.
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 a disk containing cruise data exported from POSALE must be delivered upon the completion of the sale.** Note: At the cruise data entry screen in POSALE, when prompted to enter the stand acres, enter your actual GPS file acres – NOT the contract's estimated inventory-based acreage.

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 codominant trees from the stand to reduce basal area to the desired goal.
5. Regeneration gaps have to be created in this stand in order to hasten its development toward an uneven aged stand. Create 3 to 5 thirty-foot diameter regeneration holes per acre to facilitate maple regeneration. In areas where basswood is more common, create 1 to 2 sixty-foot diameter regeneration holes per acre. Create these holes by removing pockets of lesser-quality trees, where possible. If only high-quality trees exist on a particular acre, then do not make any regeneration holes within that area. Some regeneration holes will be created by default when large-crowned trees are marked for removal and places are marked out for them to fall. It is essential that all trees greater than 1" DBH be marked for removal within the regeneration gaps. Note: the gap diameter is based on the size of the opening between tree crowns, not tree boles.
6. 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.
7. The contractor will keep track of total quarts of paint used per-sale by color.
8. The attached type map delineates the contract marking area.
9. Marking must be done in dry weather and when tree surfaces are not wet.
10. Mark the trees on two opposite sides, approximately 6 feet above the ground.
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.