



# TIMBER SALE PRESCRIPTION

## GENERAL

Date 07/24/2008	Forest, Mineral and Fire Management Unit Crystal Falls/Norway
Timber Sale Number (if applicable)	Sale Name (or prescription name) Breen C93 Hdwd

## LOCAL CONTACT

Name Otto Jacob	Telephone (906) 563 - 9247
Email Address Jacobom@michigan.gov	FAX (906) 563 - 5802

Map of Project Area Attached

## LEGAL DESCRIPTION

T40N R29W Section(s) 2, 3 Description See Map

Year of Entry: 2009 Compartment(s):93 Stand Number(s): 1, 3, 6, 26, 29, 34, 38, 41, 54, 58

## 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
1, 3	M6	5,29	140	Thin	Northern Hardwood
6, 26	M6	60,55	130	Thin	Northern Hardwood
29, 34	M6	14,2	130	Thin	Northern Hardwood
38	A6	5	110	Final Harvest	Aspen
41	M6	28	120	Thin	Northern Hardwood
54	M6	6	120	Thin	Northern Hardwood
58	M6	26	120	Thin	Northern Hardwood

## PRESCRIPTION

1. In M6 stands, mark to achieve a residual B.A. of 80 sq. ft.
2. In M6 stands, mark to release crop trees, while retaining conifers, Oak and minor species.
3. In M6 stands, mark lightly around vernal ponds.
4. In M6 stands, mark trees with v-shaped forks and trees with Eutapella cankers
5. In M6 stands, leave some den trees for wildlife.
6. In all stands line out and/or do not mark in wet areas with wet indicator species.
7. In aspen stands retain Pine, Oak, Hemlock, Cedar and Cherry.
8. In aspen stands retain one stick conifers.
- 9.
- 10.

**Access** The Norway truck trail runs North and South through this sale. Some of the sale area West of the main road may be accessed through private roads.

DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK	ESTIMATED DATE
Provide survey monuments necessary for line work.	09/01/2008

## CONTRACT WORK CAN BEGIN

Immediately  Date: 10/01/2008

**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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Other:

**Exclusions to mark and why**

Exclude wetlands in areas over 20ft by 20ft or by recommendation of DNR administrator.

**Standards for marking lines against private land**

One or two dots on two sides of trees with ample paint used on marks. Lines must be straight from survey monument to survey monument. Distance between marks average 50 feet. See appendix.

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

**Special Instructions:**

Provide corrected GPS files compatible with Arcview software.

**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**

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
All stands	1	3 X 3
		X
		X
		X
<b>TOTAL NUMBER OF CRUISE POINTS</b>		

**Cruise Special Instructions:**

1. Sawlog cruise sheets with large pulp sticks, provided by DNR, must be used.
2. Each unit must be cruised separately; a summary must be provided for each unit (pulp and sawlogs)
3. Summary sheet for the sawlogs cruised on the entire sale must be provided to the DNR.
4. Each plot center will be flagged with unit number and plot number (ie.u-5,#14). A locator flag on the ground may be necessary.
5. Pulp species will be cruised as: mixed hardwood (includes Sugar maple, Red maple, Birch, Ironwood, ash) Basswood, Aspen, and mixed softwood (spruce and balsam).

**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):** 80 (Minimum 70 to Maximum 90)

TREATMENT	NUMBER	SIZE
Regeneration Gaps Per Acre	0	
Girdled Trees Per Acre	0	

PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	double slash w/ dots	12 inches	10 inches
Sawbolts			
Pulpwood	single slash two sides	5 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
Sugar maple logs	1 : 1
Basswood logs	1 : 1
Mixed hardwood logs	1 : 1
	1 :

**SPECIAL MARKING INSTRUCTIONS**

1. Conifers and Oak are not to be marked.
2. Sawlogs will be marked with a double slash on one side and with one dot per 8ft. log on the opposite side.
3. Pulp trees will be marked with a single slash on each of opposite sides.
4. All marked trees will have stump marks at least 6 inches in length and with ample paint.
5. Stump marks will not be applied on moss. All or most paint must be on the tree bark.
6. Do not mark survey witness trees or private property line trees.
7. Do not mark red stand boundary trees. Unit line trees may be marked for cut.
8. If administrator deems paint marks are not heavy enough contractor must repaint unit.

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 Otto Jacob at (906) 563 - 9247, to make arrangements for paint.
2. Paint will be supplied from (location).
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.

## Breen C93 HDWD 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.