



TIMBER SALE PRESCRIPTION

GENERAL

Date 10/12/2012	Forest, Mineral and Fire Management Unit Shingleton Management Unit
Timber Sale Number (if applicable)	Sale Name (or prescription name) C157 Beech

LOCAL CONTACT

Name Robert Burnham	Telephone (906) 452 - 6227 ext 240
Email Address Burnhamr2@michigan.gov	FAX (906) 452 - 6584

Map of Project Area Attached

LEGAL DESCRIPTION

T46N R16W Section(s) 22 & 27 Description 22-NWNW, NENW, NWNE, SENW, SWNE, NWSE, NESE, SESE, SWSE. 27-NENE, NESE

Year of Entry: 2014 Compartment(s):157 Stand Number(s): 45 & 56

THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE

Estimated Acres: 210 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
45 (Unit 1)	M9	32	110	Selection	Northern Hardwoods
56 (Units 2-5)	M6	178	100	Selection	Northern Hardwoods

PRESCRIPTION

1. Establish red boundary and yellow unit lines as indicated on the attached map. All paint lines must be located using a GPS in accordance with the sale preparation contract.
2. Mark all stands according to specifications listed in the 157 Hardwood Prescription Appendix, timber marking specifications, and specific details obtained at the pre-work meeting.
3. Cruise all stands according to specifications listed in the 157 Hardwood Prescription Appendix, timber cruising specifications, and specific details obtained at the pre-work meeting.

Note: Units 2 and 5 will need minimal marking and are more of a salvage type harvest.

Access: M-28 to Creighton Truck Trail, continue north on Creighton Truck Trail approximately 0.6 miles.

DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK	ESTIMATED DATE
Private lines Painted in blue paint	Complete

CONTRACT WORK CAN BEGIN

Immediately Date:

CONTRACT WORK MUST BE COMPLETED BY Date 9/1/2013

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 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"/> Other:

Exclusions to mark and why**Standards for marking lines against private land**

All blue line work has been completed 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	See contract requirements
Payment Unit	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	See contract requirements
Stand	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	See contract requirements

Special Instructions:

GPS all paint lines. Area must be determined for each individual payment unit using a GPS unit consistent with contract specifications. GPS files must be compatible with Arcview and all GPS files must be sent to the local contact by CD or e-mail.

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)
Units 1-5	.5	4 x 5
TOTAL NUMBER OF CRUISE POINTS	105	

Cruise Special Instructions:

- Each unit must be recorded on a separate cruise card so volume can be determined by unit.
- Each cruise plot must be identified on the ground. A map showing the location of these cruise plots must be turned in. Scale on map must be 1:15840.
- Residual basal area by species must be tallied at each cruise plot. Borderline residual trees do not have to be measured, but every other borderline residual tree should be counted.
- Do not cruise trees which were marked with an "X" designating log trees. There will be a 100% tally on log trees marked with an "X".
- All beech trees will be designated for harvest.
- Pulpwood species grouping: mixed hardwood pulpwood (maple, yellow birch, and cherry pulpwood) any beech and ash must be tallied separately and mixed aspen pulpwood (quaking and bigtooth). All other trees must be cruised by species.

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

Target Merchantable Residual BA (Basal Area): 70 (Minimum 60 to Maximum 80) See appendix

TREATMENT		NUMBER	SIZE
Regeneration Gaps Per Acre		1	50-75' in diameter
PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	"X" on 2 opposite sides and 6' above ground level, plus one 3" dot per 8 ft log	11.1 inches	10 inches
Pulpwood	Diagonal slash on 2 opposite sides, 6' above ground level	4.6 inches	4 inches
Beech Leave Trees	Slash 4 sides, 6' above ground level	Appx. 1 per acre	

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
Sawlogs - All sawlogs will be tallied by species to a 10 inch DIB top. Tallied by species.	1 : 1
Pulp topwood (to 10 inch DIB) - tallied by species	1 : 1
All pulpwood trees	No tally see cruising instructions.

SPECIAL MARKING INSTRUCTIONS

1. Additional pulpwood volume larger than 10 inches, top DIB, occurring in sawlog trees must be recorded on tally cards supplied by the Local Contact.
2. Avoid marking during wet weather conditions, or when tree boles are damp. Paint must last for the duration of the timber sale.
3. Each unit must be tallied and summarized separately.
4. Look for beech bark resistant trees. These trees should be marked to leave with green paint.
5. Look for beech trees that have been used in the past by bears (evidence of claw marks). Beech trees that have evidence of bear claw marks should be marked to leave in green paint.
6. Do not mark any hemlock, cedar or oak.
7. Since beech will be designated there will be areas that will fall below the targeted BA.

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

RESTRICTIONS

1. Forest 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 Mario Molin at (906) 452 – 6227 ext 245, to make arrangements for paint.
2. Paint will be supplied from Shingleton.
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.

Compartment 157 CONTRACTORS TIMBER SALE PRESCRIPTION APPENDIX

When establishing paint lines:

- Avoid using dead or badly damaged trees – boundary trees must last for the duration of the timber sale (up to 5-6 years).
- Favor the use of reserved species such as hemlock, oak or lesser occurring species.
- Avoid using small (fast-growing) stems and those exposed to direct sunlight.
- Mark Unit lines so they can be seen from all sides

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 local contact.

Stand(s) 45 and 56 Management Objective All Aged Northern Hardwoods (Mark to Cut)

Stand 45 and 56 (Units 1, 3 and 4) target BA is 70 with an acceptable range of 60-80 BA.

Stand 56 (Units 2 and 5) has the same target BA but there will be limited marking in these Units since these Units were recently harvested and is mostly salvage.

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 yellow birch, hemlock and white pine. Local contact can provide an explanation of this priority.
3. Remove high-risk and poor quality trees.
4. Maintain target basal area lower basal areas are acceptable in areas with heavy beech component.

Reserved Species:

- Do not mark any hemlock, oak or cedar. Avoid marking other trees if harvesting them is likely to result in damage to these reserved species.
- Marking of infrequently occurring species should be avoided. Consult the local contact for clarification.
- Leave 2-4 large, live cull trees per acre for den trees and soft snag production. Reserved tree species may also be used for this purpose. These should be well distributed.
- Do not mark within 100' of any raptor nest trees. Report these to the local contact as soon as possible and directions will be given at that time.
- Leave beech bark resistant trees and those beech trees that have been heavily used by bears in the past (evidence of claw marks). Total amount of beech left should be one per acre.

Designated species:

- All beech and ash will be designated for harvest unless marked in green paint. Beech trees marked in green should be those that show signs of resistance to BBD, these are usually characterized by smooth bark and have little scale present. In addition, those trees **that** are heavy mast producers which are evident by bear claw markings should be marked in green as well.

The contractor should contact Bob Burnham, Unit Manager, at the Shingleton Field Office, PO Box 67, M-28, Shingleton, MI 49884 (906) 452-6227 once the contract is awarded so a local contact can be assigned. Approximately 1-2 weeks prior to beginning work, the contractor should also contact the DNR's local contact administrator (Mario Molin) to arrange an on-site meeting to discuss the details of these prescriptions. Paperwork should be completed and all of the necessary reports submitted to the Unit secretary as soon as possible after the fieldwork is complete.