



TIMBER SALE PRESCRIPTION

GENERAL

Date 8/10/2008	Forest, Mineral and Fire Management Unit Shingleton Management Unit
Timber Sale Number (if applicable)	Sale Name (or prescription name) Lund Contract

LOCAL CONTACT

Name Adam Petrelius	Telephone (906) 341 - 8463
Email Address petrelia@michigan.gov	FAX (906) 341 - 8344

Map of Project Area Attached

LEGAL DESCRIPTION

T44N R15W Section(s) 1-3, 10-12 Description See Map

Year of Entry: 2003, 2009 Compartment(s): 23:24 Stand(s): 10, 11: 66, 65, 58, 9, 53, 5, 26, 19, 6, 33, 24, 31, 23, 25

THIS TIMBER SALE CONTRACT IS BASED ON THE FOLLOWING ACREAGE

Estimated Acres: 641 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
5	M9	45	120	Selection	M
6	M9	210	140	Selection	M
9	M9	23	120	Selection	M
10	M9	78	120	Selection	M
11	M9	12	140	Selection	M
19	M9	9	120	Selection	M
23	M9	9	120	Selection	M
24	M9	70	120	Selection	M
25	M9	2	120	Selection	M
26	M6	49	140	Clearcut with Reserves	M
31	M9	5	120	Selection	M
33	M6	20	120	Selection	M
53	W9	19	140	Shelterwood-Seed	W
58	M6	79	100	Clearcut with Reserves	M
65	R9	5	150	Thinning	R
66	R9	6	130	Thinning	R

PRESCRIPTION

1. Establish all paint 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 Lund Contract prescription appendix, timber marking specifications, and specific details obtained at the pre-work meeting.
3. Cruise all stands according to specifications listed in the Lund Contract prescription appendix, timber cruising specifications, and specific details obtained at the pre-work meeting.

Access: A key can be obtained for access via a private road (DNR holds management easement) at the pre-work meeting. The easement prohibits use of the road through Michael Lund's property from November 14 through November 30.

DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK	None
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CONTRACT WORK CAN BEGIN

Immediately Date: 10/1/08

CONTRACT WORK MUST BE COMPLETED BY Date 8/1/2009

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

Exclusions to mark and why

Within stands 33,24,31,9,53,5,26,19,10 sale boundary should be placed a minimum of 100 feet from water's edge on Hickey Creek and Section 19 Creek. All areas labeled as retention patches on the attached map shall be excluded with red paint. A seasonal drainage located within stand 66 must have its centerline marked with green paint. This paint line must be visible from all sides and traversed with a GPS.

Standards for marking lines against private land

Private line is about ¼ mile long and borders stands 33 and 24. Adjacent private land has been harvested, and portions of property line are painted. Re-paint property line with blue paint facing state land.

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 or Pathfinder Office Software 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** None

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
Stands 65,66,53,33,26	1	3 X 3
Stand 58	.75	3 X 4
Stands 9,5,19,10,11,6,24,31,25,23	.4	5 X 5
TOTAL NUMBER OF CRUISE POINTS	343**	Spacing specific to unit

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".
 - Species grouping: mixed hardwood pulpwood (maple, yellow birch, ash, beech, and cherry pulpwood) and mixed aspen pulpwood (quaking and bigtooth). All other trees must be cruised by species.
 - No hemlock, oak or cedar will be cut. These species should be counted as residual basal area.
- **Cruise plots may decrease or increase depending on actual GPS acres.

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):

Stands 5, 6, 9, 10, 11, 19, 23, 24, 25, 31, 33	70 (Minimum <u>60</u> to Maximum <u>80</u>)
Stands 58	10 (Minimum <u>0</u> to Maximum <u>20</u>)
Stands 65, 66	80 (Minimum <u>70</u> to Maximum <u>90</u>)
Stand 53	40 (Minimum <u>30</u> to Maximum <u>50</u>)
Stand 26	20 (Minimum <u>10</u> to Maximum <u>30</u>)

TREATMENT		NUMBER	SIZE
Regeneration Gaps Per Acre		3-5 per acre	Minimum 30 feet
PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	X on 2 sides, 6 feet up, and dot per 8 ft log	11.1 inches	10 inches
Pulpwood	Slash on 2 sides, 6 feet up	4.6 inches	4 inches

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.	1 : 1
Sawlog topwood (to 10 inch DIB) - tallied by species	1 : 1
All pulpwood quality 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. Trees marked to leave - A complete ring of paint must be place around the tree so it is visible from all directions. Stump marks are also mandatory.
4. Each unit must be tallied and summarized separately.
5. DO NOT MARK ANY HEMLOCK, OAK OR CEDAR FOR HARVEST.

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 Adam Petrelius at (906) 341 - 8463, to make arrangements for paint as soon as possible after contract is awarded.
2. Paint will be supplied from the Wyman Nursery.
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 or gallons).
3. Tally summaries and cruise 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.

Lund Contract 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.
- Avoid using small (fast-growing) stems and those exposed to direct sunlight.

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 prescriptions (stands 5, 6, 9, 10, 11, 19, 23, 24, 25, 31, and 33):

Mark to cut with a target of 70 basal area. Within stands 5, 6, 9, 10 and 19, white pine and red pine may be marked. Within stands 23, 24, 25, 31 and 33, do not mark any conifer species unless needed for operability.

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. The Local Contact can provide an explanation of this priority.
3. Remove high-risk and poor quality trees.
4. Maintain target basal area.
5. Maintain all species diversity.

The management objective is all-aged northern hardwood.

Stands 65 and 66

Mark to cut red pine and white pine with a target of 80 basal area in those portions of the stand currently above 80 basal area. Management objective is red pine, and white pine is the preferred species to mark where available. All other species are designated to be cut except reserved species. Leave 1-2 supercanopy red pine and white pine per acre.

Stand 58

Mark to cut red pine and white pine with a target of 10 basal area. The highest quality red pine and white pine sawlogs should be removed from the stand first. Residual red pine and white pine should be a mixture of younger poles and large supercanopy seed trees. All other species are designated to be cut except reserved species.

Stand 53

Mark to cut red pine and white pine with a target of 40 basal area. All other species are designated to be cut except reserved species.

Stand 26

Mark to leave 20 basal area. Trees marked in green paint to leave should be large supercanopy white pine and large pulp quality hardwood trees which exhibit high wildlife values. All other trees except reserved species are to be cut. Sawlog trees will be marked with orange paint and designated with an 'X' and dots corresponding to the number of sawlogs in each tree. Stump marks are not required. All other trees must be cruised.

Reserved Species:

- No hemlock, Oak or Cedar can be cut. 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.

The contractor should contact Jeff Stampfly, Unit Manager, at the Shingleton Field Office, PO Box 67, M-28, Shingleton, MI 49884 (906) 452-6227 ext. 240 once the contract is awarded so a Local Contact can be assigned. Approximately 1 week prior to beginning work, the contractor will notify the Unit Manager or Local Contact to arrange a 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.