



# TIMBER SALE PRESCRIPTION

GENERAL	
Date	Forest Resources Division Management Unit
09/20/2012	Gladwin Management Unit
Timber Sale Number (if applicable)	Sale Name (or prescription name)
73-001-13-01	Cornwell Harvest

LOCAL CONTACT	
Name	Telephone
Tim Gallagher	(989) 426 – 9205 ex. 7644
Email Address	FAX
gallagher@michigan.gov	(989) 426 - 1454

**Map of Project Area Attached**

LEGAL DESCRIPTION
T20N R03W Section(s) 18, 19, 30 & 33 Description: Various (See Map)

Year of Entry: 2013 Compartment(s):2 Stand Number(s): 40, 44, 48, 54, 72, 79, 97 & 101

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

Estimated Acres: 529.7 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
40	Red Oak	32	111 - 140	Single Tree Selection	Mixed Oak
44	Red Oak	11.9	111 - 140	Single Tree Selection	Mixed Oak
48	Aspen	26.8		Clearcut with Reserves	Aspen
54	Red Pine Mix Deciduous	131.3	141 - 170	Single Tree Selection	Natural Red Pine Mixed Deciduous
72	Red Pine	160.4	171 - 200	Crown Thinning	Planted Red Pine
79	Red Pine	13.4	200 +	Crown Thinning	Planted Red Pine
97	Red Pine	81.8	200 +	Crown Thinning	Planted Red Pine
101	Aspen	72.1		Clearcut with Reserves	Aspen

**PRESCRIPTION**

**Stand 40:** Individual tree mark to cut with orange paint retaining 70 BA/AC residual. Spec cutting all red pine less than 10" DBH (suppressed red pine). Maintain species diversity with harvest. Create regeneration holes 100' ft. in diameter crown to crown: 1 gap every 2 acres.

**Stand 44:** Individual tree mark to cut with orange paint retaining 70 BA/AC residual. Maintain species diversity. Favor the best crop tree in place for residual. Mark stand to improve maneuverability for logging operations to occur.

**Stand 48:** Clearcut with reserves. To meet retention guidelines mark to leave with green paint scattered oak and red maple in small groups or islands.

**Stand 54:** Individual tree mark to cut with orange paint retaining 70 BA/AC residual. Focus on leaving single stem red maple and red pine crop trees, thin red pine and remove red maple multi stem clump trees to meet target residual. Do not cut any oak, cherry or sugar maple. In addition; mark regeneration gaps in stand 100' ft. in diameter crown to crown: 1 gap every 3 - 4 acres.

**Stand 72, 79 & 97:** Second time red pine plantation thinning's. Individual tree mark to cut with orange paint removing 1/3 of the total volume. Leave all mixed hardwoods. (Removing an estimated 60 – 70 BA/AC of red pine, density varies)

**Stand 101:** Clearcut with reserves. To meet retention guidelines mark to leave with green paint scattered hardwood species that were left in 1963 harvest. Do not cut any cedar or hemlock. Red line to be placed on top of steep bank that leads down to stands 93 and 102. Leave narrow strip of stand along east end between Athey Ave. and the underground gas line.

**Access:** Via county roads; Arnold Lake Road, Long Lake Road, Cornwell Ave, Athey Ave and various state forest two track roads.

DNR PREPARATION WORK TO BE DONE PRIOR TO CONTRACT WORK	ESTIMATED DATE
None	

**CONTRACT WORK CAN BEGIN**

Immediately  Date: \_\_\_\_\_

**CONTRACT WORK MUST BE COMPLETED BY: 06/30/2012**

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

**Special Instructions for paint line work:** Yellow marks for cutting units shall be visible from all sides of the trees. See attached map for locations and colors of lines to be marked.

**Contractor will paint blue line in stands 40, 44, 48, 54, 72, 79, 97 & 101.**

**Standards for marking lines against private land:** The sale area has been surveyed by the DNR in 2003. Copies of survey information can be obtained at the Gladwin Field Office to facilitate the location of private lines. The blue line is to be accurately located leaving no buffers along private boundaries.

**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	HDOP <sub>≤</sub> 3
Payment Unit	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	HDOP <sub>≤</sub> 3
Stand	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> String Chain <input type="checkbox"/> Other	HDOP <sub>≤</sub> 3

**Special Instructions:** Contractor must GPS all stands, payment units and/or retention islands separately. Contractor must also provide a GPS file and hard copy of each stand printed at a scale of 1:15840. See map for location and color of lines to be GPS'd

**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:** North/South or East/West

CRUISING UNITS	NUMBER OF PLOTS PER ACRE	SPACING (CHAINS)
Stands 40, 44, 48 & 79	1	3.3 X 3.3
Stand 54	1.8	4.3 X 4.3
Stand 72	2	4.5 X 4.5
Stand 97	1.4	3.8 X 3.8
Stand 101	1.3	3.6 X 3.6
<b>TOTAL NUMBER OF CRUISE POINTS</b>	353	Evenly spaced

**Cruise Special Instructions:**

- Total number of cruise points is estimate, based on estimated IFMAP acres. Actual number of plots will be based on actual GPS acres.
- All cruise points must show residual BA/AC.
- Contractor must show all plot locations for each stand on the GPS stand boundary map. Plot locations do not need to be GPS'd
- Plot center locations must be shown on the ground and at eye level with bright colored ribbon.
- Contractor may cruise using the TCruise program, TCruise files are acceptable as long as they can be merged into the MDNR PO TSale program.
- Point sample method for all puplwood products and spec removal species. All orange marked sawlog trees will have sawlogs individually tallied.

**Unless otherwise specified, the tally sheets used must be those supplied by the Forest Resources Division 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):** Varies by stand. See prescription section.  
 Stands 40, 44, and 54: 70 (Minimum 60 to Maximum 80)

TREATMENT		NUMBER	SIZE
Regeneration Gaps Per Acre: Stands 40 & 54		1 per every 2 to 4 acres. See prescription section.	100' ft diameter measured crown To crown.
PRODUCT	MARKING SYMBOL	MINIMUM DBH	TOP DIB
Sawlogs	Slash visible all sides/with dots.	9.1 inches DBH	8 inches top DIB
Sawbolts			
Pulpwood	Slash visible from all sides.	4.5 inches DBH	4 inches DIB small end

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
All orange painted sawlog species / products.	1 : 1 1 :

**SPECIAL MARKING INSTRUCTIONS:**

- Contractor will follow marking guidelines for hardwood stands set forth in the DNR published "Complete Marker"
- Within the red pine plantation stands favor the removal of suppressed, forked and poor health trees first to hit target residual. Second favor the removal of co-dominant and dominant trees to hit target residual.
- Within all stands, loggability must be considered when laying out he boundaries and marking trees for removal.
- Within stand 54 remove red maple multi stem clump trees. Do not thin within the clump.
- All sawlog products not removed by spec cutting are to be dot marked and 100% tallied.

Unless otherwise specified, the tally sheets used must be those provided by the Forest Resources Division Management Unit.

**RESTRICTIONS**

1. Forest Resources 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 Tim Gallagher at (989) 426-9205 - 7644, to make arrangements for paint.
2. Paint will be supplied from Gladwin.
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.