



**NEWBERRY FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 31 ENTRY YEAR: 2009

Compartment Acreage: 2332 County: Luce

Revision Date: 8/1/2007

Stand Examiner: Keith Magnusson

**Legal Description: T49N R10W Sections 22-27, 29 32
T48N R10W Section 5**

RMU (if applicable):

Management Goals: Fisheries, wildlife and timber and are the main uses of this area. The goal is to manage for all of these simultaneously and to provide, enhance and perpetuate their uses through proper management. Forest treatments prescribed will help ensure the sustainability of the forest resource and continue to enhance the quality of the wildlife habitat. Any timber management adjacent to the Two Hearted River will follow the guidelines set forth in the Two Hearted River Natural River Plan.

Soil and Topography: The dominant soil type of the compartment is Rubicon sand. The main cover type found on this soil is various mixes of red, white and jack pine with components of paper birch, aspen, red maple, spruce and balsam. Lesser components of Wallace sand are found in places along the Dawson Creek within the compartment, supporting a cover type of northern hardwoods. Crosswell/Deford sand complex and Carbondale, Lupton and Tawas muck soils are found within the Two Hearted River corridor. The overall topography of the compartment is mostly level to slightly rolling with some ridges having relatively steep sides. The riparian areas are fairly deep with steep side hills especially in the Two Hearted River corridor. The area in Section 22 of this compartment adjacent to the Two Hearted River is known as the High Banks.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The main portion of the compartment is surrounded by State land on the north, east and south sides with the west side being private corporate land. The isolated parcels west of County Road 414 are surrounded by a combination of private corporate land, Nature Conservancy Land and private land. Predominate land use in the area is hunting, fishing, canoeing, ORV and snowmobile riding, berry picking, wildlife/nature viewing and timber production.

Unique, Natural Features (include only non-site specific and non-sensitive information): Unique features of the compartment include The Two Hearted River and its tributaries, the Dawson Creek and Wabash Creek. Another unique feature of the compartment would be Chris Brown Lake.

MNFI lists other features such as the following; potential for loon, great blue heron rookery, spruce grouse, eagle, osprey, merlin and goshawk; potential for moose and wolf; potential for wood turtle and Blanding's turtle; potential for incurvate emerald and ebony boghaunter in boggy areas; potential for pine drops, climbing fumitory, false violet in pines and Canada rice-grass possible in jack pine openings; potential for sweet coltsfoot, Wiegand's sedge, northern prostrate clubmoss, fir clubmoss, English sundew, round-leaved orchis, black crowberry, yellow pitcher plant, and panicked screwstem in bogs and open wetlands.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): The Bureau of History does not list any historical features.

Special Management Designations or Considerations: The Two-Hearted River has been designated as a Natural River, and thus has special management guidelines to follow. The Two Hearted River Natural River Plan is in place and management guidelines have been established for timber management within this zone. Stands within the boundaries of the Natural River Zone have been designated as a High Conservation Value Area (HCVA). Management decisions shall be dictated by the promotion and enhancement of the desired characteristics associated with the natural river zone. Any prescribed treatments that take place near the Two Hearted River will also incorporate BMP guidelines.

Watershed and Fisheries Considerations: Fisheries Values

Excellent. Dawson Creek is classified as Type 1 trout, with a good population of brook trout. Eroding sand, especially from the CR 412 bridge repair project has hurt spawning habitat, but forage still appears plentiful. The stands along Two-Hearted River border a Type 1 trout river actively managed for trout, salmon and steelhead. In addition, it is a designated Natural River, with special zoning requirements. Stands along Wabash Creek border another Type 1 trout stream, not actively managed but sustaining a natural brook trout population. Any additional sand bedload will reduce successful fish spawning far into the future.

Wildlife Habitat Considerations: **Compartment 31** lies in the far northern portion of Luce county and is in the Grand Marais Sandy End Moraine and Outwash ecological sub-subsection. The vegetation is primarily white and red pine with a few hardwood, aspen and jack pine stands in the compartment. Diversity of tree species in the red pine stands is fairly poor and slightly better in white pine stands. Overall, pre-settlement vegetation patterns appear to have been similar to the current landscape of this compartment.

In a predominantly pine forested ecosystem, maintaining a variety of age and size classes and maintaining as much structural diversity as possible in managed stands will be important to achieving wildlife objectives. For example, retaining soft and hard mast producing species in red pine harvests will help provide food sources, nest and den trees, and improve structural diversity. Leaving understory spruce and hemlock will likewise increase structural diversity. Forked trees will be left in hardwood thinnings to provide possible nest trees. Wildlife species potentially using this compartment include white-tailed deer, black bear, spruce grouse, gray wolves, coyote, otter, fisher and marten.

Mineral Resource and Development Concerns and/or Restrictions: Sections 22 – 27 & 29 – 32, T49N-R10W, Luce County

Surface sediments consist of lacustrine (lake) sand and gravel and minor end moraine of coarse-textured till. There is insufficient data to determine the glacial drift thickness. The Cambrian Munising Group and the Precambrian Jacobsville Sandstone subcrop below the glacial drift. These rocks have been used as building stones in the past. There are no gravel pits in the area, but there may be some potential. There is no economic oil and gas production in the UP.

Vehicle Access: The compartment is located in northern Luce County and can be accessed via County Road 414. The Chris Brown Lake Road leads off of County Road 414, is a good dirt road and borders a large portion of the compartment. The High Banks Trail, as well as several other small two tracks (approximately 5 miles), give additional access to the compartment. In addition to the two tracks, there are several old and abandoned roads within the compartment that were used to access the compartment for logging in the past. There are several roads on the surrounding private land that range from good to abandoned that offer close access to the compartment as well.

Survey Needs:

E1/16 between sections 5 and 8, T48N R10W; there is a wood post located here already that has been historically used by landowners in the area. Not registered, but it looks to be fairly accurate.

E1/16 of Section 5, T48N R10W; this corner is needed if stand 88 is treated. There is currently a ribbon line running south from an approximate corner location. The property to the east of this N-S ribbon line was treated about 5 years ago. There is also a ribbon line running west from this approximated corner location and the property to the north of state land is being treated right now.

Recreational Facilities and Opportunities: Recreational opportunities include hunting, fishing, canoeing, hiking, berry picking and wildlife viewing. There are a few remote “unofficial” camping sites along the Chris Brown Lake shoreline on the east and north sides of the lake. There are a number of hunting camps on private land adjacent to the compartment boundary.

Fire Protection: Large fire runs are possible in the continuous pine stands in the large portion. Private property outside this portion could be at risk to large fires. The remote parts of this compartment pose little risk for large fires because of primarily hardwoods fuel types. Modified suppression tactics may need to be considered in the Two Hearted River Area. Road access through the compartment is good providing some opportunities for fire lines if needed.

Additional Compartment Information: The Luce County Road Commission has recently been widening most of their existing road widths by removing trees 10-15’ along the adjacent road edge. Portions of County Road 414 have already been widened. Expect the road maintenance to continue along this road through Sections 23, 24, 26 and 27 within the next year. The timber along the road may have to be salvaged by a contracted logger if it is not harvested through normal timber sale activities first.

- **The following 5 reports from the Operations Inventory System (OIPC) are attached:**
 - ◆ **Cover Type by Age Class**
 - ◆ **Cover Type by Management Objective**
 - ◆ **Compartment Volume Summary**
 - ◆ **Proposed Treatments – No Limiting Factors**
 - ◆ **Proposed Treatments – With Limiting Factors**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
 - ◆ **Base feature information, stand numbers, cover types**
 - ◆ **Proposed treatments**
 - ◆ **Proposed road access system**
 - ◆ **Suggested potential old growth**

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Michigan Department of Natural Resources - Operations Inventory System
Individual Compartment Report

LAKE SUPERIOR STATE FOREST

NEWBERRY FOREST MGT UNIT

LUCE COUNTY

COMPARTMENT: 31

Table 3

(acres shown in boxes)

STAND AGE CLASS

COVER TYPE	Not Coded	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150-159	All Aged	Total
Aspen		88	81			8	11												188
Black Spruce							3		2	22									27
Bog or Marsh	24																		24
Cedar																		6	6
Hemlock																		26	26
Jack Pine		53	38				132	8	10										241
Lowlnd Brush	2																		2
Marsh	25																		25
Mx Swmp Cnfr						3			38		25							124	190
Non Stocked	2																	11	13
Red Pine										174	381							5	560
Spruce Fir						7												2	9
Treed Bog	11																		11
Upland Hdwds																		109	109
Water	64																		64
White Pine							2			11	126	203						495	837
Total	128	141	119			18	148	8	50	207	532	203						778	2332

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Michigan Department of Natural Resources - Operations Inventory System
Individual Compartment Report

LAKE SUPERIOR STATE FOREST

NEWBERRY FOREST MGT UNIT

LUCE COUNTY

COMPARTMENT: 31

Table 3A

(acres shown in boxes)

MANAGEMENT OBJECTIVE TYPE

COVER TYPE	A	S	V	C	G	H	J	I	L	P	N	Q	X	O	B	R	K	Y	F	E	T	D	U	M	Z	W	Total	
A Aspen	100						88																				188	
S Black Spruce		27																									27	
V Bog or Marsh			24																								24	
C Cedar				6																							6	
H Hemlock						26																					26	
J Jack Pine							241																				241	
L Lowlnd Brush									2																		2	
N Marsh											25																25	
Q Mx Swmp Cnfr												190															190	
X Non Stocked													13														13	
R Red Pine															560												560	
F Spruce Fir																			9								9	
D Treed Bog																						11					11	
M Upland Hdwds																								109			109	
Z Water																									64		64	
W White Pine																										837	837	
Total	100	27	24	6		26	329		2		25	190	13		560				9				11		109	64	837	2332

LAKE SUPERIOR STATE FOREST

NEWBERRY FOREST MGT UNIT

LUCE COUNTY

COMPARTMENT: 31

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	4665 Cds	Hardwood	872 Cds
Hardwood	256 Mbf	Hardwood	27 Mbf
Softwood	13672 Cds	Softwood	1985 Cds
Softwood	6415 Mbf	Softwood	1452 Mbf
Sum TotVol	31679 Cds	Sum CutVol	5815 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	701
2332			

NEWBERRY FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 31

Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
1	A2	88	6	50	jack pine	immature		0	planting	
<p>comnts Fmd : Stand was harvested in 2001; T.Sale#012-99. It was predominately jack pine then. Stand now has an overstory of RP/WP and oak in patches throughout. Some scattered jack pine and aspen in overstory as well. Regen in mostly aspen with a mix of r.maple, b.fir and white pine. Some jack pine regen present but not what was expected for a jack pine M.O. This area does grow good jack pine. May have to plant jack pine in areas of stand to increase the number of trees of that species if that is the M.O.</p> <p>Wld : OK to plant, but try not to plant too close to oak.</p>										
2	X0	11			other non-stocked or non-forest or non-productive	unevenaged	final harvest	3		
<p>comnts Fmd : County Road 414 R.O.W. County has recently been widening/maintaining their Right of Ways by cutting all trees to the edge of the ROW. Schedule this stand for a possible treatment if they decide to cut along this road as well.</p>										
3	R9	117	87	53	red pine	mature	selection	2		
<p>comnts Fmd : Natural stand of pine, mostly sawlog sized. Some large diameter RP/WP 16-24" DBH. Some red pine has utility pole quality. Regen is mostly w.pine, some r.pine and b.fir as well. Birch is dying out of stand. If treated, some p. birch, and r.maple may have to be cut to improve maneuverability for logging. 99=07,10,03.</p> <p>Wld : leave white pine (unless needed for maneuverability) and oak, leave some birch and maple and some aspen but can take some for maneuverability if needed in spots.</p>										
21	S6	22	87	40	black spruce-swamp	mature	final harvest	3		
<p>comnts Fmd : Stand is mostly spruce with a mix of lowland conifers, p.birch, r.maple and aspen. Stand is mostly low ground with subtile ridge scattered throughout. Spruce is decent. Could be treated, but would probably need to be a winter time harverst. 98=30,32,27,20 99=10,03,11 Soil=Spot/Finch Complex.</p> <p>Wld : leave something to increase tree species diversity</p>										
23	J6	5	59	53	jack pine	mature	final harvest	2	natural regeneration	
<p>comnts Fmd : J.Pine is beginning to die out, old age. Apsen, birch, r. maple, spruce, balsam throughout stand. This JP stand is basically a pocket amongst surrounding WP/RP type.</p> <p>Wld : leave a mix of species when harvested</p>										
24	J6	3	59	53	jack pine	mature	final harvest	2	natural regeneration	
<p>comnts Fmd : J.Pine is beginning to die out, old age. Apsen, birch, r. maple, spruce, balsam throughout stand. This JP stand is basically a pocket amongst surrounding WP/RP type.</p> <p>Wld : leave a mix of species for diversity when harvest</p>										
26	W9	145		53	white pine	two aged	selection	3		
<p>comnts Fmd : Shelterwood w/resreves. Retain 30-50BA, maintain two aged or multiple aged pine stand. Follow retention guidelines. White pine sawtimber is generally limby in this stand and larger diameter. Some large diam. RP that is decent quality. Mix of JP, aspen, w. spruce, r. maple, p. birch and balsam throughout stand. Stand is ranges from young WP to old RP/WP. 99=03,10 98=30,31,21,20,32</p> <p>Wld : leave large diameter wolfy species, leave some spruce and various diameter birch (lots present). Leave a good buffer along the creek.</p>										
29	R9	3	87	53	red pine	mature	shelterwood-prep	2		
<p>comnts Fmd : Stand was treated in early 90's; Tsale#024-89. Red pine is utility pole quality and the stand is park-like. Looks like WP was mostly removed on last treatment as well as most birch and aspen..</p> <p>Wld : leave white pine, birch and all understory trees (very open stand)</p>										
30	R9	30	87	53	red pine	mature	shelterwood-prep	2		
<p>comnts Fmd : Stand was treated in early 90's; Tsale#024-89. Red pine is utility pole quality. Some WP regen present but the stand is mostly park-like. Looks like WP was mostly removed on last treatment as well as most birch and aspen..</p> <p>Wld : leave white pine and birch. Stand is very open, leave all understory trees for structural diversity</p>										
33	W9	9	92	50	white pine	mature	shelterwood-prep	3		
<p>comnts Fmd : Stand is mostly WP with some RP. Other species present such as balsam, spruce, r.maple and aspen. Aspen/birch is nearly dead. If treated, some aspen/birch may have to be cut to improve maneuverability for logging.</p> <p>Wld : stand is fairly open, shouldn't need to take trees for maneuverability much. Leave snags standing.</p>										

NEWBERRY FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 31

Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	fdf Status
38	R9	31	92	53	red pine	two aged	shelterwood-prep	2		
<p>comnts Fmd : North end of stand is a mix of RP/WP that are large diametered with a thicker understory of WP and red maple. The south end of stand is more RP - thick BA in places. P.bich and aspen mixed throughout stand, getting old and is poor quality. Some oak present. If treated, may have to remove some p.birch /aspen for maneuverability for logging.</p> <p>Wld : leave some birch/aspen when not needed for maneuverability. Leave oak and white pine unless needed for maneuverability</p>										
40	J6	10	72	53	jack pine	mature	final harvest	2	natural regeneration	
<p>comnts Fmd : Stand is predominately jack pine with a RP/WP mix. Stand gets narrow in places and is basically a strip growing amongst surrounding RP/WP type. Old aspen and p.birch in stand. Scattered oak throughout. Recommend harvesting jack pine and aspen. May have to remove some p.birch as well to improve maneuverability for logging. Treat with surrounding stands if they are treated.</p> <p>Wld : leave oak and white pine unless needed for maneuverability.</p>										
41	R9	53	92	53	red pine	two aged	shelterwood-prep	2		
<p>comnts Fmd : Mixed pine stand. Some utility pole RP although a lot of the RP sawlogs are beyond that now, too large DBH. White pine reproduction throughout. Aspen/Birch/Oak scattered in stand. Birch/aspen dying out. Some j.pine in stand as well. Remove jack pine if treated. Also may have to remove some paper birch in some areas of stand to improve maneuverability for logging.</p> <p>Wld : leave some birch, and all oak and most of the white pine.</p>										
48	R9	30	97	53	red pine	mature	shelterwood-prep	3		
<p>comnts Fmd : Stand was treated in 1992; T.sale#016-89. Recommend shelterwood-prep.</p> <p>Wld : leave oak if present and all understory trees for structural diversity, stand is quite open.</p>										
58	W9	192	98	48	white pine	two aged	shelterwood-prep	2		
<p>comnts Fmd : Mixed RP/WP stand. Mostly two aged. Large diam. Pine in here 14-24" DBH. Regen of WP, balsam, spruce and r.maple throughout. P.birch is dying out as well as most aspen. Treat stand to enhance existing WP regen as well as encouraging more. If treated, may have to cut some p.birch and aspen in some areas to improve maneuverability for logging.</p> <p>Wld : leave some birch/aspen and leave large wofly white pine. Leave balsam, red maple and spruce regen intact.</p>										
71	W9	14	97	53	white pine	two aged	shelterwood-prep	3		
<p>comnts Fmd : Stand was treated in 1978; T.sale#022-78. WP/RP mix. Large sawlog sized WP/RP overtopping patchy WP regen. R.maple saplings in understory as well. WP regen is advanced, 5-20' tall. WP sawlogs are decent but not stellar quality. Some RP has utility pole quality.</p> <p>Wld : leave understory spruce, white pine (unless needed for maneuverability) and red maple and large wolffy white pine.</p>										
94	M9	7		60	northern hardwood	unevenaged	selection	3		
<p>comnts Fmd : Stand is mostly large diametered, overmature, poor quality hardwoods. Western edge of stand is thick with balsam fir understory. W.spruce/hemlock regen present. Beech has scale, nearly dead. Two Heart River plan requires a minnum BA of 70 in the area the stand is located, follow plan. Request a formal survey to get the E1/16 between Sec. 5 and 8 established. There is a wood post there now but not a registered corner, although the location looks very good. 98=39,30,21 99=03,01,07,04.</p> <p>Wld : leave yellow birch component- in various diameters, leave conifers and some forked trees (greater than half way up).</p>										
100	W9	11	87	55	white pine	mature	shelterwood-prep	3		
<p>comnts Fmd : Stand is a transition between hardwood and pine type. White pine in here is tall and has quality. Thick b.fir understory. Treat with adjacent w.pine stand if that is treated. 99=03,07,10 98=31,21,20,39</p> <p>Wld : leave hemlock</p>										
Total Acres.....		781								

NEWBERRY FOREST MGT UNIT

**Proposed Treatments
With Limiting Factors**

Compartment: 31

Entry Year: 2009

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDI Status
88	M6	8		58	northern hardwood	unevenaged	selection	3		

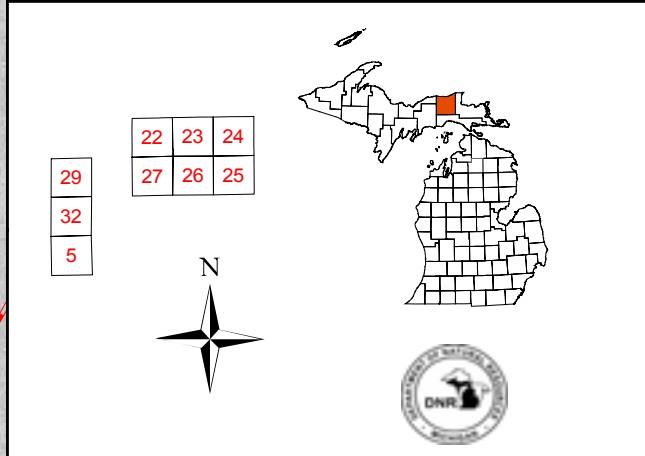
TREATMENT LIMITING FACTORS: Land survey needed

comnts Fmd : Some large diametered, overmature sawlog sized trees. Some large aspen scattered in stand, beginning to die out. Most hardwood is poor quality. A lot of maple reproduction, sapling sized. Heavy b.fir understory on west edge of stand. Stand is in Two Heart River Influence Zone, can thin to 70BA. 98=20,22,21 99=04,10,01,49. Need formal survey corner on E1/16 of Sec. 5. The adjacent landowner to the east has approximated a corner there and run a line, they cut their property already. Approx. survey corners in area along with old wood posts and locations look to be very close.

Wld : leave conifers and some forked trees (greater than half way up). Leave a yellow birch and cherry component

Total Acres..... 8

Compartment 031
 T49N, R10W, Sec. 22-27, 29, 32
 T48N, R10W, Sec. 5
 County: Luce
 Unit: Newberry
 YOE: 2009
 Acres: 2,332 GIS Calculated
 Stand Examiner: Keith Magnusson
 Map Revised: 12/05/2007
 Map Phase: Pre-Review



Field Map

Legend

- RLS Corners
- Miris Corners
- County Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- Closed Roads
- Water Features
- Gates
- Wooden Posts
- Stand Boundary
- Special Conservation Areas
- 016 - Planting
- 100 - Final Harvest
- 145 - Final Harvest/Natural Regeneration/Other
- 700 - Shelterwood-prep
- 800 - Selection

