



**NEWBERRY FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 81 ENTRY YEAR: 2008

Compartment Acreage: 3,460 acres (GIS Calculated) County: Luce

Revision Date: 5/30/2006

Stand Examiner: Theresa Sysol

Legal Description: T47N R09W Section(s) 14, 15, 22-27, 34, 35

RMU (if applicable):

Management Goals:

To maintain and/or enhance the health and quality of the forest ecosystem while providing for diversity of vegetative species, wildlife, and recreational needs. Over $\frac{3}{4}$ of the compartment is lowland species, marsh and bog; remainder is upland jack, red and white pine located on narrow ridges. Objective will be to maintain the integrity of this forest complex.

Soil and Topography:

Rousseau sands along ridges with marshes and bogs of Dawson-Greenwood-Loxley peat and Carbondale-Markey muck.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

Several areas of private lands along the Murphy Creek Road and Skyline Road (Co Rd 510). The Skyline Road also provides year-round access to corporate and private lands which connect with the Charcoal Grade to the east.

Unique, Natural Features (include only non-site specific and non-sensitive information):

MNFI has identified the potential for spruce grouse and blacked-back woodpecker. Potential for wood turtle, merlin, eagle, osprey, and great blue heron rookery. Potential for moose and wolf. Potential for ebony boghaunter, incurvate emerald, frigga fritillary, and freija fritillary in bogs. Potential for moor rush, sweet coltsfoot, Wiegand's sedge, English sundew, round-leaved orchis, black crowberry, yellow pitcher plant, and panicked screwstem, in open wetlands.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):

None listed with the Bureau of History

Special Management Designations or Considerations:

Watershed and Fisheries Considerations:

Fisheries Values

Minimal. Despite being classified as SQWW, Gimlet Creek many years ago supported native brook trout. The odds now are against any significant trout population. A Fisheries temperature data logger immediately downstream from the Charcoal Grade showed huge diurnal temperature swings. The reason is most likely the presence of a large beaver pond that uses the Charcoal Grade as an impoundment berm. The expanse of

shallow water warms quickly in sunshine and also cools quickly at night, making the fluctuating downstream temperatures difficult for trout. The Murphy Creek System is also all classified SQWW. When last surveyed, nothing was found except a couple species of minnow. Summer water temperatures in the Murphy are cold enough for trout, though, so we plan to survey it again in the relatively near future.

Wildlife Habitat Considerations:

Compartment 81 lies in central Luce county in the Grand Marais Sandy End Moraine and Outwash ecological sub-subsection. The compartment is dominated by treed bogs with interconnecting pine ridges. Stand diversity is generally low as is overall diversity of the compartment. Pine ridges, streams and drainages provide excellent travel corridors. A small part of the eastern edge of the compartment lies within the Hulbert deer yard.

Stand diversity will be maintained in jack pine final harvests with red and white pine and paper birch components being left after harvest. Leave trees will improve structural diversity, act as food sources, and nest and den trees. The overall integrity and hydrology of the compartment will be maintained by careful harvesting techniques to not impair the lowland areas. Wildlife species potentially using the compartment include black bear, white-tailed deer, black bear, bobcat, coyote, gray wolf, moose, otter, and mink.

Mineral Resource and Development Concerns and/or Restrictions:

Surface sediments consist of peat and muck and some lacustrine (lake) sand and gravel. There is insufficient data to determine the glacial drift thickness. The Ordovician Trenton and Black River Groups subcrop below the glacial drift. The Trenton and Black River are quarried for limestone/dolomite in the UP. There are no gravel pits in the area, and potential is limited. There is no economic oil and gas production in the UP.

Vehicle Access:

From Newberry, go north on M-123 to either the Skyline Road (Co Rd 510) or the Murphy Creek Road. Limited narrow, poor sand interior roads within compartment, some of which are located on fairly steep ridges.

Survey Needs:

Within Section 23: N1/2NESWSE, Section 15: E1/2SW, Section 27: Center, Section 34: NWSE

Recreational Facilities and Opportunities:

No recreational facilities, although there are good opportunities for blueberry picking and hunting.

Fire Protection:

Difficult interior access, due to narrow ridges within marsh/bogs. Will need to limit equipment used, due to the need to protect hydrology. Most ridges are Jack Pine fuel type which could result in large fires. Lowland areas may not provide natural barriers because of grass fuel types. Wildland urban interface concerns exist because of private ownerships with cabins. Areas of this compartment may lend itself to modified suppression strategies, such as containment and monitoring.

Additional Compartment Information:

- **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: 81

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
Black Spruce							76	54	11										141
Jack Pine		123	33			43	152	87	189									23	650
Lowlnd Brush	291																		291
Marsh	686																		686
Mx Swmp Cnfr				56		50	51	48	64									68	337
Red Pine											12	5		10				66	93
Tamarack						61				26								43	130
Treed Bog	1018																		1018
Upland Hdwds																		66	66
Water	11																		11
White Pine													7					30	37
Total	2006	123	33	56		154	279	189	264	26	12	5	7	10				296	3460

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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: 81

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
S Black Spruce		141																									141
J Jack Pine							650																				650
L LowInd Brush									291																		291
N Marsh											686																686
Q Mx Swmp Cnfr												337															337
R Red Pine																93											93
T Tamarack																						130					130
D Treed Bog																							1018				1018
M Upland Hdwds																								66			66
Z Water																									11		11
W White Pine																										37	37
Total		141					650		291		686	337				93					130	1018		66	11	37	3460

LAKE SUPERIOR STATE FOREST

NEWBERRY FOREST MGT UNIT

LUCE COUNTY

COMPARTMENT: 81

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	1094 Cds	Hardwood	62 Cds
Hardwood	23 Mbf	Softwood	6355 Cds
Softwood	13140 Cds	Softwood	138 Mbf
Softwood	796 Mbf	Sum CutVol	6693 Cds
Sum TotVol	15872 Cds		
Total Cmpt Acres		Acres Proposed For Cut.....	316
3460			

NEWBERRY FOREST MGT UNIT

Proposed Treatments
With NO Limiting Factors

Compartment: 81

Entry Year: 2008

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FD Status
19	J6	21	74	47	jack pine	mature	final harvest	2		
comnts Fmd : Steep and narrow ridge of jack pine - will be difficult to harvest (15 - 35% slope). Regeneration should come in naturally with good slash dispersal; site will be too steep to scarify - will either need to direct seed or hand plant if unsuccessful. 1998 entry: stand 2										
Wld : leave red and white pine										
22	J6	11	74	47	jack pine	mature	final harvest	2		
comnts Fmd : Steep and narrow ridge of jack pine - will be difficult to harvest (15 - 35% slope). Regeneration should come in naturally with good slash dispersal; site will be too steep to scarify - will either need to direct seed or hand plant if unsuccessful. 1998 entry: stand 2										
Wld : leave red and white pine.										
26	R8	14		45	red pine	unevenaged	seed tree	3		
comnts Fmd : Red pine with mixed spp. Fairly steep ridge. Harvests in 1950's and 60's. Oldest red pine is ~ 90 years old. Some regeneration starting; harvest should lean towards seed tree cut, removing only red and white pine where necessary for access . Stand provides access to ridges of jack pine timber (stands 19,22); if these are not treated, stand should be left. 1998 entry: stand 46										
Wld : leave red and white pine unless need to harvest some for maneuverability. Leave a few large spruce and paper birch										
27	J6	15	74	47	jack pine	mature	final harvest	2		
comnts Fmd : Tall, straight jack pine on a steep ridge (15-35% slopes) - may be difficult to harvest. Road access is very poor sand trail. Normal regeneration method of scarification will not be possible here; look to either direct seed, or accomplish enough soil disturbance by harvesting operations, to achieve natural regeneration. 1998 entry: stand 2										
Wld : leave red and white pine and paper birch										
28	R9	8		45	red pine	unevenaged	shelterwood-seed	3		
comnts Fmd : Steep ridge of timber (15-35% slopes); will be difficult to harvest throughout entire stand. Several timber sales noted in the 1950's and 60's. Mixed hardwood includes aspen and paper birch, much of which is dying out already. Some of the lower slopes contain more large white pine, while on highest ridges, red pine is prone to sweep and crook. RP noted with mistletoe. When marking, will have to keep windthrow factor in mind. Treat stand only if adjacent stands are treated, to keep soil/road disturbance/erosion to a minimum. Aspen should be harvested if a future component is desired within the stand; paper birch could be left for seed. MO2 = W,J. 1998 entry: stand 73										
Wld : leave white pine a birch component										
38	J0	115	3	47	jack pine	in process of regeneration		0	other - specify in remarks	
comnts Fmd : T.Sale #14-98 "Murphy Creek Pine", harvested 2000. Although scarification was never completed (part of FTP 42-445 - located in NW 1/4 of Section 23), there is natural regeneration present (1-3 foot tall). Prescribed burn (Luce 19-2002) was accomplished in late August, 2002 (21 acres) and JP direct seeding was done 3/19/03 over burn site (~18 acres). Burned and seeded area located in portion of section 22 and NWSW of section 23. Additional 8 acres burned 6/2003 (Unit 3 finger- section 22) - no seeding. Regeneration check of entire sale area will be needed to determine success of treatments. NE corner of sale contains residual cedar, red and white pine, and some regeneration of these species, as well as BF, was noted. Defoliation/ browned needles noted on regeneration in the north half of sale. Soils are Rousseau/Spot mix. Portion of stand is lower ground and not typed out as separate stand - expected to regenerate more to spruce. ** On revisit to stand during internal audit 7/19/06, young JP budworm caterpillars noted within burn/direct seeded portion of stand. 1998 entry: stand 9,10										
Wld :										
41	J0	8	4	47	jack pine	in process of regeneration		0	other - specify in remarks	
comnts Fmd : T.Sale #14-98 "Murphy Creek Pine", harvested 2000. Scarification was never completed (FTP 42-445), nor burning. There is natural regeneration present (1-3 foot tall), though. Need regeneration check. 1998 entry: stand 9										
62	J6	10	56	45	jack pine	immature	final harvest	3	natural regeneration	
comnts Fmd : Ridge of timber fringed with spruce. Mixed softwood includes: red pine, spruce. Scarification may not be possible - consider direct seeding. Best access to stand would be through adjacent PVT lands to west, which have recently been harvested. Will need to obtain permission. Soils are Rousseau - Rousseau/Spot mix. MO2= S 1998 entry: stand 39										
Wld : leave red pine, and paper birch and white pine if present.										
64	J6	68	56	47	jack pine	immature	final harvest	3	natural regeneration	
comnts Fmd : Ridge of timber fringed with spruce. Mixed softwood includes: S,R. Scarification may not be possible, due to nature of topography and soils; direct seed, if necessary. Best access to stand would be through PVT lands to the west; those lands have been recently harvested. Will need to obtain permission to cross. Soils are Rousseau - Rousseau/Spot mix. MO2= S,R. 1998 entry: stand 39										
Wld : leave red pine and white pine and paper birch if present										

NEWBERRY FOREST MGT UNIT

**Proposed Treatments
With NO Limiting Factors**

Compartment: 81

Entry Year: 2008

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status
91	J6	6	72	45	jack pine	mature	final harvest	1	natural regeneration	
<p>comnts Fmd : Heavy budworm topkill on narrow ridge of jack pine; difficult to access and harvest. Connects with adjacent red pine stand on same ridge - treat as one. Possibly try burning this ridge for natural regeneration - may need to leave a few jack pine for seed source, and/or if burning is not possible, regenerate via direct seeding. No heavy equipment should be used on burn. 1998: stand 68</p> <p>Wld : leave some red and white pine and birch</p>										
92	R9	5	102	45	red pine	mature	seed tree	2	natural regeneration	
<p>comnts Fmd : Old red pine - scars from previous logging evident. Thin to seed tree level to encourage natural regeneration - use burning, if possible, to prepare seedbed. No heavy equipment should be used to accomplish burn, though. Some fairly thick spruce regeneration in places closer to Skyline Road; may create burning problem. Some paper birch and red maple noted within stand, also; could leave within stand, but may need to harvest for access and potential burning problems. Will need to work on access onto Skyline Road. 1998: stand 54</p> <p>Wld : leave white pine and paper birch.</p>										
95	J6	4	75	45	jack pine	mature	final harvest	2	natural regeneration	
<p>comnts Fmd : Slight ridge of timber within bog; some R,W present. Old WP snags with charring/burn evidence. Clear, straight wood. Will be difficult to harvest due to surrounding location. Some small islands of S3 (3-5") adjacent. Soils are Tawas-Spot-Finch. 1998: stand 68</p> <p>Wld : leave red and white pine</p>										
98	J6	14	63	47	jack pine	mature	final harvest	2	natural regeneration	
<p>comnts Fmd : Stand is along Skyline Road and contains slopes from 6 - 35%; use caution. If need be, stand could wait to be treated with adjacent stand in the next 10 years. No health problems currently. Soils are Rousseau - Rousseau/Spot. 1998: stand 48</p> <p>Wld : leave red pine, paper birch and a few spruce</p>										
100	R9	5		45	red pine	unevenaged	shelterwood-seed	2		
<p>comnts Fmd : Stand along both sides of Skyline Road. Some PB within. 1998: stand 53</p> <p>Wld : leave paper birch and white pine</p>										
138	J6	6	76	43	jack pine	mature	final harvest	6		
<p>comnts Fmd : Stand under contract with t. sale # 14-06-1 (within C. 116 , 2006 P.O.W.). Stand is a continuation of ridge from C. 116. 1998: stand 85</p> <p>Wld :</p>										
Total Acres.....		310								

NEWBERRY FOREST MGT UNIT

**Proposed Treatments
With Limiting Factors**

Compartment: 81

Entry Year: 2008

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
1	J5	5	68	50	jack pine	mature	final harvest	1	direct seeding	
TREATMENT LIMITING FACTORS: Adjacent landowner denies access Too wet										
comnts Fmd : Stand is a mix of high and low ground; on higher ground, jack pine predominates, but as the ground slopes into lower areas, more spruce is present. A fair quantity of jack pine is either stunted, dead or dying. May be difficult to accomplish cultural work (of mechanical scarification) if winter cut is done, so direct seeding is prescribed for regeneration. Will need to cross private lands in order to harvest, which may not be possible. Soils are a Rousseau/Spot mix. MO2 = S. 1998 entry: stand 1										
Wld : leave red and white pine										
3	J6	5	68	46	jack pine	mature	final harvest	2	direct seeding	
TREATMENT LIMITING FACTORS: Water quality/bmps Land survey needed										
comnts Fmd : Extreme care will be needed along creek banks if and/or when stand is harvested. May not be possible due to BMP issues, although jack pine is slowly dying out. Leave white pine. Some creek bank stabilization was accomplished within the past year or so. Stand would be too small for scarification, so either direct seed, or, possibly plant to ensure immediate successful regeneration. Survey assistance may be necessary. Soils are Kinross/AuGres. Intermittent drainage crosses stand. Some jack pine regeneration, in places. Mistletoe noted within stand also. MO2 = S, W. 1998 entry: stand 3										
Wld : leave white pine and red pine if any.										
5	S5	1	66	35	black spruce-swamp	sparse	final harvest	2		
TREATMENT LIMITING FACTORS: Too wet Inadequate volume due to low stocking/small diameter/etc.										
comnts Fmd : Small island stand with difficult access. Treat with adjacent stand(s), if possible. Soils are Spot/Dawson mix. 1998 entry: stand 6										
Wld :										
6	J5	2	60	46	jack pine	sparse	final harvest	1	direct seeding	
TREATMENT LIMITING FACTORS: Too wet										
comnts Fmd : Budworm damage present in jack pine tops and fairly limby wood; WP is weeviled. Access will be difficult due to wet soils - will have to be winter or dry summer harvest. Regeneration needs may need to be accomplished by direct seeding, as scarification may not be possible. Soils are Spot/Dawson mix. MO2 = S. 1998 entry: stand 3										
10	J6	10	64	50	jack pine	mature	final harvest	2	natural regeneration	
TREATMENT LIMITING FACTORS: Delayed treatment for age/size class diversity										
comnts Fmd : Ridge within low ground. May wish to hold for diversity to provide add'l volume for when adjacent stands are treated. Access due to ground limitations will be the major problem with harvesting this stand. May need to be a winter cut; if so, regeneration method may need to be changed to direct seeding. South tip of stand may be difficult to access due to low ground - contains smaller jack pine and connects to old "Murphy Creek" sale. Soils are Rousseau/Spot mix. MO2 = S 1998 entry: stand 3										
Wld : leave red and white pine										
13	J6	65	70	48	jack pine	mature	final harvest	2	natural regeneration	
TREATMENT LIMITING FACTORS: Adjacent landowner denies access										
comnts Fmd : Jack pine ridges with stand edges dropping into spruce type. Some ridges are fairly steep, and may create harvesting problems. Access is very limited, and private land would have to be crossed. North access would have to be winter ice road. Cultural needs have to be based on season of harvest; direct seeding may be more probable vs. scarification if winter cut is accomplished. Portion of stand (SW end) was cut in the early 50's. Soils are Rousseau/Spot. 1998 entry: (part of) stand 2										
Wld : leave red and white pine										
14	J6	1	70	48	jack pine	mature	final harvest	2	natural regeneration	
TREATMENT LIMITING FACTORS: Adjacent landowner denies access Too wet Land survey needed										
comnts Fmd : Jack pine ridge with stand edges dropping into spruce/bog type. Some ridges can be fairly steep, and may create harvesting problems. Access is very limited, and private land would have to be crossed. May need survey work assistance. North access would have to be winter ice road. May be difficult to connect access to adjacent stands because of low surrounding ground. Cultural needs have to be based on season of harvest; direct seeding may be more probable vs. scarification if winter cut is accomplished. Soils are Rousseau/Spot. 1998 entry: (part of) stand 2										

NEWBERRY FOREST MGT UNIT

**Proposed Treatments
With Limiting Factors**

Compartment: 81


Entry Year: 2008

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status
15	J6	8	70	48	jack pine	mature	final harvest	2	natural regeneration	
<p>TREATMENT LIMITING FACTORS: Adjacent landowner denies access Too wet Land survey needed</p> <p>comnts Fmd : Jack pine ridge with stand edges dropping into spruce/bog type. Some ridges can be fairly steep, and may create harvesting problems. Access is very limited, and private land would have to be crossed. North access would have to be winter ice road. May need survey work assistance. May be difficult to connect access to adjacent stands because of low surrounding ground. Cultural needs have to be based on season of harvest; direct seeding may be more probable vs. scarification if winter cut is accomplished. Soils are Rousseau/Spot. 1998 entry: (part of) stand 2</p>										
23	J6	6	74	47	jack pine	mature	final harvest	2		
<p>TREATMENT LIMITING FACTORS: Blocked by other physical obstacle</p> <p>comnts Fmd : Steep and narrow ridge of jack pine - will be difficult to harvest (15 - 35% slopes). May not be able to cross bog. Regeneration should come in naturally with good slash dispersal; site will be too steep to scarify - will either need to direct seed or hand plant if unsuccessful. 1998 entry: stand 2</p> <p>Wld : leave red pine and a few spruce</p>										
56	J6	2	69	47	jack pine	mature	final harvest	1	natural regeneration	
<p>TREATMENT LIMITING FACTORS: Adjacent landowner denies access</p> <p>comnts Fmd : Isolated ridge of timber surrounded by private lands and creek. 1998 entry: stand 18</p>										
57	J6	8	69	47	jack pine	mature	final harvest	1	natural regeneration	
<p>TREATMENT LIMITING FACTORS: Blocked by other physical obstacle</p> <p>comnts Fmd : Isolated ridge of timber surrounded by private lands and creek. 1998 entry: stand 18</p>										
109	J6	5	72	45	jack pine	mature	final harvest	3	direct seeding	
<p>TREATMENT LIMITING FACTORS: Blocked by other physical obstacle Water quality/bmps</p> <p>comnts Fmd : Stand is a narrow ridge of timber within marsh. Only access would be through winter ice road, and difficult to accomplish. Portion of stand is heavier to red pine, so MO2=R. 1998: stand 70</p> <p>Wld : leave some red pine and paper birch if present</p>										
120	J6	11	72	45	jack pine	mature	final harvest	3	direct seeding	
<p>TREATMENT LIMITING FACTORS: Blocked by other physical obstacle Water quality/bmps</p> <p>comnts Fmd : Stand is narrow ridge of timber within marsh (surrounding ground cover of tagalder, sphagnum, cattails). Only access would be via winter ice road - difficult. Some flooding of stand is occurring. Lower ends of stand are more spruce type (5" dbh). 1998: stand 70</p> <p>Wld : leave some red pine and paper birch if present.</p>										
Total Acres.....		129								

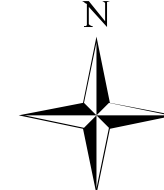

Field Map

Compartment 81
 T47N, R09W, Sec. 14-15, 22-27, 34-35
 County: Luce
 Unit: Newberry
 YOE: 2008
 Acres: 3,460 GIS Calculated
 Stand Examiner: Theresa Sysol
 Map Revised: 11/8/2006
 Map Phase: Pre-review

15	14	
22	23	24
27	26	25
34	35	



N

Legend

- RLS Corners
- Highways
- County Gravel Roads
- Poor Dirt Roads
- Water Features
- Bridges
- Gates
- Cabins
- State Highway
- Stand Boundary
- 098 - Other/Other
- 100 - Final Harvest
- 133 - Final Harvest/Direct Seeding/Ground Application
- 143 - Final Harvest/Natural Regeneration/Ground Application
- 145 - Final Harvest/Natural Regeneration/Mechanical, other
- 147 - Final Harvest/Natural Regeneration/Prescribed Burning
- 200 - Seed Tree
- 247 - Seed Tree/Natural Regeneration/Prescribed Burning
- 300 - Shelterwood-seed

