NEWBERRY FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 132 ENTRY YEAR: 2010

Compartment Acreage: 3476 (GIS Calculated) County: Luce

Revision Date: **9/15/08**

Stand Examiner: **Jason Tokar**

Legal Description: **T45N R8W Sections 1-3, 10-12**

RMU (if applicable):

Management Goals: Wildlife habitat along with some timber management and recreation are the main uses of this area. The goal is to maintain and improve the forest health and diversity, while subsequently improving wildlife habitat through proper management. Treatments prescribed will help ensure the sustainability of the forest resource and continue to enhance the quality of the wildlife habitat. An increase in the level of timber management (aspen, spruce and northern hardwoods) will promote an array of both age class and structural diversity in the cover types.

Soil and Topography: The compartment is dominated by lowland soil types. Carbondale, Lupton and Tawas mucks along with Dawson, Greenwood and Loxley Peats dominate the landscape. These lowland soils support cover types of cedar, mixed swamp conifer, black spruce, lowland/swamp hardwoods and treed bogs. The southern portion of the compartment consists of a variety of silt loam soils (Rudyard, Pickford, Ontonagon, Millecoquins). Aspen and northern hardwoods are found on these soil types. The terrain throughout the compartment is level to slightly rolling.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The Toonerville Trolley is located just north of the compartment.

Unique, Natural Features (include only non-site specific and non-sensitive information): MNFI doesn't list any occurrences within the compartment.

MNFI does list potential for eagle, osprey, great blue heron rookery, red-shouldered hawk, and northern goshawk. Potential for moose and wolf. Potential for incurvate emerald, red-disked alpine, freija fritillary, frigga fritillary, and ebony boghaunter in boggy areas. They also list potential for fir clubmoss. Potential for sweet coltsfoot, Wiegand's sedge, northern prostrate clubmoss, fir clubmoss, English sundew, round-leaved orchis, black crowberry, yellow pitcher plant, and panicled screwstem in treed bogs. Potential for climbing fumitory, goblin moonwort, large toothwort, ginseng, and showy orchis in mature hardwoods. Potential for calypso orchis, lapland buttercup, ram's head lady's slipper, round-leaved orchid and limestone oak fern in cedar swamps.

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

Special Management Designations or Considerations: The compartment lies within the Sage River Deeryard and therefore as been designated as a Special Conservation Area (SCA). Being located within the boundaries of the deer yard, management decisions shall be dictated by the promotion and enhancement of the desired characteristics associated with the winter yarding habitat. Conifer canopies should remain undisturbed. Harvesting in these areas will likely take place during winter months.

Watershed and Fisheries Considerations: Fisheries Values
None.

Wildlife Habitat Considerations: Compartment 132 lies in southwest Luce county and is in the Seney Sand Lake Plain ecological sub-subsection. The compartment lies within the Sage River Deer yard which supports high numbers of deer during stressful winter periods. A mix of lowland conifer types, swamp and northern hardwoods, and lowland aspen and birch stands comprise the majority of the compartment.

Wildlife objectives for this compartment will be met by maintaining maximum species diversity in thinned hardwoods and retaining much of the conifer to improve structural diversity in the stands. Additionally, some large aspen and white pine will be retained in hardwood thinnings. In general, sales will be harvested during winter to assist wintering deer using the compartment. Hardwood stands are likely to contain vernal pools which will be protected during harvest operations to preserve wetland wildlife habitat. White-tailed deer, moose, black bear, bobcat, gray wolf, coyote, fisher, marten and snowshoe hare are notable wildlife species likely to utilize this compartment.

Mineral Resource and Development Concerns and/or Restrictions:
Sections 1 – 3 & 10 - 12, T45N-R8W, Luce County
Surface sediments consist of lacustrine (lake) clay & silt and peat & muck. There is insufficient data to determine the glacial drift thickness. The Silurian Manitoulin Dolomite and Ordovician Queenston Shale and Big Hill and Stonington Formations subcrop below the glacial drift. The Big Hill and Stonington could is used for stone and the Manitoulin is quarried for stone in Section 10. Gravel pits are not located in the area and it appears potential is limited. There is no economic oil and gas production in the UP.

Vehicle Access: This compartment is located approximately 14 miles east of Newberry. Highway M-28 borders the compartment on the south and County Road 381 runs north through the center of the compartment, providing the only real vehicle access to the compartment. There are several abandoned/closed roads within the compartment from previous timber sale activity. Canadian National Railroad transects the NE corner of the compartment.

Survey Needs: Several corners will need to be established and/or private lines confirmed in order for some of the treatments to occur. The center of sec's 10 and 11, the ¼ corner between sec's 10 & 11, W1/16 of Sec 11. The County Remonumentation project has been through this area.

Recreational Facilities and Opportunities: There are no established recreational facilities within the compartment. Recreational opportunities would be primarily hunting as well as bird watching.

Fire Protection: Large fire runs are not likely, because of the swamp conifer and hardwood types. Poor access with wheeled equipment will limit suppression abilities.

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: **132**

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				140	68		26		10	4									248
Black Spruce										444									444
Cedar												420							420
Grass	1																		1
Lowlnd Brush	10																		10
Lowlnd Poplr				157	8														165
Mx Swmp Cnfr					78				33		51	436							598
Non Stocked	81																		81
Swamp Hrdwds									324	100	2								426
Tamarack										23									23
Treed Bog	745																		745
Upland Hdwds					32													283	315
Total	837			297	186		26		367	571	53	856						283	3476

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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: **132**

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	248																										248
S Black Spruce		444																									444
C Cedar				420																							420
G Grass					1																						1
L Lowlnd Brush									10																		10
P Lowlnd Poplr										165																	165
Q Mx Swmp Cnfr												598															598
X Non Stocked													81														81
E Swamp Hrdwds										44										382							426
T Tamarack																					23						23
D Treed Bog																						745					745
M Upland Hdwds																								315			315
Total	248	444		420	1				10	209		598	81							382	23	745		315			3476

LAKE SUPERIOR STATE FOREST | NEWBERRY FOREST MGT UNIT | LUCE COUNTY | COMPARTMENT: **132**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY

TOTAL VOLUME		CUT VOLUME	
Hardwood	17373 Cds	Hardwood	3516 Cds
Hardwood	213 Mbf	Hardwood	5 Mbf
Softwood	19235 Cds	Softwood	2354 Cds
Sum TotVol	37034 Cds	Sum CutVol	5880 Cds

Total Cmpt Acres

3476

Acres Proposed For Cut..... 349

NEWBERRY FOREST MGT UNIT | **Proposed Treatments With NO Limiting Factors** | **Compartment: 132** | **Entry Year: 2010**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
1	**S6**	65	81	48	black spruce-swamp	mature	final harvest	6		

comnts Fmd : Stand is currently under contract. Sale #42-011-08-01, "Soo Junction Spruce". Set up with sale/stands from adjacent compartment (C130) due to access issues. Agreed to at the 2008 YOE Comp Review. Stand is black spruce with tamarack and some white birch. Nice runs of spruce throughout with pockets of very small diameters.

2	**T6**	23	81	42	tamarack	mature	final harvest	6		

comnts Fmd : Stand is currently under contract. Sale #42-011-08-01, "Soo Junction Spruce". Set up with sale/stands from adjacent compartment (C130) due to access issues. Agreed to at the 2008 YOE Comp Review. Stand is nice tall tamarack with balck spruce, white birch and balsam.

5	**S5**	9	81	45	black spruce-swamp	low quality	final harvest	6		

comnts Fmd : Stand is currently under contract. Sale #42-011-08-01, "Soo Junction Spruce". Set up with sale/stands from adjacent compartment (C130) due to access issues. Agreed to at the 2008 YOE Comp Review. Stand is black spruce. Nicer spruce in the center of the stand and smaller diameters near stand edges.

24	**S6**	9	80	43	black spruce-swamp	mature	final harvest	3		

comnts Fmd : Good quality black spruce with tamarack and cedar. Small acreage. Possible access from M-28 using old grown in road.

Wld : good cedar regen in this stand, leave a few mature cedar for additional cedar seed sources after harvest.

26	**S6**	5	80	43	black spruce-swamp	mature	final harvest	3		

comnts Fmd : Good quality black spruce with tamarack and cedar. Small acreage. Possible access from M-28 using old grown in road. More tamarach near the highway. Some dead tamarack.

Wld : leave some mature cedar for seed sources in the stand after harvest

31	**A6**	4	78	59	aspen (upland)	mature	final harvest	3		

comnts Fmd : Overmature, large diameter aspen with low quality red maple, cedar and spruce. Scattered WB, hemlock and ash. Aspen is declining. Small acreage stand.

Wld : leave some alrge diameter conifers (hemlock, spruce and white pine) in the stand.

37	**E6**	44	75	49	balsam poplar & swamp aspen and swamp white birch	mature	final harvest	2		

comnts Fmd : Originally all part of one stand with adjacent stand 39 (formerly all stand 24). Separated out because this stand has a higher component of aspen, white birch and red maple. More ash, cedar and spruce in adjacent stand. Aspen is overmature, red maple and birch showing rot and decline. Some dead spruce. Stand ranges from a P6-M6/E6 - Q6 (in spots). Scattered white pine. Stand is mature. Prescribe for treatment. Harvest the stand with a final harvest (clearcut w/reserves). Winter cut. Leave white pine and some pockets of cedar for retention pockets. White birch and aspen will regenerate well based on adjacent clearcuts. 98 pulp = black spruce and balsam. Management objective of lowland aspen and birch. Likely will have some hardwood, balsam and spruce regen.

Wld : winter cut due to deer yard. Leave white pine and pockets of cedar, leave some large spruce and hemlock if present.

53	**M6**	13		50	northern hardwood	unevenaged	thinning	1		

comnts Fmd : Red maple and hard maple mixed stand. Mainly pole sized stand with some large diameter, low quality red maple. A few spruce. Portion of the stand northwest of the road is more red maple, slightly lower quality w/some cedar mixed in. Prescribe the stand for a thinning treatment. Winter cut. Remove low quality trees and favor future crop trees. Avg residual BA of 70-80 (70 in lower quality areas).

Wld : winter cut, leave conifer in the stand (not much occurs) unless needed for operability

57	**M6**	26		60	northern hardwood	unevenaged	selection	1		

comnts Fmd : Nice quality red maple and hard maple with pockets of White ash. Best quality is in the 8-10 inch maple. NW portion of the stand (north of old road) is half maple and half ash. Middle of the stand is lower quality. Scattered white spruce, hemlock and beech. A few aspen and yellow birch. Prescribe for a selection harvest. Reduce the white ash BA to 10-20 sq ft and thin white ash pockets down to 20 sq ft BA residual (Emerald Ash Borer considerations - EAB). Remove low quality maple. Maintain a component of spruce, leave all hemlock. Canopy gaps to promote maple regeneration. Management objective of northern hardwoods.

Wld : leave some fir, yellow birch and aspen in the stand after harvest. Maintain a component of spruce and all hemlock and leave some large diameter white pine if present

59	**M6**	7		60	northern hardwood	unevenaged	thinning	1		

comnts Fmd : Nice stand of mainly hard maple with some red maple pockets and aspen. Good quality hard maple poles. Scattered beech and white ash. Prescribe for a thinning treatment to remove lower quality trees and release good quality pole size trees. Remove aspen. Reduce any pockets of white ash to 20 st ft of BA. Residual BA avg for the stand of 80. Winter cut.

Wld : winter cut, leave some conifer and yellow birch and a beech component. Leave some large white pine if present

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
60	**M6**	18		57	northern hardwood	unevenaged	selection	1		

comnts Fmd **:** Primarily a hard maple stand with red maple, clumps of basswood, white ash. Some large diameter aspen throughout. Scattered beech. Medium quality. Some good quality hard maple. Prescribe for a selection harvest. Winter cut. Reduce the white ash BA to avg of 10 sq ft (EAB considerations). Remove low quality maple and low quality basswood clumps. Mark aspen for removal (overmature) but leave a component. 99 = white ash, basswood and beech. Management objective of northern hardwoods. Mangement objective of northern hardwoods.

Wld **:** leave a beech component and cherry and yellow birch if they occur. Leave a few large diameter white pine and other conifers in the stand unless needed for operability.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
69	**M6**	97		49	northern hardwood	unevenaged	shelterwood-seed	2		

comnts Fmd **:** Primarily red maple with hard maple, yellow birch, hemlock and cedar. Some aspen, balsam poplar and white ash. East end has more sugar maple (slightly higher ground). A few pockets of small diameter E5 (RM, ash). Some good maple crop trees in 8-10 inch class. Aspen and Bam is overmature. Prescribe for a shelterwood harvest. Leave all cedar, hemlock and yellow birch. Favor good quality maple and future maple crop trees as residual. Cut aspen, Bam, spruce and low quality maple. Reduce any pockets of ash to 20 sq ft BA (EAB considerations). Small pockets of conifers may be left as retention. Small diameter E5 pockets with thick understory may not need to be marked through. 99 sawtimber is HM, RM and W Ash. 99 pulp is aspen, bam and maple. 98 pulp is cedar and spruce.

Wld **:** winter cut. Leave all cedar, hemlock and yellow birch as per fmf comments. Leave a few large spruce and some large white pine if they occur.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
75	**M6**	6		62	northern hardwood	unevenaged	thinning	3		

comnts Fmd **:** Small acreage red maple stand with some hard maple, white ash and hemlock. Prescribe for a thinning with adjacent hardwood stands. Access is questionable due to drainage to the south of the stand. Possible access through private? Factor limited stand (wet, access).

Wld **:** leave the conifer, not much present. Do not operate in the drainage in the stand. Leave a yellow birch component if present. This stand can not be chipped, see header comments

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
76	**M6**	7		60	northern hardwood	unevenaged	thinning	2		

comnts Fmd **:** Medium quality hard maple and red maple with some white ash, ironwood and a few large diameter spruce and aspen. Mainly pole sized 8-10 inch stand. Small drainage through the middle of the stand. Prescribe for a thinning. Winter cut. Access from M-28 via old road. Residual BA of 70 sq ft.

Wld **:** leave conifer in the stand, not much occurs.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
79	**A6**	10	76	55	aspen (upland)	mature	final harvest	1		

comnts Fmd **:** Stand consists mainly of overmature aspen with spruce, white birch, balsam poplar, cedar and red maple. Balsam poplar is dying out of the stand. Aspen is showing rot and mortality in patches. Most of the aspen is still healthy. Prescribe for final harvest (clearcut). Small acreage/narrow stand. No retention needed. Could leave cedar as residual and hemlock if present. Access from M-28 is via old road on east end of the stand. East end has more low quality hardwoods mixed in. Management objective of aspen, with a component of hardwoods and mixed conifers. MDOT owns a wide ROW bordering this stand. Be sure of boundary location when running sale lines.

Wld **:** leave hemlock and some cedar for seed trees.

Total Acres..... **343**

NEWBERRY FOREST MGT UNIT | **Proposed Treatments With Limiting Factors** | **Compartment: 132** | **Entry Year: 2010**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
74	**M6**	6		62	northern hardwood	unevenaged	thinning	3		

TREATMENT LIMITING FACTORS: Too wet

comnts Fmd **:** Red maple with hard maple. Small acreage stand. Knob of hardwoods. Good quality in the center of the stand. Edges of the stand have smaller diameters with more balsam. Scattered hemlock of all sizes. Prescribe the stand for a thinning to remove lower quality trees and promote good quality poles. May need to mark some hemlock for maneuverability. Mark balsam for cut along stand edges where it is a major component. Access is very questionable - limiting factor stand? Wet, drainage to the south. Possible access through PVT?

Wld **:** leave conifers in the stand unless needed for operability. Leave cedar if oresent for a seed source. Do not operate in the drainage.

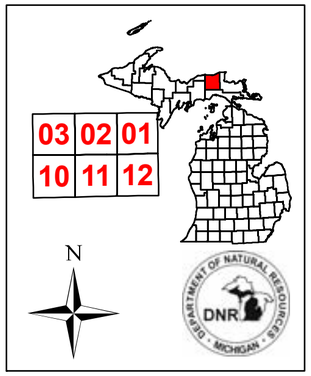
Total Acres..... 6

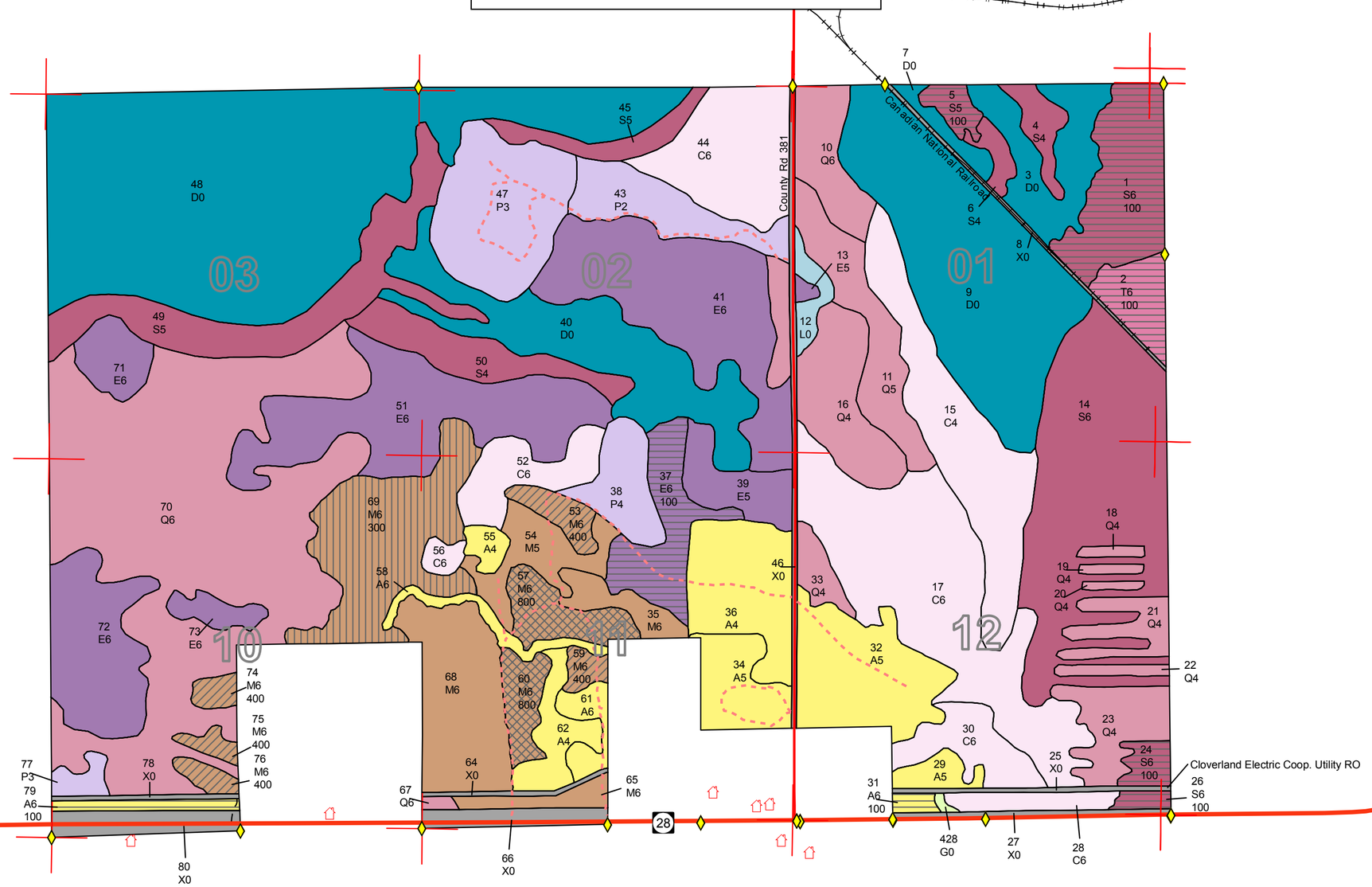
Covertype & Treatment Map

Compartment 132
T45N, R08W, Sec. 1-3, 10-12
County: Luce
Unit: Newberry
YOE: 2010
Acres: 3,476 GIS Calculated
Stand Examiner: Jason Tokar
Map Revised: 9/23/2008
Map Phase: Pre-review

Legend

- Rls Corners
- Miris Corners
- Highways
- County Paved Roads
- Paved Roads
- Poor Dirt Roads
- Closed Roads
- Railroads
- Cabins
- Stand Boundary
- 100 - Final Harvest
- 300 - Shelterwood - Seed
- 400 - Thinning
- 800 - Selection
- A - Aspen
- C - Northern White Cedar
- D - Treed Bog
- E - Swamp Hardwoods
- G - Grass
- L - Lowland Brush
- M - Northern Hardwoods
- P - Balsam Poplar, Swamp Aspen, Swamp White Birch
- Q - Mixed Swamp Conifers
- S - Black Spruce Swamp
- T - Tamarack
- X - Non-Stocked





1 0.5 0 1 Miles

85°19'0"W 85°18'0"W 85°17'0"W 85°16'0"W 85°15'0"W 85°14'0"W 85°13'0"W

46°21'0"N 46°20'0"N 46°19'0"N 46°18'0"N

Stand Boundary Map

Compartment 132
T45N, R08W, Sec. 1-3, 10-12
County: Luce
Unit: Newberry
YOE: 2010
Acres: 3,476 GIS Calculated
Stand Examiner: Jason Tokar
Map Revised: 9/23/2008
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Legend
- Rls Corners
- Miris Corners
- Highways
- County Paved Roads
- Paved Roads
- Poor Dirt Roads
- Closed Roads
- Railroads
- Cabins
- Stand Boundary

03 02 01 10 11 12

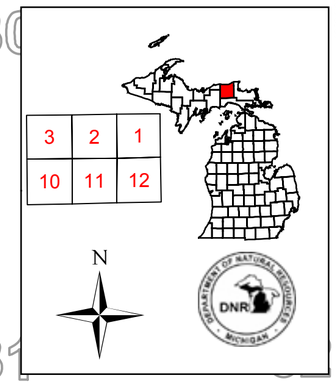
Canadian National Railroad
County Rd 381
Cloverland Electric Coop. Utility RO
28
1 0.5 0 1 Miles

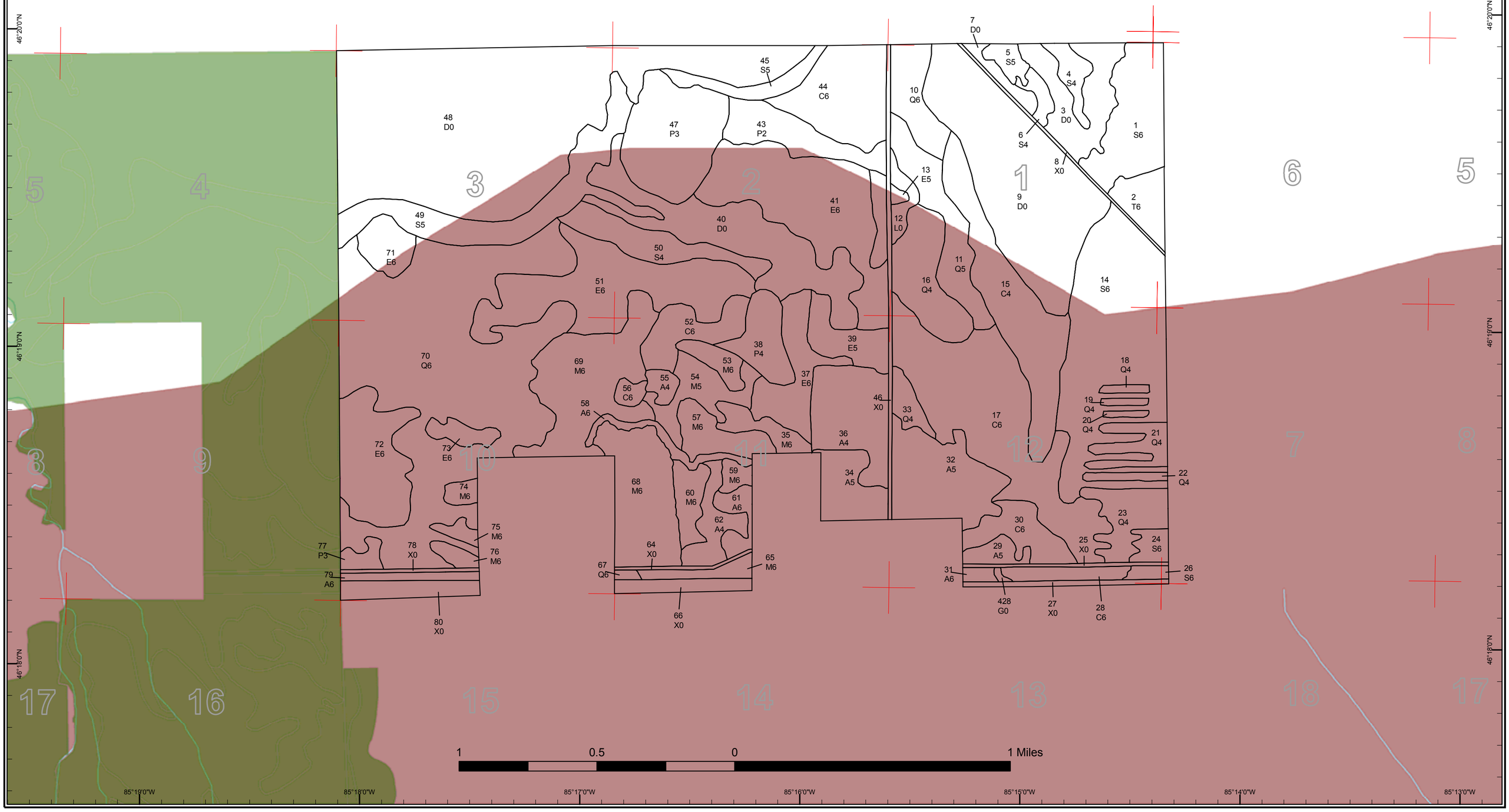
Dedicated & Proposed Special Conservation Area Map

Compartment 132
T45N, R08W, Sec. 1-3, 10-12
County: Luce
Unit: Newberry
YOE: 2010
Acres: 3,476 GIS Calculated
Stand Examiner: Jason Tokar
Map Revised: 9/23/2008
Map Phase: Pre-review

Legend
- Miris Corners
- Stand Boundary

Dedicated SCA
- Cold Water Streams
- Potential Old Growth Stands
- Deer Wintering Areas





DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment.
Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.
SCA	Potential Old Growth Areas	This category contains stands were identified for a broad range of reasons and were coded in the OI database as stand condition 8 as potential old growth (POG). Approximately 310,000 acres have been identified through the Operations Inventory (OI)/Compartment Review process. For stands in Year of Entry 2008 and forward, potential old growth is managed for the identified objective until it is: 1) vetted through the Biodiversity Conservation Planning Process (BCPP) and given a specific designation and objective (as an ERA, HCVA, or other type of SCA) and is released from the potential old growth designation; or 2) it is released from the potential old growth designation via the Compartment Review process.