NEWBERRY FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 111 ENTRY YEAR: 2010

Compartment Acreage: 1,837 County: Luce

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

Stand Examiner: **Jason Tokar**

Legal Description: **T46N R10W Sections 7, 8 & 9**

RMU (if applicable):

Management Goals: Timber management, wildlife habitat, and recreation are the main uses of the compartment. The overriding goal is to maintain or improve the forest health, productivity and diversity of the area to promote and enhance these uses. Treatments prescribed will help ensure the sustainability of the forest resource and continue to enhance the quality of the wildlife habitat. Timber management (aspen and northern hardwoods) will continue at the current sustainable level of management, promoting an array of both age class and structural diversity in the cover types.

Soil and Topography: Upland areas are dominated by two soil types; Kalkaska sand and Wallace-Spot soils complex. These upland soils support cover types of aspen, northern hardwoods and some red pine and upland spruce plantations. Lowland areas are dominated by Spot-Finch soil complex, Paquin-Spot soil complex and Carbondale, Lupton and Tawas muck soils. These lowland soils support lowland aspen and birch, mixed swamp conifer, and lowland hardwoods cover types. Several drainages supporting beaver ponds/floodings are found throughout the compartment. The terrain throughout the compartment is level to slightly rolling, with a gradual ridges at the transition from upland to lowland.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The compartment is entirely State owned, with only one privately owned 80 acre parcel in Section 7. The compartment is surrounded on all sides by State land, with the exception of 2 small private parcels on the northern border. Development around the area is low. There are a number of permanent residences east of the compartment along Co Rd 446 as well as a few scattered camps in the local area. The main types of land use of the area are hunting, snowmobile and ORV riding, berry picking, wildlife viewing and timber production.

Unique, Natural Features (include only non-site specific and non-sensitive information): MNFI lists an occurrence of Osprey within the compartment.

MNFI notes that potential is there for eagle, osprey, merlin, great blue heron rookery, black-backed woodpecker, spruce grouse, red-shouldered hawk, and goshawk. Potential for moose and wolf. Potential for incurvate emerald, red-disked alpine, freija fritillary, frigga fritillary, and ebony boghaunter in boggy areas. Potential for Blanding's turtle along drainage. They also list potential for small yellow pond lily, American shore grass, Farwell's milfoil, alternate-leaved water-milfoil, and Potamogeton conifervoides associated with inland lakes in the compartment. Potential for climbing fumitory, pine-drops, Canada rice-grass, and false violet in pine stands. Potential for auricled twayblade in streamside thickets.

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: There are no Special Management Designations.

Watershed and Fisheries Considerations: Fisheries Values
Moderate. The small stream flowing south through section 9 into Spider Bay, Tahquamenon River, is classified SQCW, for natural brook trout. It should be protected as much as possible from streambank erosion. The other small stream flowing west from section 7 into Silver Creek has not been classified.

Wildlife Habitat Considerations: Compartment 111 lies in central Luce county and is in the Seney Sand Lake Plain ecological sub-subsection. It is immediately north of the McMillan Deer yard and as such is a breakout area for wintering deer. The compartment is heavily used for recreation. It is quite diverse with a heavy component of aspen and northern hardwood stands, a good mix of low types including marshes, treed bogs, and lowland brush and scattered spruce, fir, and mixed lowland conifer stands. Within stand diversity is good in all stand types.

Wildlife objectives will be achieved by the retention of hard and soft mast producing trees, wildlife den and nest trees and snags in harvested stands and the preservation of conifer components in aspen and hardwood stands. Some large aspen will be retained in stands for future softwood snags. Many stands will retain large white pine as a component. Soft mast (cherry) is present in the compartment and will be retained in harvested stands. Large oak may be planted in regeneration gaps of harvest stands or in openings of several other stands to replace beech mast that is being lost to disease. Hardwood stands are likely to contain vernal pools which will be protected during harvest operations to preserve wetland wildlife habitat. White-tailed deer, black bear, fisher, marten, bobcat, coyotes, gray wolves, ruffed grouse, woodcock, beaver and snowshoe hare are expected to use this compartment.

Mineral Resource and Development Concerns and/or Restrictions:
Sections 7 – 9, T46N-R10W, Luce County
Surface sediments consist of an end moraine of coarse-textured till and peat & muck. There is insufficient data to determine the glacial drift thickness. The Ordovician Utica Shale subcrops below the glacial drift. The Utica does not have a current economic use. No gravel pits are located in the area, but there should be some potential. There is no economic oil and gas production in the UP.

Vehicle Access: Located 5 miles northwest of Newberry, primary access is via County Road 446 from the east. Camp 6 Road, a maintained forest road, as well as a network of lesser forest roads (two track dirt roads) transect the compartment providing ample vehicle access. Access can also be gained via the designated ORV and snowmobile trails which are found within the compartment boundary. Several abandoned/closed roads used for past timber sales are also found throughout the area.

Survey Needs: Corners are needed around the private property located in Section 7 (NWNE, NENW) if treatment of Stand 66 is to occur.

Recreational Facilities and Opportunities: Recreational facilities include the Three Mile Snowmobile Trail and the Silver Creek ORV Trail. The Silver Creek Multi Use Trailhead is located within the compartment. Opportunities for recreation include hunting, hiking, berry picking, wildlife/nature viewing, snowmobiling and ORV riding.

Fire Protection: Large fire growth potential will be minimal with the absence of pine fuel types. Parts of the compartment are lowland types and not accessible by suppression equipment, but may not support high intensity fire. Some of the two track road network will require some effort for access by wheeled suppression equipment.

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: **111**

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		43	143	232	101				52										571
Black Spruce									38										38
Bog or Marsh	4																		4
Grass	4																		4
Lowlnd Brush	116																		116
Lowlnd Poplr								85		91									176
Marsh	39																		39
Mx Swmp Cnfr								67	129	34									230
Non Stocked	1																		1
Red Pine							49												49
Spruce Fir						110													110
Swamp Hrdwds						9		21											30
Treed Bog	17																		17
Upland Hdwds				14				112	15	39								182	362
Water	90																		90
Total	271	43	143	246	101	119	49	285	234	164								182	1837

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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: **111**

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	571																										571
S Black Spruce		38																									38
V Bog or Marsh			4																								4
G Grass					4																						4
L Lowlnd Brush									116																		116
P Lowlnd Poplr										176																	176
N Marsh											39																39
Q Mx Swmp Cnfr												230															230
X Non Stocked													1														1
R Red Pine																49											49
F Spruce Fir																			110								110
E Swamp Hrdwds																				30							30
D Treed Bog																						17					17
M Upland Hdwds	15																							347			362
Z Water																									90		90
Total	586	38	4		4				116	176	39	230	1			49			110	30		17		347	90		1837

LAKE SUPERIOR STATE FOREST | NEWBERRY FOREST MGT UNIT | LUCE COUNTY | COMPARTMENT: **111**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY

TOTAL VOLUME		CUT VOLUME	
Hardwood	12063 Cds	Hardwood	3635 Cds
Hardwood	19 Mbf	Softwood	807 Cds
Softwood	7837 Cds	Sum CutVol	4442 Cds
Softwood	33 Mbf		
Sum TotVol	20004 Cds		

Total Cmpt Acres

1837

Acres Proposed For Cut..... 233

NEWBERRY FOREST MGT UNIT | **Proposed Treatments With NO Limiting Factors** | **Compartment: 111** | **Entry Year: 2010**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
36	**M4**	39	80	50	northern hardwood	sparse		0	planting	

comnts Fmd : Open area filling in with red maple and cherry. Scattered spruce and balsam. Pockets of better quality M5 thorughout and also areas of more of an M2/M3.

Wld : Can plant large oak in the stand if desired.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
37	**M4**	112	60	54	northern hardwood	immature		0	planting	

comnts Fmd : Lots of variability to this stand. Ranges from an A2/M2 to M5/A5. Pockets of thicker aspen and/or hardwoods (northern end). Open areas (U0). Lots of wildlife activity within the stand. Bear sign, deer sign, grouse seen in stand. M4/A4/M6/A5/M3/A3/U0. Old notes state "This stand was harvested heavily for firewood in the late 70s and early 80s."

Wld : Can plant large oak in the stand if desired.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
42	**A6**	52	76	58	aspen (upland)	mature	final harvest	1		

comnts Fmd : Mature aspen. Large diameters throughout. Bordered by black spruce stand to the north. Rolling hills/ridges. Some lower areas. "Open" areas have a high BA of balsam, small diameter. Stand consists of areas of overmature aspen, oepn grown aspen, areas of thicker balsam with spruce. Good component of maple throughout. Northeast portion of the stand has some lower areas near the spruce stand to the north. Prescribe the stand for treatment. Clearcut with reserves. Southern portion of the stand between stands 39 and 44 will need to be looked at for possible buffer requirements. Care should be taken during sale prep work to not include portions of stands 26 or 44 into the sale area. Same with stand 69 (spruce stand surrounded by this stand). Leave large white pine and a component of white birch as residual. No other retention is required, stand is narrow and surrounded by stands with a variety of species. Management objective of aspen.

Wld : leave large white pine, a component of birch, some large diameter spruce and a cherry component. Buffer stands 39, 40 and 41.leave hemlock if present.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
46	**F6**	3	47	49	spruce-fir (uplands-including upland black spruce)	immature	thinning	1		

comnts Fmd : Planted in 1961. Small stand of spruce in N-S rows. Prescribed but not treated last entry year. Prescribe for treatment again this entry year. Treat with a row thinning. Set up as one sale with adjacent aspen stand (Stand 42).

Wld : leave white pine and anything else you can to maximize diversity in this stand.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
66	**P6**	89	79	52	balsam poplar & swamp aspen and swamp white birch	mature	final harvest	2		

comnts Fmd : Variable stand. Ranging from a P type to a Q type to an E type. Lower areas have tag alder, ash, maple and spruce. Much of the aspen is over mature and dying out. Most of the red maple is low quality and small dbh. Areas of thicker spruce. One nice ridge of aspen east of stand 67. Open areas of E5 - very wet. A few lower cedar areas. Prescribe stand for treatment. Clearcut with reserves. Winter harvest. Leave cedar patches for retention (will have a component of white birch, spruce and red maple within them). Leave all yellow birch and white pine. Management objective of lowland aspen mixed with hardwoods. 98 = balsam and cedar Paquin-Spot soil complex.

Wld : leave hemlock and encourage it by thinning around the drip line. Leave all yellow birch and white pine unless needed for operability. Leave some representative trees of each species.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
70	**M6**	14		50	northern hardwood	unevenaged	thinning	1	planting	

comnts Fmd : Pole size red maple with a component of hard maple and beech. Scattered aspen, yellow birch and cherry. This stand was originally part of stand 22 - separated out for management. This stand consists of the area with better quality, higher BA and slightly larger diameters. Stand edges adjacent to stands 37 and 36 have slightly lower quality. Prescribe stand for treatment. Treat stand with a thinning. Remove low quality trees and release the good quality pole timber. Mark to a residual BA of 70 sq ft on average. Mark some aspen for removal but leave a component in the stand.

Wld : leave a component of aspen, birch and cherry and some conifer in the understory.Can plant large oak in openings in the stand if desired.leave hemlock if present.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
71	**M6**	44		50	northern hardwood	unevenaged	thinning	1	planting	

comnts Fmd : Pole size red maple with a component of hard maple and beech. Scattered aspen, yellow birch and cherry. This stand was originally part of stand 22 - separated out for management. This stand consists of the area with better quality, higher BA and slightly larger diameters. Stand edges adjacent to stands 37 and 36 have slightly lower quality. Prescribe stand for treatment. Treat stand with a thinning. Remove low quality trees and release the good quality pole timber. Mark to a residual BA of 70 sq ft on average. Mark some aspen for removal but leave a component in the stand.

Wld : retain a component of yellow birch, cherry and aspen in the stand, and a conifer component. Can plant large oak in the stand in openings if desired.leave hemlock if present.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
74	**M6**	15	73	55	aspen (upland)	low quality	final harvest	1	planting	

comnts Fmd **:** Variable stand. Low quality red maple, small diameters and limby. Mature aspen. Component of cherry, white birch, spruce, balsam and white pine. Some beech (dying out of stand). Aspen is mature and showing decline and some mortality. Open areas with aspen and balsam. Stand continues into the adjacent compartment to the south. Prescribe stand for treatment. Clearcut with reserves, and conversion to aspen. Quality of the maple in the stand is low, not worth managing as hardwoods. Better suited for conversion to aspen. Management objective of aspen with a component of mixed hardwoods.

Wld **:** leave a yellow birch and cherry component. Leave standing some mature trees of each species. Can plant some large oak in the stand if desired.leave hemlock if present.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
75	**M6**	16		50	northern hardwood	unevenaged	thinning	2	planting	

comnts Fmd **:** Hardwood ridges running SE/NW. Mature aspen along the edges of the stand. Some good quality in the 9-10 inch red maple poles. Quality in the red maple decreases along the stand edges. Small acreage stand. Prescribe for treatment this entry year. Treat stand with a thinning. Set up as one sale with stands 70, 71, 74. Include mature aspen along stand edges in the sale. Harvest all aspen to promote younger aspen along stand edges for diversity between adjacent stands. Residual BA of 70 sq ft on average.

Wld **:** leave yellow birch and cherry components, and some mature white pine, spruce and fir. Can plant large oak in the stand if desired. Leave hemlock if present

Total Acres..... **384**

Proposed Treatments With Limiting Factors

Compartment: 111 **Entry Year: 2010**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status

TREATMENT LIMITING FACTORS:

Total Acres..... **0**

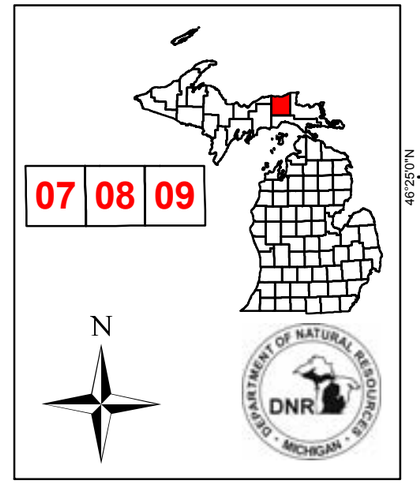
Covertype & Treatment Map

Compartment 111
T46N, R10W, Sec. 7-9
County: Luce
Unit: Newberry
YOE: 2010
Acres: 1,837 GIS Calculated
Stand Examiner: Jason Tokar
Map Revised: 9/18/2008
Map Phase: Pre-review

Legend

- RIs Corners
- Miris Corners
- County Paved Roads
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Abandoned Road
- Trails
- Trail Head
- Gate
- Radio Tower
- ORV Trails
- Snowmobile Trails
- Stand Boundary
- 100 - Final Harvest
- 400 - Thinning

- A - Aspen
- D - Treed Bog
- E - Swamp Hardwoods
- F - Upland Spruce or Fir
- G - Grass
- L - Lowland Brush
- M - Northern Hardwoods
- N - Marsh
- P - Balsam Poplar, Swamp Aspen, Swamp White Birch
- Q - Mixed Swamp Conifers
- R - Red Pine
- S - Black Spruce Swamp
- V - Bog or Muskeg
- X - Non-Stocked
- Z - Water



85°37'0"W 85°36'0"W 85°35'0"W 85°34'0"W 85°33'0"W
46°25'0"N
46°24'0"N

07 08 09

Camp Six Rd

1 0.5 0 1 Miles

Stand Boundary Map

Compartment 111
T46N, R10W, Sec. 7-9
County: Luce
Unit: Newberry
YOE: 2010
Acres: 1,837 GIS Calculated
Stand Examiner: Jason Tokar
Map Revised: 9/18/2008
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Legend
- RIs Corners
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- County Paved Roads
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- Abandoned Road
- Trails
- Gate
- Radio Tower
- Trail Head
- ORV Trails
- Snowmobile Trails
- Stand Boundary

07 | 08 | 09

N

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07 08 09

Camp Six Rd

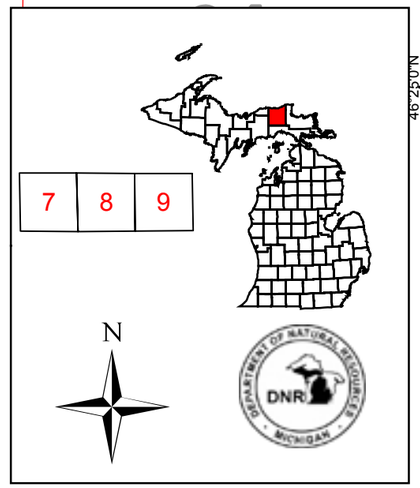
1 0.5 0 1 Miles

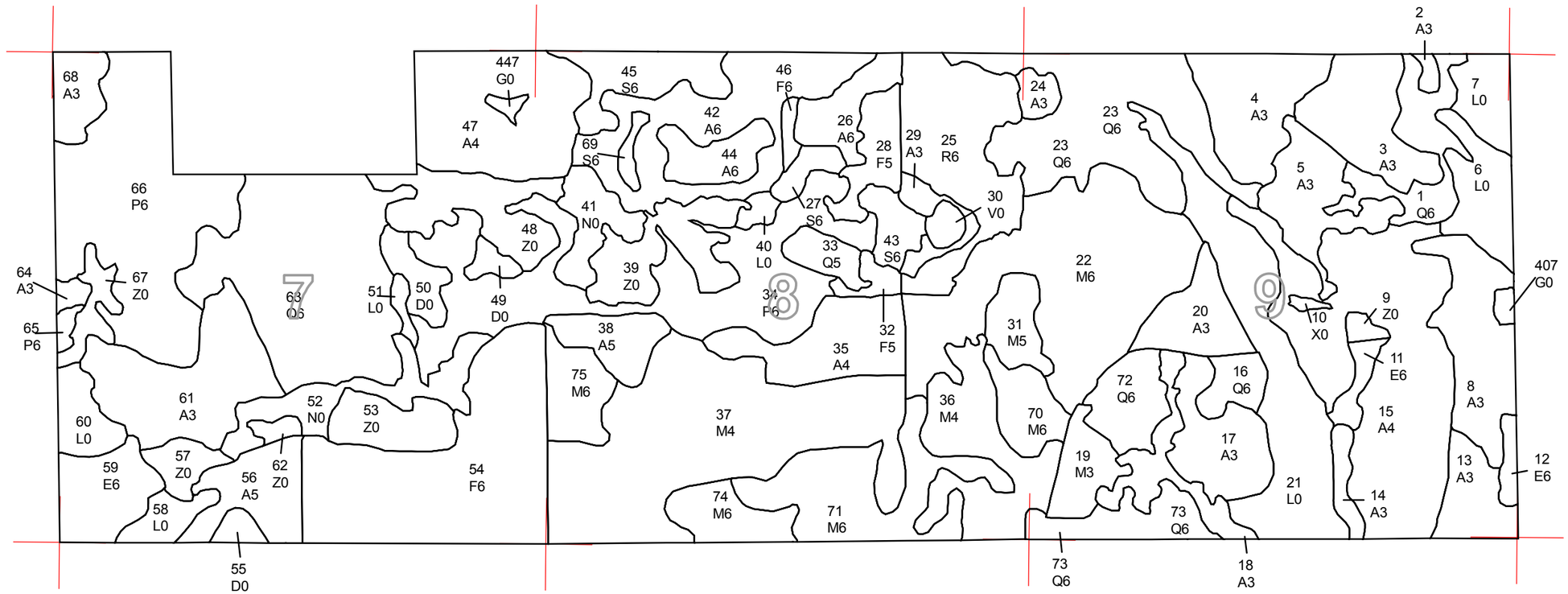
Dedicated & Proposed Special Conservation Area Map

Compartment 111
T46N, R10W, Sec. 7-9
County: Luce
Unit: Newberry
YOE: 2010
Acres: 1,837 GIS Calculated
Stand Examiner: Jason Tokar
Map Revised: 9/18/2008
Map Phase: Pre-review

Legend
- Miris Corners
- Stand Boundary

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





1 0.5 0 1 Miles

85°37'0"W 85°36'0"W 85°35'0"W 85°34'0"W 85°33'0"W
46°25'0"N 46°24'0"N 46°23'0"N

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	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
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.