



**NEWBERRY FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 79 ENTRY YEAR: 2011

Compartment Acreage: 1342 (GIS Calculated) County: Luce

Revision Date: 11/2/2009

Stand Examiner: Ben Travis

Legal Description: T47N R08W Sections 19, 20 and 21

RMU (if applicable):

Management Goals: Timber management, fire control, wildlife habitat management and forest recreation management are all critical considerations during the planning, implementation and monitoring of treatments within this compartment. The overall management goal is to improve the forest health, diversity and productivity of the area through sustainable, proper forest treatments. Treatments prescribed will help renew and utilize the forest resource and continue to enhance the quality of wildlife and fisheries habitat.

Soil and Topography: Numerous soil series are found within the compartment, including Auger – Annanias Silt Loam, Hendrie-Annanias Complex and Zandi Silt Loam. Terrain is variable, ranging from rolling hills and steep ridges to lowlands and floodplains.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The compartment has a fairly contiguous block of State land comprising the core area with some mixed private and state ownership at its east and west edges. Several private camps are within the compartment and surrounding area. Predominant land use in the area includes timber production and forest recreation.

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

Potential for calypso orchid, lapland buttercup, ram's head lady's slipper, round-leaved orchid and limestone oak fern in cedar swamps. Potential for red-shouldered hawk, goshawk, great blue heron rookery, black-backed woodpecker, spruce grouse, eagle, osprey, wood turtle, moose and wolf. Potential for incurvate emerald, frigga fritillary, freija fritillary, and ebony boghaunter in boggy areas.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): There is one historical occurrence listed in this compartment by the Bureau of Michigan History.

Special Management Designations or Considerations: This compartment is considered winter deer range. Management activities near Murphy Creek and its associated tributaries will follow all BMP guidelines as well as guidance provided by the Fish Biologist. Snowmobile trail operation during the winter and aesthetics along the snowmobile corridor are important considerations.

Watershed and Fisheries Considerations: Fisheries Values

Minimal. The entire Murphy Creek system is classified SQWW. Even so, its close proximity to the Tahquamenon River, which is classified FQWW, may allow some sports fish seasonal into this section of

stream. A temperature logger placed at the Charcoal Grade one summer found temperatures low enough for brook trout. Fisheries Division will look closer at its fish community structure within the next few years. It should be protected from any new sources of erosion and vegetative cover should be managed to discourage beaver.

Wildlife Habitat Considerations: Compartment 79 is in eastern Luce county and lies in the Grand Marais Sandy End Moraine and Outwash ecological sub-subsection. Portions of the compartment lies within the Hulbert Deer yard which could support high numbers of deer during stressful winter periods. The compartment has a good diversity of stand types and good species diversity within stands. Murphy Creek and its tributaries run throughout the compartment providing excellent travel corridors for wildlife. The compartment has high recreational use (hunting and non-hunting) throughout the year.

Wildlife values will be achieved by maintaining a component of represented species in hardwood thinnings. Conifer components will be preserved in aspen final harvests. Diversity in vertical structure of stands and creation of nest and den sites will be enhanced by leaving some large white pine, spruce, and aspen behind in aspen final harvests. Hardwood stands are likely to contain vernal pools which will be protected during harvest operations to preserve wetland wildlife habitat. Notable wildlife species expected to inhabit this compartment include White-tailed deer, black bear, moose, wolves, bobcat, snowshoe hare, otter, mink, ruffed grouse, woodcock, muskrat and beaver.

Mineral Resource and Development Concerns and/or Restrictions:

Sections 19 - 21, T47N-R8W, Luce County

Surface sediments consist of lacustrine (lake) sand & 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/dolostone in the UP. There are no gravel pits in the area, but there could be some potential. There is no economic oil and gas production in the UP.

Vehicle Access: The Charcoal Grade is gated on private property approximately 2 miles south of the compartment, just south of intersection with Skyline Road. This gate is only open during snowmobile season. Access to various private property/camps is provided by the Charcoal Grade, Atwood Creek road and the Ulbeck Trail. This compartment is located approximately 1.5 miles northeast of the Charcoal Grade – Skyline Road intersection.

Survey Needs: Survey monument placement is warranted in this compartment and surrounding area. Establishing private property lines on the proposed forest treatments without registered survey corners will be problematic.

Recreational Facilities and Opportunities: Snowmobile Trail #45 follows the Charcoal Grade through the compartment. Opportunities for recreation include hunting, fishing, dispersed camping, wildlife/nature viewing, snowmobiling and ORV riding.

Fire Protection: Large fire runs are not likely because of the fragmented hardwood/lowland conifer types and lack of hazard fuel types. Heavy wheeled equipment accessibility will be challenging in many areas because of the lowland types. Fire risk to private properties should be low because of lower intensity fires occurring.

Additional Compartment Information: None.

- **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: 79

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		10	54			32	13												109
Black Spruce						8													8
Cedar												61							61
Hemlock										8									8
Lowlnd Brush	42																		42
Marsh	1																		1
Mx Swmp Cnfr						60	5	2	172	2									241
Spruce Fir			24	3	2														29
Swamp Hrdwds				29			17		14	7								153	220
Treed Bog	2																		2
Upland Hdwds						58		21										496	575
Water	27																		27
White Pine								9								1		9	19
Total	72	10	78	32	2	158	35	32	186	17		61				1		658	1342

LAKE SUPERIOR STATE FOREST

NEWBERRY FOREST MGT UNIT

LUCE COUNTY

COMPARTMENT: 79

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	109																										109
S Black Spruce		8																									8
C Cedar				61																							61
H Hemlock						8																					8
L Lowlnd Brush									42																		42
N Marsh											1																1
Q Mx Swmp Cnfr												241															241
F Spruce Fir																			29								29
E Swamp Hrdwds																				220							220
D Treed Bog																						2					2
M Upland Hdwds																								568	7	575	
Z Water																									27	27	
W White Pine																										19	19
Total	109	8		61		8			42		1	241							29	220		2		568	27	26	1342

LAKE SUPERIOR STATE FOREST

NEWBERRY FOREST MGT UNIT

LUCE COUNTY

COMPARTMENT: **79**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY			
TOTAL VOLUME		CUT VOLUME	
Hardwood	12765 Cds	Hardwood	2978 Cds
Hardwood	728 Mbf	Hardwood	234 Mbf
Softwood	5455 Cds	Softwood	325 Cds
Softwood	691 Mbf	Softwood	7 Mbf
Sum TotVol	21058 Cds	Sum CutVol	3785 Cds
Total Cmpt Acres		Acres Proposed For Cut.....	262
1342			

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status
19	M6	17		55	northern hardwood	unevenaged	thinning	2		
comnts Fmd : Mixed hdwd sawlog class includes yellow birch and sugar maple. Mixed softwood class includes cedar and white spruce. Aspen, hemlock, white birch, cedar, and white pine are overstory associates. Retain approximately 1/2 of yellow birch. Leave all cedar, hemlock, white pine and white spruce unless interfering with logging maneuverability. May remove a subset of the sugar maple pulpwood-sized trees. Aspen in decline. Remove most aspen, but leaving some scattered large trees. Soils = Auger-Annianias silt loam; Histosols and Aqueuts, ponded.										
Wld : leave some large aspen and a white birch component. Leave cedar, hemlock and spruce and a good component of yellow birch.										
23	A6	32	54	55	aspen (upland)	mature	final harvest	1		
comnts Fmd : Aspen boles deteriorating. White pine, white birch, ironwood, hemlock, cedar, and white spruce poles present. Retain white pine, hemlock, and cedar unless interfering with logging maneuverability. Soils = Hendrie-Annianias complex.										
Wld : leave some mature conifer most, if not all, super canopy trees. Leave some large diameter aspen. Retain white pine, hemlock and cedar. Buffer the N type. No chipping, deer yard.										
29	M6	2		55	northern hardwood	unevenaged	selection	2		
comnts Fmd : Light intensity treatment to coincide with overstory removal of surrounding type. Zandi silt loam.										
Wld :										
30	M6	23		55	northern hardwood	unevenaged	selection	2		
comnts Fmd : Mixed softwood class comprised of white spruce and white pine. Understory becomes a F2/F3 to east. Stand is more pole-sized to east. Defect in hardwoods is common. Abundant snags. Hemlock, yellow birch and black cherry components in overstory. Steep, fairly long slope descending towards Murphy Creek at south edge of stand. Zandi silt loam. Will retain hemlock and cedar unless interfering with logging equipment maneuverability. Will leave some white spruce. Fish biologists asks that a 200 foot wide "no cutting" buffer be left along Murphy creek.										
Wld : leave hemlock, cedar and some spruce. Leave some wolfy trees and some trees with crotches greater than 2/3 of the way up.										
34	M6	36		50	northern hardwood	unevenaged	selection	2		
comnts Fmd : Many defects above butt log in most sawtimber. Aspen decadent, 14" to 18" Dbh. White pine and hemlock sawlog-sized trees present. White pine, white spruce, fir, black cherry and white birch poles also found. Retain all white pine and hemlock unless interfering with logging equipment maneuverability. Leave some white spruce. Soils = Zandi silt loam.										
Wld : leave some aspen, cherry and birch. Leave some mature spruce and pine. Leave all hemlock										
35	A6	6	65	50	aspen (upland)	mature	final harvest	1		
comnts Fmd : Aspen large and beginning to show signs of decline/defect. Aspen diameters include a subset up to 16" to 20" Dbh. Many minor overstory associates. Retain all white pine, cedar and hemlock unless interfering with logging equipment maneuverability. Soils = Zandi silt loam.										
Wld : leave a few mature aspen and spruce. No chipping, deer yard										
43	M6	32		48	northern hardwood	unevenaged	selection	2		
comnts Fmd : Hemlock, white spruce, white pine, beech and yellow birch are overstory associates. Aspen is deteriorating. Leave all hemlock and white pine unless interfering with logging equipment maneuverability. Leave some scattered white birch and white spruce. Wallace sand and Spot-Dawson peats.										
Wld : leave aspen if not a lot, otherwise leave a component of mature aspen. Leave a yellow birch component and scattered white birch and spruce.										
68	A6	2	66	55	aspen (upland)	mature	final harvest	1		
comnts Fmd : Mixed hardwood pulp category comprised of fir and white spruce. Aspen bole quality will substantially decline within 10 years. Retain all white pine, hemlock and cedar unless interfering with logging equipment maneuverability. White birch, black spruce and black cherry are overstory associates. Watch for any apple trees and retain if found. Soils = Zandi silt loam. Snowmobile trail runs along east side of stand.										
Wld : retain all hemlock, cedar and white pine., no chipping, deer yard.										
72	M6	7		46	white pine	unevenaged	seed tree	2		
comnts Fmd : Very low grade soft maple products. Aspen beyond economic rotation age and will be harvested. White spruce, hemlock, cedar, beech and aspen are overstory associates. Retain all white pine, hemlock and cedar unless interfering with logging equipment maneuverability. Favor leaving most yellow birch and white spruce. Possibly underplant white pine? Soils = Wallace sand; Dawson, Greenwood and Loxley soils.										
Wld : leave a few mature fir. Leave hemlock. Leave mature spruce and white pine unless needed for maneuverability. Leave most yellow birch.										

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
76	A6	15	25	50	aspen (upland)	mature	final harvest	2		
<p>comnts Fmd : Alternate MO of F. Variable stocking, composition and age structure as part of a larger, transitioning forest opening. Pockets of F type and openings. Red maple, white pine, yellow birch, sugar maple, balsam fir and black cherry are overstory associates. Retain hemlock, cedar, and white pine unless interfering with logging equipment maneuverability. Retain most consolidated small pockets (small inclusions) of hardwood and use individual tree selection in these patches. Aspen is in process of decline/degrading. Soils = Zandi silt loam. Leave some scattered white spruce, black cherry and white birch. Leave any apple trees. Fish biologist asks that a 200 foot wide "no cutting" buffer be left along Murphy creek.</p> <p>Wld : leave spruce 14" dbh and greater plus some large diameter aspen. Retain cedar, hemlock. Leave white pine unless needed for maneuverability. Leave a yellow birch component andscattered cherry and white birch.no chipping, deer yard.</p>										
Total Acres.....		172								

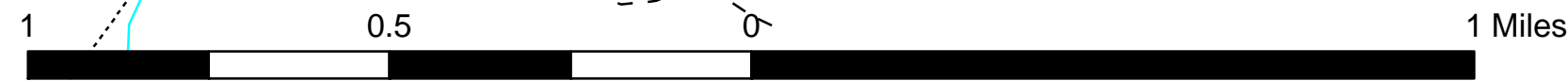
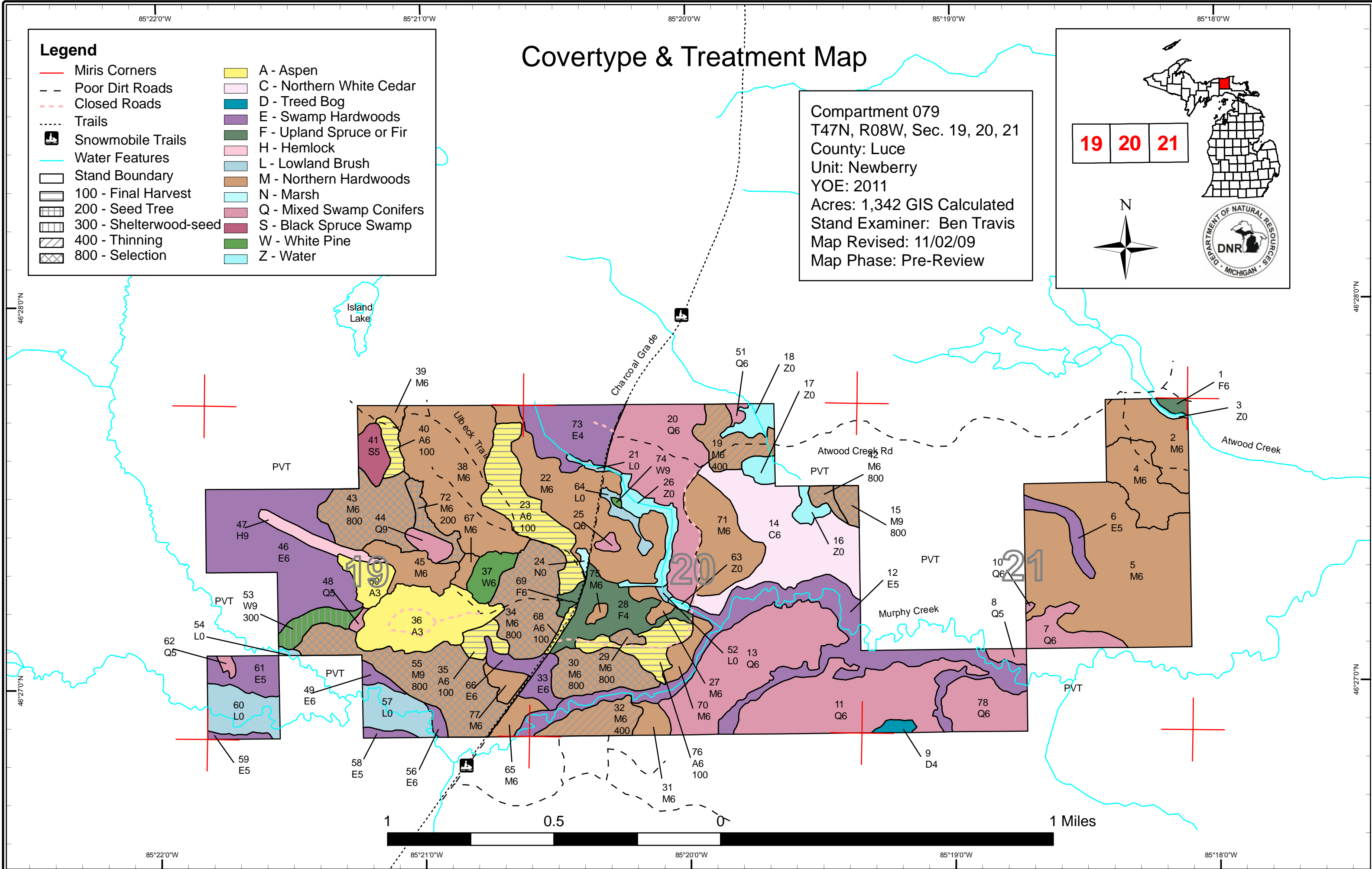
Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDf Status
15	M9	5		60	northern hardwood	unevenaged	selection	2		
TREATMENT LIMITING FACTORS: Adjacent landowner denies access										
comnts Fmd : Private hardwood stand to north has been heavily cut, while same stand to east is marked for cutting. Very vigorous M2 understory - 1 inch Dbh and 20 feet tall. Higher quality hardwood stand on upland site. Very infrequent white spruce poletimber. Retain spruce. East private line is painted in and looks accurate. North Line will need to be established as private harvest to North did not cut all way to a flag line. Soils = Zandi silt loam.										
Wld : retain spruce. Leave a component of all species in various sizes.										
32	M6	15	68	50	northern hardwood	immature	thinning	2		
TREATMENT LIMITING FACTORS: Land survey needed										
comnts Fmd : Scarce sawlog-sized beech. Mixed softwood category comprised of white spruce and cedar. Larger red maple are pulpwood quality. Private camp on south boundary. May need survey support to establish private line. Stand located on a gentle, north-facing slope. Patches of nice M2 understory - up to 20 ft tall. Understory composition is mainly sugar maple. Yellow birch, hemlock, and white pine are additional overstory associates. Leave cedar, white pine and hemlock unless interfering with logging equipment maneuverability. Will leave some white spruce. Soils = Wallace sand and Zandi silt loam. Portion of stand within Murphy Creek influence zone. Fish Biologist asks that a 200 foot wide "no cutting" buffer along Murphy creek per Fisheries.										
Wld : leave cedar, hemlock and white pine and a component of spruce. . Leave a component of all species present in various sizes										
40	A6	5	66	55	aspen (upland)	mature	final harvest	1		
TREATMENT LIMITING FACTORS: Threatened, endangered, and special concern species/communities										
comnts Fmd : Hawk's nest had been found in stand when hardwood stand to east was prepared during the last entry. Cutting of this stand was deferred at that time due to this nest. Prime aspen stand. Aspen will not hold much longer. The stand examiner has made several trips to stand during the late spring and summer of 2009 to search for any nesting raptors and did not find any signs of birds of prey or nests. Retain all yellow birch, hemlock, and white pine unless interfering with logging equipment maneuverability. Percentage of maple increases to south. Mixed hardwood pulp comprised of sugar maple, yellow birch, and beech. Wallace sand.										
Wld : watch for nests while setting this stand up and during treatment. Leave hemlock and white pine unless needed for maneuverability. Do not mark to thin hemlock and white pine to thin. leave a few large diameter aspen. No chipping, deer yard.										
42	M6	4		50	northern hardwood	unevenaged	selection	2		
TREATMENT LIMITING FACTORS: Adjacent landowner denies access										
comnts Fmd : Site is wetter to south. Mixed hardwood sawlogs include red maple and yellow birch. Retain yellow birch, white pine, white spruce, hemlock and cedar unless this interferes with logging equipment maneuverability. Soils = Zandi silt loam.										
Wld : retain cedar and hemlock. Leave spruce and white pine and a yellow birch component.										
53	W9	9		55	white pine	unevenaged	shelterwood-seed	2		
TREATMENT LIMITING FACTORS: Land survey needed										
comnts Fmd : Stand located on some low ridges. Infrequent beech poles. Yellow birch and hemlock are overstory associates. Retain most yellow birch, white pine, hemlock, and white spruce (may need to remove a limited number of stems of these species for operability). Wallace sand.										
Wld : leave hemlock and yellow birch. Leave white pine and spruce unless needed for maneuverability.										
55	M9	52		48	northern hardwood	unevenaged	selection	1		
TREATMENT LIMITING FACTORS: Land survey needed										
comnts Fmd : Mixed softwood sawlog category includes white spruce, hemlock and white pine. Mixed hardwood pulp category includes yellow birch, beech, white birch and black cherry. Will harvest some sugar maple poles, white birch poles and beech timber if needed. Retain hemlock, white pine, and cedar unless interfering with logging equipment maneuverability. Favor leaving good proportions of yellow birch and cherry. Leave some white spruce. Will remove aspen. Residual BA may be lower in areas. May need survey support to run private lines. Soils = Wallace sands and Auger-Annianis silt loams. Snowmobile trail extends along southeast side of stand.										
Wld : leave a good component of yellow birch and cherry in the stand and retain some spruce. Leave cedar, hemlock and white pine.										
Total Acres.....		90								

Covertime & Treatment Map

Legend

- | | |
|--------------------------|----------------------------|
| — Miris Corners | ■ A - Aspen |
| - - Poor Dirt Roads | ■ C - Northern White Cedar |
| - - - Closed Roads | ■ D - Treed Bog |
| ⋯ Trails | ■ E - Swamp Hardwoods |
| ☐ Snowmobile Trails | ■ F - Upland Spruce or Fir |
| — Water Features | ■ H - Hemlock |
| ☐ Stand Boundary | ■ L - Lowland Brush |
| ▨ 100 - Final Harvest | ■ M - Northern Hardwoods |
| ▩ 200 - Seed Tree | ■ N - Marsh |
| ▧ 300 - Shelterwood-seed | ■ Q - Mixed Swamp Conifers |
| ▦ 400 - Thinning | ■ S - Black Spruce Swamp |
| ▤ 800 - Selection | ■ W - White Pine |
| | ■ Z - Water |





Compartment 079
 T47N, R08W, Sec. 19, 20, 21
 County: Luce
 Unit: Newberry
 YOE: 2011
 Acres: 1,342 GIS Calculated
 Stand Examiner: Ben Travis
 Map Revised: 11/02/09
 Map Phase: Pre-Review



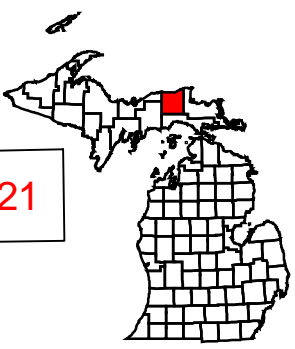
Compartment 079
 T47N, R08W, Sec. 19, 20, 21
 County: Luce
 Unit: Newberry
 YOE: 2011
 Acres: 1,342 GIS Calculated
 Stand Examiner: Ben Travis
 Map Revised: 11/02/09
 Map Phase: Pre-Review

Dedicated & Proposed Special Conservation Area Map



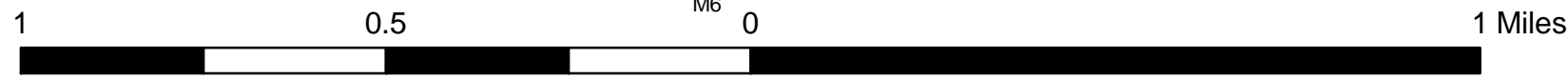
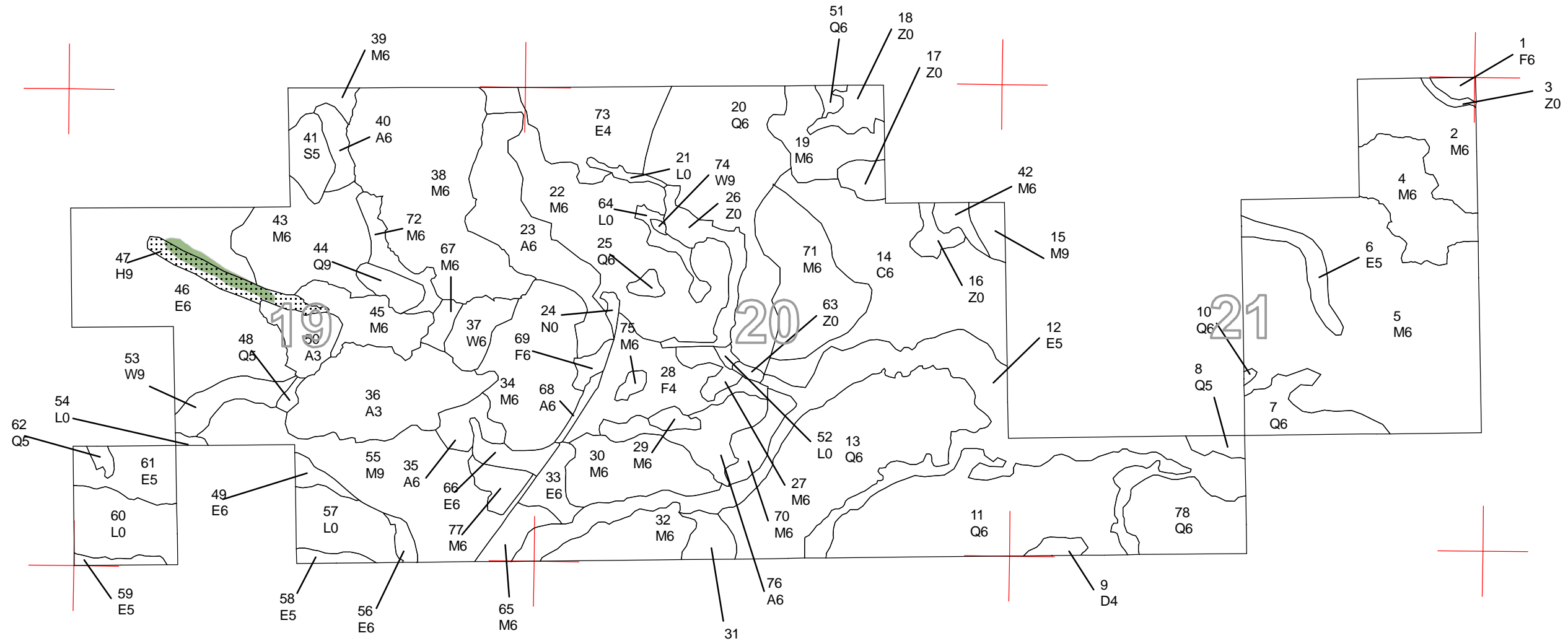
Legend

-  Miris Corners
-  Stand Boundary
-  Proposed SCA
-  Potential Old Growth Stands

Dedicated Special Conservation Areas



19
20
21

46°28'0"N

46°28'0"N

46°27'0"N

46°27'0"N

85°22'0"W

85°21'0"W

85°20'0"W

85°19'0"W

85°18'0"W

85°22'0"W

85°21'0"W

85°20'0"W

85°19'0"W

85°18'0"W



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	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.