Compartment Review Presentation

Newberry Forest Management Unit

Compartment 137
Entry Year 2016
Acreage: 3,928
County Luce
Management Area: Whitefish Vermillion Point

Revision Date: 07/29/2014

Stand Examiner: Jason Tokar

Legal Description:

T50N R7W Sections 5, 6, 7, 8, 18
T50N R8W Sections 1, 11, 12, 13, 14, 15

Identified Planning Goals:

This compartment is comprised of the newly aquired Crisp Point property. Timber management, wildlife habitat and protection of natural communities within the compartment are equally important management goals. Treatments prescribed will help maintain forest productivity, forest health, species diversity, and age class diversity and continue to enhance the quality of the wildlife habitat. Protection of the natural communities associated with the sensitive dune systems and the Lake Superior shoreline is an essential goal within the compartment.

Soil and topography:

The major soil series within the compartment boundary are Sporley silt loam, Wallace sand, Pence very fine sand loam, Paquin sand, Alcona loamy very find sand, Gaastra-Gogomain-Ingalls complex, Markey and Carbondale mucks. Other soil types include Deer Park sand, Liminga-Alcona complex, Kalkaska sand, Halfaday sand, Rousseau fine sand, Roscommon muck, Croswell sand. Topography ranges from wet, lowlands to fairly steep ridges ranging from 15-60% slopes.

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

The compartment consists of one large, contiguous block of recently aquired State land. State land borders the comparment to the west. To the south is private industrial land and to the east is a mix of small private land owners and small State parcels. Development in the area is minimal. Crisp Point Lighthouse is located just outside the western boundary of the compartment. Other development in the area would include small cabins and camps on private land. Land use is mainly recreational in the forms of hunting, fishing and ORV riding.

Unique Natural Features:

The compartment contains 12,200 feet of Lake Superior shoreline as well as Browns Lake and Browns Creek. MNFI lists the potential for various sensitive flora and fauna associated with the shoreline and adjacent natural communities. A portion of the large hardwood complex (Stand 8) has unique topographical characteristics with slopes ranging from 15-35% and numerous seasonal drainages.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

The compartment includes a number of special management area designations, associated with the Lake Superior shoreline and adjacent areas as well as other sensitive areas within the compartment. Several ERA's (Mesic Northern Forest, Sand and Gravel Beach, Interdunal Wetland, Emergent marsh), and an HCVA (Piping Polver habitat). An SCA is proposed (natural area) to connect the already existing SCA's in the compartments adjacent to the east and west, along the Lake Superior shoreline. All management within the compartment will follow all guidelines associated with those designations.

Watershed and Fisheries Considerations:

Fisheries Values: Poor
Fisheries Concerns: Browns Lake is located within the compartment. Also a small tributary flows to Browns Lake from the eastern portion of the compartment. Browns Lake has not had any formal survey conducted there, but a winter limnological survey of the water column found dissolved oxygen unsuitable for most game species. It is likely that the lake experiences frequent winterkills due to the long periods of ice cover and heavy snow. Any treatments prescribed near the waterbodies should use standard BMP’s.

Wildlife Habitat Considerations:

Compartment 137 lies in the Grand Maris Sandy End Moraine and Outwash ecological subsubsection and in the Deer Park

Management Area along Lake Superior shoreline. American marten, Kirtland's warbler, piping plover and red crossbill are featured species in the compartment. The Lake Superior shoreline is the northern border of the compartment and there are several lakes and creeks in the compartment. The bulk of the compartment is northern hardwoods with significant components of lowland mixed types and mixed conifers.
Maintaining species and size class diversity is important in hardwood stands that are thinned. Wildlife objectives will be achieved by the retention of conifers, hard and soft mast producing trees, wildlife den and nest trees and snags in hardwoods stands. White-tailed deer, fisher, black bear, and American marten, are noteworthy wildlife species using this compartment.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine (lake) clay, silt, sand and gravel and minor end moraine of coarse-textured till. There is insufficient data to determine the glacial drift thickness. The Precambrian Jacobsville Sandstone subcrops below the glacial drift. The Jacobsville has been used as a building stone in the past. A gravel pit is located to the south and there should be some potential in the uplands. There is no economic oil and gas production in the UP.

Vehicle Access:

Primary access to the compartment is from the west via County Road 412 (Luce County) and the two track road which also doubles as the snowmobile trail. This road runs through the compartment and out to the south eventually connecting through to West Bear Lake Road in Chippewa County. There is a small network of two track roads that provides additional access to the north and western portions of the compartment. Access from the east is limited by any existing roads crossing private land.

Survey Needs:

Survey needs for proposed management activities would include possible corner establishment along the west side of Sections 8 and 17, T50N R7W, Chippewa County. Other survey concerns would include property boundary delineation around the small private parcels located on Browns Lake.

Recreational Facilities and Opportunities:

Recreational facilities within the compartment consist of the groomed sknowmobile trail (Trail #8) which runs through the western half of the compartment. Crispt Point Lighthouse is located just outside of the compartment to the west. Other recreational opportunities would include hunting, fishing (Browns Lake), ORV riding, sightseeing and berry picking.

Fire Protection:

Potential for large fire growth is low because of the dicidious covertypes. Access to this compartment is good in some areas and others will be challenging because of drainages and hilly country. Suppression tactics may need to be modified. Risk to private property would be low.

Additional Compartment Information:

This compartment encompasses the recent Crisp Point acquisition.

The following reports from the Inventory are attached:

- **Total Acres by Cover Type and Age Class**
- **Cover Type by Harvest Method**
- **Proposed Treatments – No Limiting Factors**
- **Proposed Treatments – With Limiting Factors**
- **Stand Details (Forested and Nonforested)**
- **Dedicated and Proposed Special Conservation Areas**
- **Site Condition Details**

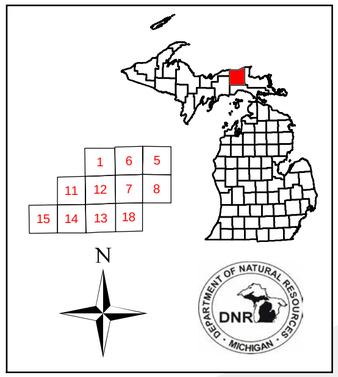
The following information is displayed, where pertinent, on the attached compartment maps:

- **Base feature information, stand boundaries, cover types, and numbers**
- **Proposed treatments**
- **Site condition boundaries**
- **Details on the road access system**

Cover Type & Treatment Map

Compartment: 137
T50N R07W Sections 5-8, 18
T50N R08W Sections 1, 11-15, 24
County: Luce
Unit: Newberry
Management Area: Whitefish Vermillion Point
YOE: 2016
Acres: 3,928 GIS Calculated
Examiner: Jason Tokar
Map Revised: 08/20/2014
Map Phase: Pre-Review

Stand # 23
Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code



Legend

- Miris Corners
- Remonumented Section Corners
- Gate
- Berms
- Cabin
- Seasonal Dwelling
- Mining
- Sign
- Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)
- Treatments w/ Site Condition

Forest Stands

Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

- 320 - Upland Shrub
- 500 - Water
- 622 - Lowland Shrub
- 710 - Sand, Soil

Stand Boundary Map

Compartment: 137
T50N R07W Sections 5-8, 18
T50N R08W Sections 1, 11-15, 24
County: Luce
Unit: Newberry
Management Area: Whitefish Vermillion Point
YOE: 2016
Acres: 3,928 GIS Calculated
Examiner: Jason Tokar
Map Revised: 08/20/2014
Map Phase: Pre-Review

Stand # 23 — Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code

Legend
- Miris Corners
- Remonumented Section Corners
- PLSS Corner
- Gate
- Berms
- Cabin
- Seasonal Dwelling
- Mining
- Sign
- Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Snowmobile Trail
- Stream
- Intermittent Stream
- Stand Boundaries

Forest Stands
Level 3
411 - Northern Hardwood
413 - Aspen Types
419 - Mixed Upland Deciduous
423 - Other Upland Conifers
429 - Mixed Upland Conifers
612 - Lowland Coniferous Forest
613 - Lowland Mixed Forest

Non-Forest Stands
Level 3
320 - Upland Shrub
500 - Water
622 - Lowland Shrub
710 - Sand, Soil

1 0.5 0 1 Miles

Special Conservation Areas & Site Conditions Map

Compartment: 137
T50N R07W Sections 5-8, 18
T50N R08W Sections 1, 11-15, 24
County: Luce
Unit: Newberry
Management Area: Whitefish Vermillion Point
YOE: 2016
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Stand # 23
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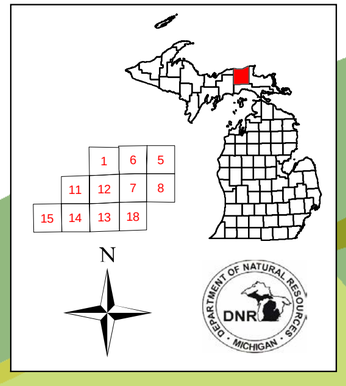
(412)0) - A7
Level 3 OI
Level 4 Code
Cover Type Code



Crisp Point/Browns Lake Proposed Natural Area

3G - 002
2D - 006
3J - 007
3J - 007
5C - 004
3K - 010
3B - 009

Legend

- Miris Corners
- Remonumented Section Corners
- Stand Boundaries

Site Condition Available

- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)

Site Condition Type

Available Factors W/ Constraints

- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2D: Portable Bridge Needed (Dept. bridge will be adequate)

Unavailable Factors

- 3B: Threatened, endangered, and special concern species/communities
- 3G: Other Influence zones - See comments
- 3J: Water quality / BMPs (stream, river, or lake)
- 3K: Rare or unique landforms

Reviewable SCAs

Proposed SCA's

- Proposed SCA
- SCA Removal

Dedicated Special Conservation Areas

- Cold Water Streams
- Cold Water Lakes
- Critical Dunes
- Critical Coastal Habitat (Piping Plover)
- Non-Dedicated Natural Areas and National Natural Landmarks

1 0.5 0 1 Miles

85°18'0"W 85°17'0"W 85°16'0"W 85°15'0"W 85°14'0"W 85°13'0"W 85°12'0"W
46°45'0"N 46°44'0"N 46°43'0"N

Report 1 – Total Acres by Cover Type and Age Class

Newberry Mgt. Unit **Compartment 137 Year of Entry 2016**

Jason Tokar : Examiner

Age Class

	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 +	Uneven Age	Total
Aspen	0	0	0	0	0	0	0	0	260	0	0	0	0	0	**260**
Lowland Conifers	0	0	0	0	0	0	0	0	166	231	183	0	0	0	**580**
Lowland Mixed Forest	0	0	0	0	0	0	0	0	24	0	0	0	0	0	**24**
Lowland Shrub	96	0	0	0	0	0	0	0	0	0	0	0	0	0	**96**
Mixed Upland Deciduous	0	0	0	0	0	0	0	158	442	0	0	0	0	0	**601**
Northern Hardwood	0	0	0	0	0	0	0	106	1842	135	0	0	0	0	**2083**
Sand, Soil	70	0	0	0	0	0	0	0	0	0	0	0	0	0	**70**
Upland Conifers	0	0	0	0	0	0	0	23	0	0	0	0	0	0	**23**
Upland Shrub	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Upland Spruce/Fir	0	0	0	0	0	0	0	126	0	39	0	0	0	0	**165**
Water	23	0	0	0	0	0	0	0	0	0	0	0	0	0	**23**
Total	**192**	**0**	**0**	**0**	**0**	**0**	**0**	**413**	**2734**	**405**	**183**	**0**	**0**	**0**	**3928**

Report 2 – Proposed Treatment Summaries

Newberry Mgt. Unit
Year of Entry 2016

Compartment 137
Total Compartment Acres: 3,928

Acres by Treatment Type

Commercial Harvest - 676	Tree Planting - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen Types	81	0	0	0	0	0	**81**
Mixed Upland Deciduous	55	0	0	0	0	0	**55**
Northern Hardwood	0	501	0	0	0	0	**501**
Other Upland Conifers	39	0	0	0	0	0	**39**
Total	**174**	**501**	**0**	**0**	**0**	**0**	**676**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
2	42137002-Cut	27.8	4112 - Maple, Beech, Cherry Association	High Density Pole	85	111-140	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Selection harvest. Reduce overall stand BA to 80 sq ft on average. Remove up to 80% of the beech in the stand. Retain most of the conifer. Extent of harvestable area is limited by topography to the east.

Other Comments:

Next Steps: Monitor the success of regeneration the next treatment period. Acceptable regeneration is maple and other northern hardwooods species which occur in the Maple, Beech, Cherry Association.

Proposed Start Date: 10/01/2015

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
4	42137004-Cut	55.3	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	78	81-110	Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves. Remove all red maple, birch, beech, balsam ans aspen. Retention to be 5% of total stand acreage. Individual tree retention of 1 hard maple and 1 large diameter white spruce/acre where present. Retain all hemlock and some supercanopy trees of various species Incorporate specifications to protect advanced regeneration.

Other Comments:

Next Steps: Monitor the success of regeneration the next treatment period. Acceptable regeneration is a mix of red maple, hard maple, balsam, spruce, aspen, birch, white pine.

Proposed Start Date: 10/01/2015

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	42137005-Cut	311.9	4111 - S.Maple, Hard Mast Association	High Density Log	85	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Specs: Selection harvest. Reduce overall stand BA to 80 sq ft on average. Remove up to 80% of the beech in the stand. Retain much of the conifer. Lower residual BA in areas of advanced maple regeneration. There will be pockets/areas where no marking will be required (BA already in the acceptable range).

Other Comments: Abandoned roads will require brushing. Do not allow dozing piles of saplings.

Next Steps: Monitor the success of regeneration the next treatment period. Acceptable regeneration is hard maple with yellow birch, beech and red maple.

Proposed Start Date: 10/01/2015

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
9	42137009-Cut	62.3	4139 - Aspen, Mixed Deciduous	High Density Log	85	111-140	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves. Retention in patches and not to exceed 3% of total stand acreage so as not to hinder thick aspen regeneration. Retain any conifer present.

Other Comments: Access to be from the west via old logging roads.

Next Steps: Monitor the success of regeneration the next treatment period. Acceptable regeneration is aspen with hard maple, yellow birch and red maple.

Proposed Start Date: 10/01/2015

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
16	42137016-Cut	18.2	4139 - Aspen, Mixed Deciduous	High Density Log	85	111-140	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves. Retention in patches and not to exceed 3% of total stand acreage so as not to hinder thick aspen regeneration. Retain any conifer present.

Other Comments: Access to be from the south via old logging roads.

Next Steps: Monitor the success of regeneration the next treatment period. Acceptable regeneration is aspen with hard maple, yellow birch and red maple.

Proposed Start Date: 10/01/2015

Total Treatment Acreage Proposed: 475.6

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
19	42137019-Cut	38.6	42340 - Upland Spruce/Fir	High Density Log	91	171-200	Harvest	Clearcut with Reserves	42340 - Upland Spruce/Fir	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves. Retain 1-2 large white spruce per acre as well as buffer along headwaters of Browns Creek for retention.

Other Comment: Access likely will have to be via old road from the west. Bridge will be needed at the old crossing. Private land to the east is questionable for logging access.

Next Steps: Monitor the success of regeneration the next treatment period. Acceptable regeneration is white spruce and balsam with components of red maple, white birch, white pine.

Proposed Start Date: 10/01/2015

Limiting Factor: 2D: Portable Bridge Needed (Dept. bridge will be adequate)

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
21	42137021-Cut	135.2	4110 - Sugar Maple Association	High Density Pole	90	111-140	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Specs: Selection harvest. Reduce the BA to 80-90. Concentrate on best quality trees for residual. In the portion of the stand that was recently thinned, mark through lightly in areas where the BA is above 90 sq ft. Leave conifer, including all hemlock. Protect any pockets of understory conifer.

Other Comment: Access will likely be from the west via old road. Bridge will be needed to cross Browns Creek. Access through the private to the east is questionable for logging.

Next Steps: Monitor the success of regeneration the next treatment period. Acceptable regeneration is hard maple with yellow birch and minor components of red maple and beech.

Proposed Start Date: 10/01/2015

Limiting Factor: 2D: Portable Bridge Needed (Dept. bridge will be adequate)

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
27	42137027-Cut	26.2	4112 - Maple, Beech, Cherry Association	High Density Log	85	111-140	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Selection harvest. Residual BA of 80 in areas of higher quality, 70 sq ft in lower quality red maple areas. Retain all hemlock and a good conifer component. Protect pockets of understory conifer.

Other Comment:

Next Steps: Monitor the success of regeneration the next treatment period. Acceptable regeneration is maple and other northern hardwooods species occuring in the Maple, Beech, Cherry Association.

Proposed Start Date: 10/01/2015

Limiting Factor: 2D: Portable Bridge Needed (Dept. bridge will be adequate)

Total Treatment Acreage Proposed: 200.0

Report 5 – Site Conditions

Newberry Mgt. Unit | **Compartment 137**

Jason Tokar : Examiner | **Year of Entry 2016**

Availability for Management

Total Acres	Acres Available	Acres Not Available		Dominant Site Conditions No	5C	3K	3J	3G	3B	2D
260	260		**Aspen**	81	179					
580	231	349	**Lowland Conifers**		231			166	183	
24		24	**Lowland Mixed Forest**					24		
601	480	120	**Mixed Upland Deciduous**	480				120		
2083	1508	575	**Northern Hardwood**	620	726	560		15		161
23	23		**Upland Conifers**	23						
165	39	126	**Upland Spruce/Fir**				126			39
3,735	2,540	1,195	Total Forested Acres	1,204	1,136	560	126	325	183	200
	68%	32%	Relative Percent							

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond	Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002		**Not Available**	**3G: Other Influence zones - See comments**	491				
	Comments: Proposed natural area along recessional beach lines, dunes, and adjacent areas of Lake Superior. Connect the the existing proposed natural area(s) in Comp 51 to the west and Comp 53 to the east.							
004		**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	1,137				
	Comments: Hold this stand for 10 years to improve the age class diversity of the aspen in the area.							
006		**Available**	**2D: Portable Bridge Needed (Dept. bridge will be adequate)**	200	2B: Unknown if access through adjacent landowner(s) is possible			
	Comments:							

007	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	126	2F: Too steep

Comments:

009	**Not Available**	**3B: Threatened, endangered, and special concern species/communities**	183	1C: Other dept or div proc/practices

Comments:

Potential ERA located within the boundaries of the stand. Mesic Northern Forest calssification.

010	**Not Available**	**3K: Rare or unique landforms**	561	2F: Too steep

Comments:

Numerous steep slopes, seasonal drainages. Slopes range from 15-35%. Unique area because of the topography. Harvesting would be difficult, but site conditions do not eliminate the possibility of future management if agreed to.

Report 6 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Crisp Point/Browns Lake Proposed Natural Area	Contiguous Resource Area		**SCA**	490.8

Comments

Proposed natural area along recessional beach lines, dunes, and adjacent areas of Lake Superior. Connect the the existing proposed natural area(s) in Comp 51 to the west and Comp 53 to the east.

Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

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

Conservation Area	Type	Description
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
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	Non-Dedicated Natural Areas and National Natural Landmarks	This category is comprised of those Natural, Wilderness and Wild Areas that have been nominated or proposed for legal dedication, but for which legal dedication by legislature has not occurred. The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.
HCVA	Critical Dunes	Critical dune areas are established via the public legislative process, and governed by Part 353, Sand Dune Protection and Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the Michigan Department of Environmental Quality (DEQ). The current distribution of designated critical dunes is established by the DEQ 1989 Atlas of Critical Dune Areas.
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.
HCVA	Legally dedicated Natural Areas, Wilderness or Wild Areas	The nomination process is defined by Part 351, Wilderness and Natural Areas, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The program is administered by the DNR. Nominations require the submittal of a Natural Areas Nomination Packet to the DNR. This is an active program, with proposed sites in various stages of review. Final dedication of nominated Natural, Wilderness and Wild Areas is accomplished through legislative action.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	124.1	82	51-80	Stand was cut through approximately 30 years ago. Residual red maple, hemlock, white pine, hard maple, white spruce. Hemlock was retained mainly in patches. Smaller diameter (pole/sapling) of numerous species...red maple, hard maple, beech, yellow birch, balsam, paper birch, some spruce and hemlock. Very mixed stand, both is species composition and age/size class.
2	4112 - Maple, Beech, Cherry Association	High Density Pole	27.8	85	111-140	Primarily a hard maple stand with red maple and components of beech and yellow birch. Advanced regeneration of maple, beech and some yellow birch throughout. Areas of sawlog quality hard maple and red maple. Areas with slightly lower BA and thicker sub canopy. Most of the beech is dying or dead.
3	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	103.1	75	81-110	Mixed stand of red maple, balsam, hard maple, white spruce, white pine, white birch, aspen, Lesser components of white pine, birch and aspen. Low quality white birch. Red maple has some weak tops/dieback. Hard maple is decent quality in large poles and small sawlogs. Some beech in canopy but most is dead or dying. 4-5 stick balsam. Large diameter white spruce. Lots of 2-4 inch red maple, birch and balsam in the understory. This stand will be retained for 10 years and then harvested to increage the age class diversity in the area.
4	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	55.3	78	81-110	Mixed stand of red maple, balsam, hard maple, white spruce, white pine, white birch, aspen, Lesser components of white pine, birch and aspen. Low quality white birch. Red maple has some weak tops/dieback. Hard maple is decent quality in large poles and small sawlogs. Some beech in canopy but most is dead or dying. 4-5 stick balsam. Large diameter white spruce. Lots of 2-4 inch red maple, birch and balsam in the understory.
5	4111 - S.Maple, Hard Mast Association	High Density Log	311.9	85	111-140	Primarily a hard maple stand with red maple and components of beech and yellow birch. Trace of white birch and balsam in the canopy. Occasional hemlock. Advanced regeneration of maple, beech and some yellow birch throughout. Areas of sawlog quality hard maple and red maple. Areas with slightly lower BA and thicker sub canopy. Most of the beech is dying or dead.
6	4115 - Y.Birch, Hemlock NH	High Density Pole	88.0	76	51-80	Stand was cut through approximately 30 years ago. Residual red maple, hemlock, white pine, hard maple, Hemlock was retained mainly in patches. Smaller diameter (pole/sapling) of numerous species...red maple, hard maple, beech, yellow birch, balsam, paper birch, cherry and some spruce. Very mixed stand, both is species composition and age/size class. Very similar to the stand adjacent to the west, but less of a conifer component in this stand.
7	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	48.6	82	51-80	Stand is on ridge that runs down to beach line. Poorer quality. Mostly maple with some white birch, balsam and spruce. Large white pine. Lesser component of aspen. Stand lies on the sensitive recessional beach soils leading to the shore of Lake Superior. Stand extends into Comp 51 adjacent to the west, which is designated as a proposed SCA - natural area. Leave this stand in its natural state due to the location and the sensitive nature of the soils, slope, etc. ORV issues within the stand...trail coming from teh south.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
8	4112 - Maple, Beech, Cherry Association	High Density Log	560.5	85	111-140	Primarily a hard maple stand with red maple and components of beech and yellow birch. Trace of white birch and balsam in the canopy. Occasional hemlock. Advanced regeneration of maple, beech and some yellow birch throughout. Many areas of sawlog quality hard maple and red maple. Areas with slightly lower BA and thicker sub canopy. Most of the beech is dying or dead. This stand has considerable topography and seasonal drainages associated with it, making management challenging. Stand is bounded by roads.
9	4139 - Aspen, Mixed Deciduous	High Density Log	62.3	85	111-140	Large diameter, mature aspen with hard maple, yellow birch and a lesser component of red maple. Mortality showing in the aspen. Stand was separated out from the large acreage hardwood stand adjacent to the south to manage for aspen in the area. This stand will be managed this entry year to begin aspen management and increase diversity in the area.
11	4139 - Aspen, Mixed Deciduous	High Density Log	179.1	81	111-140	Large diameter, mature aspen with hard maple, yellow birch and a lesser component of red maple. Mortality showing in the aspen. Stand was separated out from the large acreage hardwood stand adjacent to the south to manage for aspen in the area. This stand will be retained for 10 years and then harvested to promote age class diversity in the aspen component in the area.
13	4112 - Maple, Beech, Cherry Association	High Density Log	726.5	85	111-140	Primarily a hard maple stand with red maple and components of beech and yellow birch. Trace of white birch and balsam in the canopy. Occasional hemlock. Advanced regeneration of maple, beech and some yellow birch throughout. Many areas of sawlog quality hard maple and red maple. Areas with slightly lower BA and thicker sub canopy. Most of the beech is dying or dead. This portion of the larger hard maple complex consists of areas of varying BA's. Portions could be managed and other areas are not ready for management. Some areas may be difficult to manage due to topography and drainage areas. Southeastern portion of the stand could be managed by selection harvest, possibly in 10 years.
15	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	269.6	86	81-110	Very mixed stand of red maple, white birch, balsam, white spruce, cedar, Lots of species variability. Mostly upland but stand includes swales of low ground with cedar, spruce and black ash. Some areas are wet. Birch is showing dieback. Stand surrounds Brown's Lake.
16	4139 - Aspen, Mixed Deciduous	High Density Log	18.2	85	111-140	Large diameter, mature aspen with hard maple, yellow birch and a lesser component of red maple. Mortality showing in the aspen. Stand was separated out from the large acreage hardwood stand adjacent to the south to manage for aspen in the area. This stand will be managed this entry year to begin aspen management and increase diversity in the area.
17	42340 - Upland Spruce/Fir	High Density Pole	93.3	75	81-110	Mixed stand of spruce, balsam, red maple, white birch, white pine on both sides of Brown's Creek. Stand provides a corridor for the creek. Steep topography near the headwaters of the creek.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4112 - Maple, Beech, Cherry Association	High Density Pole	52.7	85	81-110	East end of the stand is primarily red maple, multiple stems, lower quality. Component of balsam. West end has more hard maple with some yellow birch. Primarily a pole size stand throughout. Stand is located below the steep "bluff"/ridge. Browns Creek runs through the western portion of the stand. Some flooded timber along the creek. Pretty thick understory.
19	42340 - Upland Spruce/Fir	High Density Log	38.6	91	171-200	Large diameter white spruce with pole size balsam, red maple, white birch and white pine. Pockets of white birch and red maple. White spruce is mature. Mortality and blowdown beginning in spruce and balsam. Old road runs east/west through the stand, access from the west if use a portable bridge.
20	6124 - Lowland Spruce-Fir	High Density Pole	165.7	82	81-110	Stand consists of mostly lowland areas with ridges of higher ground mixed in. Tough stand to delineate or type. Mix of various species. Stand continues across compartment boundaries to both the east and west. Previous inventory in both directions has designated a proposed SCA of natureal area. Stand is adjacent to Lake Superior shoreline. Maintain stand in it's natural state. No management concerns or potential.
21	4110 - Sugar Maple Association	High Density Pole	135.2	90	111-140	Nice stand of sugar maple, with a minor componet of yellow birch. Eastern and southwestern portions of the stand are primarily pole size. Western portion of the stand was thinned through recently (within last decade?). Portion that was thinned through has slightly larger diameters. Appears that sawlogs were removed. BA is still high in spots. Good quality and form throughout the stand.
23	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	183.4	100	111-140	Stand has been identified as a potential ERA, Mesic Northern Forest. Stand consists of lower areas dominated by hemlock, cedar, spruce and small red maple. Slightly higher ridges consist of red maple, yellow birch and hemlock. Drainages throughout the stand. The closed-canopy (75-95%) is dominated by Hemlock with canopy associates including yellow birch, red maple, cedar and white pine. The scattered subcanopy includes hemlock, red maple, balsam and cedar. Several smaller stands of "Emergent Marsh" included within the stand boundaries, and have been designated as potential ERA's
24	42340 - Upland Spruce/Fir	High Density Pole	33.0	75	81-110	Mixed stand of spruce, balsam, red maple, white birch, white pine on both sides of the small creek. Stand provides a corridor for the creek.
25	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	230.9	95	111-140	Stand consists of lower areas dominated by hemlock, cedar, spruce and small red maple. Slightly higher ridges consist of red maple, yellow birch and hemlock. Stand is similar to the adjacent stand to the west, however contains higher component of red maple and lower component of hemlock. Subcanopy of red maple and balsam with some yellow birch, hemlock, spruce and cedar. Areas of lower ground dominated by black spruce, cedar and hemlock. Old road system, stand has been harvested in the past. Adjacent stand to the west has been designated as a potential ERA.
27	4112 - Maple, Beech, Cherry Association	High Density Log	26.2	85	111-140	Mainly hard maple in the northern portion of the stand. Red maple and hard maple mix through out the rest of the stand. Red maple is multiple stem and low quality in spots.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
28	6139 - Mixed Lowland Forest	High Density Pole	24.5	80		
29	4112 - Maple, Beech, Cherry Association	High Density Pole	16.2	85	81-110	Small stand of low quality red maple poletimber. Inclusions of balsam. Areas of lower ground.
30	4113 - R.Maple, Conifer	High Density Pole	17.6	70		
31	4113 - R.Maple, Conifer	High Density Pole	14.7	85	81-110	Mixed hardwood poletimber with scattered w birch and associated larger diameter w pine. Spruce component, balsam sapling understory. Stand continues across the compartment boundary to the east. Adjacent stand was designated for potential SCA - natural area.
33	429 - Mixed Upland Conifers	High Density Pole	22.9	77		
34	4110 - Sugar Maple Association	High Density Pole	28.9	80		
35	4112 - Maple, Beech, Cherry Association	High Density Pole	77.0	85		

Report 9 – Nonforested Stands

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
10	3205 - Mixed Upland Shrub	3.0	No	Unspecified	Open stand with ash saplings thorughout, averaging 10 ft tall. Stand continues west into Compartment 42051. Seasonal flooding of the stand in the spring.
12	50 - Water	23.1	No	Unspecified	Portion of Browns Lake located in Luce County.
14	710 - Sand, Soil	69.9	No	Unspecified	Lake Superior beach and shoreline
22	6229 - Mixed lowland shrub	7.7	No	Unspecified	Stand is flooded this year (2014) due to high water levels.
26	6229 - Mixed lowland shrub	25.6	No	Unspecified	Some areas of "marsh" characteristics but overall the stand is a lowland brush stand. Ponding from beaver activity thorughout. Small drainage.
32	6229 - Mixed lowland shrub	62.6	No	Unspecified	