Compartment Review Presentation

Sault Ste. Marie Forest Management Unit

Compartment 20
Entry Year 2016
Acreage: 3,748
County Chippewa
Management Area: Huron Patterned Outcrop

Revision Date: 07/02/2014

Stand Examiner: Josh Brinks

Legal Description:

T41N R03E, Sections 1-5, 9-14, T 42N R03E Section 25

Identified Planning Goals:

To manage various timber types in a “sustainable” manner using “best management practices” (BMPs) for the enhancement of wildlife and vegetative species. Currently forest management is taking place in the hardwoods to salvage beech trees and in the older aspen/birch covertypes to promote an early successional forest. Allow for several different recreational activities in an aesthetically pleasing environment. Provide adequate state campground information, facilities, and safety at Detour State Campground. Properly sign and maintain recreational trails through out compartment.

Soil and topography:

Topography is low and flat with scattered ridges and raised areas. The compartment is a Markey-Kinross-Croswell association. The Markey soils in this association are in the broad depressions and drainage ways. Kinross soils are on the low plains and in swales and depressions. Both of these soils are frequently ponded. Croswell soils are on the broad plains and ridges (USDA Soil Conservation Service).

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

The surrounding private parcels are primarily recreational, utilized on a seasonal basis. Other than a couple new structures (small homes) very little new development has occurred since the last inventory.

Unique Natural Features:

The wooded dune and swale complex is found here. According to Michigan Natural Features Inventory (MNFI) this community of wetland swales and upland beach ridges is found in embayments and on large spits along the shoreline of all of the Great Lakes. Many of these complexes began forming approximately 12,000 years ago. Because they contain a unique assemblage of physiographic, soil, and vegetative components, and provide a high quality habitat for numerous shoreline animal species, this complex is considered a distinct natural community to Michigan.

Archeological, Historical, and Cultural Features:

There are known concerns within the compartment. All proposed management activities have taken these concerns into consideration.

Special Management Designations or Considerations:

The bald eagle (Hailiaeetus leucocephalus), osprey (Pandion hailaetus), common loon (Gavia immer), and piping plover (Charadrius melodus) have been identified in surrounding and similar areas. The compartment has also been identified as a possible habitat type for several threatened and/or endangered plant species.

Watershed and Fisheries Considerations:

Albany Creek, Joe Straw Creek, and an unnamed creek can be found in the compartment along with Cranberry Lake and Cranberry Flooding. This compartment also contains a portion of Caribou Lake. Both Albany Creek and the unnamed coastal tributary are designated trout streams, and Albany Creek in particular supports several species of lake run fish. All cutting should be designed to minimize the area’s desirability to beaver near these streams. Standard BMPs should also be applied in all areas.

Wildlife Habitat Considerations:

Compartment 26 is located in the Huron Patterned Outcrop Management Area. Much of the compartment is dominated by cedar and other lowland conifers, and northern hardwoods. A large northern hardwood stand dominates much of the center of the compartment. Beech here has been impacted heavily by beech bark disease. A thinning targeting beech was conducted due to the declining trees, and will help to diversify the stand. Hardwoods will continue to provide habitat for hawks, woodpeckers, and other cavity nesters. Cranberry Lake and the Cranberry Lake Wildlife Flooding are located on the east end. The Cranberry Lake Wildlife Flooding contained approximately 60 acres of open water habitat prior to decommissioning of the dam in 2013. The dam was decommissioned due to failure of the control structure which

threatened the dam. The control structure was removed and replaced with a constructed stream bed spillway to allow natural flow and reduce maintenance needs at the site. The flooding remains, but water levels are reduced from the high levels maintained by the control structure and dam. It and the adjacent lake will continue to provide habitat for beaver, waterfowl, and other wetland wildlife.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine sand & gravel and peat & muck at times thin to discontinuous over the bedrock. The glacial drift thickness varies between 10 and 50 feet. The Silurian Engadine Group subcrops below the glacial drift. The Engadine is quarried for stone/dolomite six miles to the east on Drummond Island. A gravel pit is located to the northeast and there could be some potential. There is no current economic oil and gas production in the UP.

Vehicle Access:

Access to the compartment is not a concern. State Highways M-134 and M-48 both intersect the compartment. Cranberry Lake road and Albany Creek road cross through the interior. The snowmobile and ORV trails provide additional access to the interior. There is a locked gate located on the east side of the bridge which crosses the unnamed creek. Both bridges in this compartment will not support the weight of a log truck.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

The small creeks are frequented by local fisherman during different seasonal runs. Deer and small game hunting activity is prevalent throughout the compartment, Cranberry Lake and Cranberry Flooding provide hunting opportunities for waterfowl. Snowmobiles and ORV trails meander throughout the compartment. Detour State Campground is also located in the compartment. It has 21 “rustic” sites and is accessible by the water.

Fire Protection:

The majority of current cover types are not prone to frequent fire activity. Access for fire protection is adequate with plenty of water sources.

Additional Compartment Information:

Mable Annette Island, found in Lake Huron is also associated with this compartment. Michigan Department of Transportation manages a good portion of the shoreline along M-134.

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**

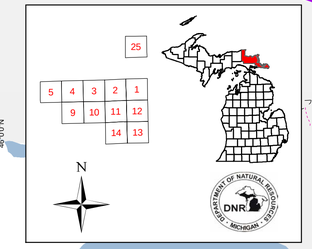
The following information is displayed, where pertinent, on the attached compartment maps:

- **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: 020
T41N R03E Sections 1-5, 9-14
T42N R03E Section 25
County: Chippewa
Unit: Sault Ste. Marie
Management Area: Huron Patterned Outcrop
YOE: 2016
Acres: 3,748 GIS Calculated
Examiner: Josh Brinks
Map Revised: 08/05/2014
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
- Bridges
- PLSS Corner
- ORV Trails
- Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Pipeline
- Powerline
- ORV Trail
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Selection (Group, Single Tree)
- Other Harvest - See Comments

Forest Stands

Level 3

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

Non-Forest Stands

Level 3

- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland

1 0.5 0 1 Miles

84°7'0"W 84°6'0"W 84°5'0"W 84°4'0"W 84°3'0"W 84°2'0"W 84°1'0"W 84°0'0"W 83°59'0"W 83°58'0"W
46°1'0"N 45°59'0"N 45°58'0"N 45°57'0"N

Stand Boundary Map

Compartment: 020
T41N R03E Sections 1-5, 9-14
T42N R03E Section 25
County: Chippewa
Unit: Sault Ste. Marie
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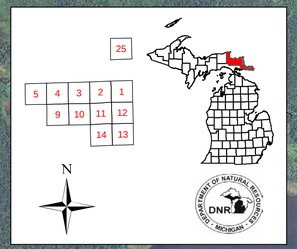

Legend

- Miris Corners
- Remonumented Section Corners
- Bridges
- PLSS Corner
- ORV Trails
- Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Pipeline
- Powerline
- ORV Trail
- Snowmobile Trail
- Stream
- Intermittent Stream
- Stand Boundaries

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

Non-Forest Stands
Level 3
122 - Road/Parking Lot
310 - Herbaceous Openland
330 - Low-Density Trees
500 - Water
622 - Lowland Shrub
623 - Emergent Wetland
629 - Mixed non-forested wetland

1 0.5 0 1 Miles

Special Conservation Areas & Site Conditions Map

Compartment: 020
T41N R03E Sections 1-5, 9-14
T42N R03E Section 25
County: Chippewa
Unit: Sault Ste. Marie
Management Area: Huron Patterned Outcrop
YOE: 2016
Acres: 3,748 GIS Calculated
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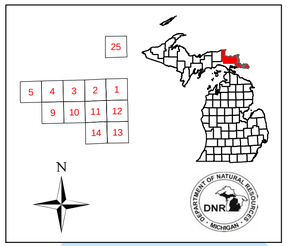

Legend

- 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
- 2I: Survey needed
- 5C: Delay treatment for age/size class diversity or exceptional site quality

Unavailable Factors
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3B: Threatened, endangered, and special concern species/communities
- 3D: Recreational / Scenic values
- 3G: Other Influence zones - See comments
- 3J: Water quality / BMPs (stream, river, or lake)

Reviewable SCAs

Proposed SCA's
- Proposed SCA
- SCA Removal

Dedicated Special Conservation Areas
- Cold Water Streams
- Cold Water Lakes
- High Priority Trout Stream Buffer
- Ecological Reference Areas
- Coastal Environmental Areas
- Critical Coastal Habitat (Piping Plover)
- Great Lakes Islands

3J - 008
3J - 007
3J - 006
2I - 012
3J - 005
3G - 003
2H - 002
2H - 013
2G - 015
2G - 015
3B - 004
3D - 009
Cranberry POG
Detour State Forest Campground

1 0.5 0 1 Miles

84°7'0"W 84°6'0"W 84°5'0"W 84°4'0"W 84°3'0"W 84°2'0"W 84°1'0"W 84°0'0"W 83°59'0"W 83°58'0"W
46°1'0"N 46°0'0"N 45°59'0"N 45°58'0"N 45°57'0"N

Report 1 – Total Acres by Cover Type and Age Class

Sault Ste. Marie Mgt. Unit **Compartment 020 Year of Entry 2016**

Josh Brinks : 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	66	74	17	14	0	0	0	0	0	18	0	0	0	0	**189**
Bog	117	0	0	0	0	0	0	0	0	0	0	0	0	0	**117**
Cedar	0	0	0	0	25	14	84	3	127	251	204	40	0	0	**747**
Hemlock	0	0	0	0	0	0	0	0	0	14	0	0	0	0	**14**
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
Low-Density Trees	15	0	0	0	0	0	0	0	0	0	0	0	0	0	**15**
Lowland Aspen/Balsam Poplar	17	0	0	0	0	0	0	0	0	0	0	0	0	0	**17**
Lowland Conifers	0	0	0	0	0	0	20	55	20	7	0	459	0	0	**560**
Lowland Deciduous	0	0	81	0	0	0	0	134	5	38	0	0	0	0	**257**
Lowland Mixed Forest	0	0	0	0	0	0	9	0	0	0	0	0	0	0	**9**
Lowland Shrub	219	0	0	0	0	0	0	0	0	0	0	0	0	0	**219**
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	25	0	0	0	0	0	**25**
Marsh	44	0	0	0	0	0	0	0	0	0	0	0	0	0	**44**
Mixed Upland Deciduous	0	0	17	0	0	0	0	192	0	79	0	0	0	0	**288**
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	32	127	0	0	0	**159**
Northern Hardwood	0	6	0	0	0	0	0	129	652	0	0	0	0	0	**787**
Upland Conifers	0	0	24	0	0	0	0	0	0	0	10	0	0	0	**34**
Upland Mixed Forest	0	0	39	59	0	0	0	0	0	20	0	0	0	0	**118**
Urban	16	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
Water	110	0	0	0	0	0	0	0	0	0	0	0	0	0	**110**
White Pine	0	0	0	0	0	0	0	19	0	0	0	0	0	0	**19**
Total	**607**	**80**	**178**	**73**	**25**	**14**	**112**	**531**	**829**	**457**	**342**	**499**	**0**	**0**	**3748**

Report 2 – Proposed Treatment Summaries

Sault Ste. Marie Mgt. Unit
Year of Entry 2016

Compartment 020
Total Compartment Acres: 3,748

Acres by Treatment Type

Commercial Harvest - 647	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
Lowland Deciduous Forest	62	0	0	0	0	0	**62**
Mixed Upland Deciduous	30	0	0	0	0	0	**30**
Northern Hardwood	0	80	0	0	0	475	**555**
Total	**92**	**80**	**0**	**0**	**0**	**475**	**647**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
19	45020019-Cut	33.9	4119 - Mixed Northern Hardwoods	High Density Log	78	51-80	Harvest	Other - Specify in Comments	411 - Northern Hardwood	Cmpt. Review Proposal

Prescription Specs: Cut all beech. Mark 1-3 per beech per acre to leave concentrating on large wolfy trees and those that look healthy.

Other Comments:

Next Steps: Follow up treatment with regen check to look at beech brush. Herbicide may need to be used to control beech brush. The stand may be a good spot to plant oak, white pine or resistant beech.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
39	45020039-Cut	21.2	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	74	81-110	Harvest	Clearcut with Reserves	6112 - Lowland Aspen	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Cut all trees that are 4" in DBH or larger. Do not cut oak, hemlock, pine, cedar, yellow birch or elm if it exists within the unit.

Other Comments: West portion of stand is currently on proposal. Look at expanding treatment to harvest entire stand at the same time.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, paper and yellow birch, white pine, spruce, fir, aspen, cedar and tamarack.

Proposed Start Date: 10/01/2010

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
39	45020039new-Cut	40.7	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	74	81-110	Harvest	Clearcut with Reserves	611 - Lowland Deciduous Forest	Cmpt. Review Proposal

Prescription Specs: Cut all deciduous 2" or more and conifer 4" or more to encourage young growth for ruffed grouse, deer, and other species. Leave all cedar. Leave a retention pocket between this treatment and the original treatment for budding trees and diversity.

Other Comments: Treatment shape has been adjusted to show the retention area.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, paper and yellow birch, aspen, white pine, spruce, fir, and cedar.

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
40	45020040-Cut	441.0	4112 - Maple, Beech, Cherry Association	High Density Log	86	81-110	Harvest	Other - Specify in Comments	411 - Northern Hardwood	Fld. Tr. Bdy.

Prescription Specs: Cut all beech except those marked with green paint. Leave 1-3 beech per acre. Allow producer to cut only operational hardwood where needed.

Other Comments:

Next Steps: Hollow up treatment with regen check to look at beech brush. Herbicide may need to be used to control beech brush. The stand may be a good spot to plant oak, white pine or resistant beech.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
42	45020042-Cut1	80.0	4111 - S.Maple, Hard Mast Association	High Density Log	76	81-110	Harvest	Single Tree Selection	411 - Northern Hardwood	Cmpt. Review Proposal

Prescription Specs: Thin stand to 80-90 basal area to encourage stand diversity. Leave all oak, cedar, pine, hemlock and yellow birch for wildlife. Mark all beech except those that look resistant to BBD and any wildlife trees. Leave at least 2-3 beech per acre where present.

Other Comments: Stand was marked by contractors and is on proposal. We have figured out access into the stand and have decided to mark more of the beech that is in the stand.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, birch, white pine, spruce, fir and beech.

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
60	45020060-Cut	30.1	4191 - Mixed Upland Deciduous with Conifer	High Density Log	91	81-110	Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal

Prescription Specs: Cut all conifers greater than 4" DBH and all deciduous greater than 2" DBH to encourage young growth for grouse, hare, and deer. Leave buffer around lake as retention. For the most part stay south of the snowmobile trail.

Other Comments: Check the new ERA boundary to make sure that we stay out of that area with this harvest.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, paper and yellow birch, white pine, spruce, fir, hemlock and cedar.

Proposed Start Date: 10/01/2015

Total Treatment Acreage Proposed: 646.9

Report 4 -- Treatments Prescribed with a Site Condition

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
		#Type!	#Type!							

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Type!

Limiting Factor

Total Treatment Acreage Proposed: 0.0

Report 5 – Site Conditions

Sault Ste. Marie Mgt. Unit

Josh Brinks : Examiner

Compartment 020

Year of Entry 2016

Availability for Management

Total Acres	Acres Available	Acres Not Available		Dominant Site Conditions No	5C	3J	3D	3B	2I	2H	2G
189	177	13	**Aspen**	171		13			6		
747	747		**Cedar**	747							
14	14		**Hemlock**	14							
17	17		**Lowland Aspen/Balsam Poplar**	17							
560	40	520	**Lowland Conifers**	29	11			459		53	9
257	204	53	**Lowland Deciduous**	204		38				15	
9	9		**Lowland Mixed Forest**	9							
25		25	**Lowland Spruce/Fir**							25	
288	266	22	**Mixed Upland Deciduous**	266		22					
159	134	25	**Natural Mixed Pines**	134			25				
787	787		**Northern Hardwood**	787							
34	24	10	**Upland Conifers**	24						10	
118	118		**Upland Mixed Forest**	118							
19	19		**White Pine**	19							
3,223	2,555	668	Total Forested Acres	2,539	11	72	25	459	6	103	9
	79%	21%	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**	**2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)**	96	2B: Unknown if access through adjacent landowner(s) is possible	2G: Too wet (sensitive soils, does not include access issues)		
	Comments:						
003	**Not Available**	**3G: Other Influence zones - See comments**	1				
	Comments: Great Lakes Island.						

004	**Not Available**	**3B: Threatened, endangered, and special concern species/communities**	459		

Comments:
Dune and Swale

005	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	38		

Comments:

006	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	5		

Comments:

007	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	8		

Comments:

008	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	22	2E: Road needed	

Comments:

009	**Not Available**	**3D: Recreational / Scenic values**	25		

Comments:
Stand contains the Detour State Forest Campground

012	**Available**	**2I: Survey needed**	6	
	Comments:			
013	**Not Available**	**2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)**	7	
	Comments:			
014	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	11	
	Comments:			
015	**Not Available**	**2G: Too wet (sensitive soils, does not include access issues)**	9	
	Comments:			

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
Detour State Forest Campground	Concentrated Recreation Area	State Forest Campground	**SCA**	18.7
Comments				
Cranberry POG	Potential Old Growth		**SCA Removal**	518.7
Comments				
BEACH RIDGES. SAVE! NO CUT. PVE type				

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	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.
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	Great Lakes Islands	Great Lakes Islands provide significant habitat for numerous species, including many rare plants and animals, several of which are endemic or largely restricted to the Great Lakes region. Due to their isolation, islands provide good examples of many Great Lakes-associated natural communities and ecosystems, and thus have potential to provide insights for understanding the consequences of human disturbance on the increasingly fragmented ecosystems of the mainland.
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	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.
HCVA	Coastal Environmental Areas	The public designation process is defined by Part 323, Shorelands 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). This is an inactive program with no new areas currently under consideration by the DEQ.
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.

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
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6120 - Lowland Cedar	High Density Pole	63.1	96	171-200	Stand of very thick cedar growing on wet ground. Some areas of nice log size trees.
2	4191 - Mixed Upland Deciduous with Conifer	High Density Log	21.7	92	111-140	Stand boarders the creek. Mostly birch with super canopy white pine.
4	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	10.9	88		There is an old skid trail leading right to this stand. About an acre of the stand was cut approx. at the same time as the stand to the south.
5	4136 - Aspen, Mixed Conifer	High Density Log	7.6	94	111-140	Similar to the stand to the south. Large aspen and birch. Some cedar in the stand as you get close to the creek.
6	6120 - Lowland Cedar	High Density Pole	33.0	90	111-140	This is a variable stand of cedar. On the east side of the stand the stand is very thick with small diameters but on the west side of the stand the diameters are larger. There are also a few small ridges in the stand that are dryer than the surrounding area.
7	4319 - Mixed Upland Forest	High Density Pole	59.5	36	81-110	Stand was cut in 1978. Scattered log size pines along witha few other species. The regen from that cut is right on the edge of a pole/sapling size and is very think. The regen was dominated by aspen/fir/maple/white pine.. Dune and swale topography.
8	6120 - Lowland Cedar	Medium Density Pole	5.0	85	81-110	About 1/4 of the stand is lowland shrub. Stand is flooded in the spring time.
9	429 - Mixed Upland Conifers	High Density Sapling	23.9	24		I am guessing that this stand was cut in 1990 about the same time as the adjacent stand. Regenerated to an aspen/spruce/fir stand. There is much more conifer in the canopy than in the adjacent stand.Scattered supercanopy red and white pine present throught the stand. Very thick with conifers in the understory.
11	4137 - Aspen, Birch	High Density Log	10.6	94	81-110	Stand has really large aspen with pole size birch. Fairly thick understory. Some cedar can be found in the souther portions of the stand.
12	4319 - Mixed Upland Forest	High Density Sapling	17.5	24		Stand is right on the edge of being called a pole size stand. This stand was cut in 1990 and the resulting regen was a mix of aspen and fir with some white pine mixed in. Some areas of this stand are lowland and can be flooded during wet periods.
13	42290 - Natural Mixed Pine	Medium Density Log	31.7	98	51-80	Dune and swale ridges with pine. Swales have a mix of lowland shrub and cedar. Fairly open canopy compared to the stand to the west.
14	4115 - Y.Birch, Hemlock NH	High Density Log	21.6	88	51-80	Stand was thinned in the past and has some really good regeneration. The east side of this stand has some lower ground with a cedar and hemlock component. The beech in this stand is too big and is of too poor quality to a salvage. They will make great wildlife trees.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
15	42290 - Natural Mixed Pine	High Density Log	102.5	102	81-110	Very nice stand of natural pine growing on dune and swale type topography. Understory is quite thick with lots of fir. Pockets of aspen regeneration.
16	6120 - Lowland Cedar	High Density Log	7.5	86	111-140	Most of this stand is solid to cedar but in some places it is a little more mixed.
17	4113 - R.Maple, Conifer	High Density Sapling	5.9	15		Stand was most likely cut at the same time as the adjacent hardwood. It is now moslty red maple saplings and balsam fir.
19	4119 - Mixed Northern Hardwoods	High Density Log	33.9	78	51-80	Stand was thinned in 2009. DBH drops of a little in the northern part of the stand. All the balsam fir regeneration is along the outer edge of the stand. Regen is mostly maple with lots of stripped maple.
20	6120 - Lowland Cedar	High Density Pole	11.4	98	111-140	Cedar with scattered deciduous trees over the top of it. The spruce in this stand are of real nice quality.
21	6120 - Lowland Cedar	High Density Pole	10.3	85	141-170	Cedar with a good mix of other species. Ground looks very wet based on how the snow is melting. Not a whole lot of saplings in the understory. Some small areas of tag alder with in the stand. Larger cedar in the north part of the stand.
22	4136 - Aspen, Mixed Conifer	High Density Sapling	20.2	4		Stand was cut in 2010. Good regeneration that is approaching 10 ft tall. Scattered larger trees mostly yellow birch, white pine and cedar. Some regeneration of white pine can be seen poking through the snow.
23	6120 - Lowland Cedar	High Density Sapling	64.9	62		Sapling and pole size cedar with scattered log size supercanopy white pine. Stand is very thick.
25	6120 - Lowland Cedar	High Density Pole	204.2	102	111-140	Large stand of cedar with super canopy white pine. Some of the cedar in this stand is in decline. There are some areas of sapling size trees.
26	6120 - Lowland Cedar	Low Density Sapling	24.9	45		Small cedar with lowland brush.
27	4130 - Aspen	High Density Sapling	74.3	13		Stand was cut in 2001. Very nice regeneration that is doing well. There are some areas of the stand which are more lowland and wet. Look like yellow birch were left during the harvest. Most of which are dying.
28	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	37.6	96	81-110	A creek runs through the middle of this stand. The stand includes the banks and flood plain of the creek. Lots of nice hemlock in the stand. There is an area on the west side of the creek where the conifer component in the canopy is lower and there is a higher maple/birch component.
30	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	19.6	65	1-50	Low wet ground with smaller diameter cedar and pole size black spruce and tamarack. Very poor quality site.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
32	6112 - Lowland Aspen	High Density Sapling	17.0	3		Stand was cut in 2010. Wet ground. Regen is doing quite well. Nice buffer/retention along the wetland edge.
33	4136 - Aspen, Mixed Conifer	High Density Sapling	45.6	4	1-50	Stand was cut in 2010. The east side of the stand has significantly more white pine that were left during the harvest. A strip of paper birch and red maple was left on the hill between this stand and the hardwood. Regen is dong very well in this stand.
34	42200 - Natural White Pine	High Density Pole	18.9	75	51-80	Stand was left when the surrounding stand was harvest. Mostly pole size white pine with some scattered log size trees. Looks liek the stand may have been harvested in the past bc there are two diameter classes of white pine present. The older trees are around 75 years old and the younger trees are abot 30 years old.
37	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	16.1	25	51-80	Young aspen stand that was cut in 1989. Stand is right on the edge of pole and sapling size.
38	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	47.3	77	111-140	Stand of lowland hardwoods with scattered cedar. There looks to be a few drainages or streams running through the stand. A couple of patches of lowland shrub.
39	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	76.1	74	81-110	Stand of very nice log and pole size aspen with pole size paper birch. Scattered cedar. Northwest area looks to have smaller diameters than where I walked through the stand on the east side.
40	4112 - Maple, Beech, Cherry Association	High Density Log	554.7	86	81-110	Stand has a lot of glacial eradic boulders. Areas of pole size timer. There is a lot of damage from wind in this stand either blow downs or trees snapped off. Some areas the understory is very thick but in others it is fairly open. Going to look a lot different after this stand is harvested, areas of soilid beech will look like a clear cut.
41	6120 - Lowland Cedar	Medium Density Pole	35.3	90	51-80	Variable stand dominated by cedar/ Northeast part of stand is flooded timber with some islands of trees. Some areas of really nice cedar and other areas of lowland shrub with scattered cedar. Streams running through the stand.
42	4111 - S.Maple, Hard Mast Association	High Density Log	94.6	76	81-110	Souther portion of the stand is dominated by large log size trees and contains most of the beech in this stand. The northern part ofthe stand is dominated by pole and small log size trees. Very open understory in this stand, there my be seedlings under all of this snow. Scattered large boulders. As you transition into the wetland on the west side of the stand if becomes a mix of yellow birch, cedar and red maple.
43	6117 - Lowland Deciduous, Mixed Coniferous	Low Density Pole	10.5	76	1-50	About half of the stand is covered by lowland brush and sapling conifers the other half has aspen and birch growing on it.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	4191 - Mixed Upland Deciduous with Conifer	High Density Sapling	16.9	21	1-50	Stand was cut in 1993. Most of the aspen was removed from the stand leaving the white pine red oak and some other random species. Areas that were opened up the most have aspen regeneration in them other areas where the canopy was not opened as much have maple regen. Some areas of this stand look to have been untouched during the harvest. Dune and swale type topography.
45	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	4.6	81	81-110	
46	6122 - Black Spruce	High Density Pole	25.0	82	81-110	q type stand with low wet ground.
47	6120 - Lowland Cedar	Medium Density Pole	75.0	96		A lot of dead pole size cedar along the east side of the stand with sapling cedar growing underneath. Stand is in a little better shape as you get further away from the lake.
49	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	9.2	75		Slightly drier area of the lowland around cranberry lake that is supporting a decent stand of spruce, fir, and cedar with aper birch and red maple.
50	6129 - Mixed Coniferous Lowland Forest	Medium Density	45.8	70		Small, poor quality trees growing on the old lake bottom. Lots of cedar regeneration taht is 4' and below.
51	42390 - Mixed Non-Pine Upland Conifers	High Density Log	10.4	104	111-140	This stand was once an island that has since becone attached to the mainland. Very cool stand with lots of large yellow birch and hemlock. Stand is higher than the surrounding area but still exhibits some lowland type characteristics.
55	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	6.8	92	111-140	Island of cedar, fir and birch. Birch is in good shape.
57	4136 - Aspen, Mixed Conifer	High Density Sapling	17.0	22		Stand was cut in 1992 when all the aspen was removed. There is some rolling hill type topography in this stand. The stand is on the south side of a large ridge which run allong the boarder between this stand and the hardwood to the north. West side of this stand has log size white pine and red oak left from the harvest. This area has a lot of white pine regen.
58	42350 - Upland Hemlock	High Density Log	13.9	91	81-110	Stand of nice hemlock. Some areas of good hemlock regen can be found along the road and in canopy gaps.
59	4319 - Mixed Upland Forest	High Density Sapling	21.5	27	1-50	Stand was cut in 1987. This stand is right on the border of sapling/pole size classes. At this time saplings still dominate the canopy. Stand is inside of the dune and swale polygon but has been cut and regenerated very nicely. Mix of species is simlar to what can be found in the dune and swale complex to the south.
60	4191 - Mixed Upland Deciduous with Conifer	High Density Log	57.1	91	81-110	Narrow ridge of high ground that seperated the cranberry lake area from the clearcuts to the south. Paper birch is the dominate species in this stand. There is an area of cedar in the north part of the stand.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
61	6120 - Lowland Cedar	High Density Sapling	19.0	62		Area of sapling size cedar that is doing quite well. Little sign of browse. This stand resembles some of the swale areas in the dune and swale complex.
62	6120 - Lowland Cedar	High Density Pole	2.9	75	141-170	Cedar stand has some areas of blow down. Scattered very large aspen. East side of the stand has more balsam fir. One super canopy red pine.
64	4115 - Y.Birch, Hemlock NH	High Density Log	75.9	88	81-110	Stand is very similar to the stand to the south but there are more hemlock and larger trees here. There is a grove of cedar in teh stand located along the ORV trail. Legacy trees present in this stand.
65	4136 - Aspen, Mixed Conifer	High Density Pole	14.0	34	51-80	This aspen stand was cut in 1980. It has just grown into a pole size stand with lots of sapling size trees still occupying space in the canopy. A portion of this tand would be considered lowland aspen but most is upland. Scattered larger pole and log size trees are present.
66	6117 - Lowland Deciduous, Mixed Coniferous	High Density Sapling	64.7	24		Stand was cut in 1989. Some scattered pole size trees are left over from that harvest. Drier ground has really good aspen and birch regeneration. In the lower wetter areas there is aspen and scattered birch with lots of willow. Maple is growing on the ridge along the road. Decent amount of cedar regen is mixed in throught the stand. Lots of willow in the canopy.
67	6120 - Lowland Cedar	High Density Sapling	13.9	56		Low wet ground with stunted trees. Trees on the north side of the powerline are a bit larger.
68	6131 - Hemlock, White Pine, Maple, Birch	High Density Pole	8.9	62	51-80	Stand is mostly paper birch and red maple with areas of cedar and scattered super canopy white pine. There is a swale that runs through the middle of the stand of lowland brush. Stand seems like a transitional stand between lowland and upland.
69	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	8.8	85	111-140	Stand of mixed conifer dominated by cedar. Stand is split by M-134.
71	6120 - Lowland Cedar	High Density Pole	104.4	87	141-170	Nice stand of cedar with little to no deer activity. No dune and swale topography in this stand. Most of the understory is pretty open withsome areas of thick fir. Diameters drop off as you head to the east. A few areas of lowland shrub.
72	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	459.0	114	81-110	Dune and swale complex. Swales have lowland shrub and sapling size cedar growing in them. Some swales are full of water and have water flowing through them. Ridges have decent timber on them.IN the northwest part of the compartment they are dominated by hemlock and cedar. Down south they are more spruce and white pine.
74	4191 - Mixed Upland Deciduous with Conifer	High Density Log	192.0	76	81-110	North part of this stand is more mixed. There is an area in the southern portion of the stand that is solid maple with very little understory. Looks like the stand has been thinned in the past. Lots of balsam fir in the understory. Red maple is poor quality with lots of seams.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
76	6120 - Lowland Cedar	High Density Pole	32.7	94	141-170	Southern portion of the stand is solid cedar. The north part of the stand gets into the dune and swale topography and is more mixed.
77	42360 - Upland Cedar	High Density Pole	39.7	117	141-170	Cedar is on top of the ridge that borders the lake. Some areas of pine.
78	4319 - Mixed Upland Forest	High Density Log	19.7	98	81-110	Nice pine, oak and hemlock with a thick subcanopy of balsam fir. Area to the south is more open canopy with balsam fir regen.
80	42290 - Natural Mixed Pine	High Density Log	24.9	104	111-140	Mixed pine stand of white pine and red pine. Stand includes the campground. Borderline log/pole size stand. Lots of conifers in teh understory. Area of cedar near the south end of the campground.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	622 - Lowland Shrub	22.1	Unspecified	Unspecified	Albany Creek runs through this stand. Some cedar in the stand.
10	122 - Road/Parking Lot	2.5	Unspecified	Unspecified	
18	6239 - Mixed Emergent Wetland	23.2	Unspecified	Unspecified	flooded at some times of the year
24	622 - Lowland Shrub	55.4	Unspecified	Unspecified	Some areas of water within the stand. Scattered cedar and spruce trees.
29	623 - Emergent Wetland	13.6	Unspecified	Unspecified	
31	3303 - Mixed Low Density Trees	4.8	Unspecified	Unspecified	Site of an old logging camp. Foundation is still present.
35	50 - Water	2.0	Unspecified	Unspecified	Beaver lodge in the middle of the pond with a good size dam along the south side of the pond.
36	629 - Mixed non-forested wetland	44.3	Unspecified	Unspecified	This stand is dominated by lowland shrub and emergant wetland. Some areas of this stand are low density conifer trees dominated by cedar spruce and fir. There are a few island pockets of nice pole size timber.
48	3301 - Low Density Deciduous Tree	1.3	Unspecified	Unspecified	Island in Lake Huron with a few scattered trees and shrubs
52	622 - Lowland Shrub	93.4	Unspecified	Unspecified	There are some scattered small conifers in this stand along with the shrubs. A portion of this stand was underwater before the culvert was removed for the flooding. Lots of old stumps can be seen in that area.
53	50 - Water	86.5	Unspecified	Unspecified	Cranberry Lake
54	50 - Water	21.4	Unspecified	Unspecified	Cranberry flooding. The culvert was removed in 2013 drawing down the water level of the flooding. Boundary may change when new imagery becomes available.
56	6225 - Bog	117.2	Unspecified	Unspecified	There are some trees in this bog but not enough to call it a treed bog. Lots of dead cedar saplings.
63	310 - Herbaceous Openland	2.3	Unspecified	Unspecified	Powerline ROW. East half is low wet ground.
70	622 - Lowland Shrub	3.6	Unspecified	Unspecified	
73	122 - Road/Parking Lot	13.9	Unspecified	Unspecified	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
75	6239 - Mixed Emergent Wetland	7.1	Unspecified	Unspecified	
79	3302 - Low Density Conifer Trees	4.1	Unspecified	Unspecified	
81	3302 - Low Density Conifer Trees	1.4	Unspecified	Unspecified	
82	3302 - Low Density Conifer Trees	3.7	Unspecified	Unspecified	