Newberry Forest Management Unit
Compartment Review Presentation
Compartment #42059 Entry Year: 2013
Compartment Acreage: 8,485 County: Chippewa

Revision Date: September 1, 2011

Stand Examiner: Tori Irving

Legal Description: T51N, R5W, Sect. 32
T50N, R5W, Sect. 5, 6
T50N, R6W, Sect. 1-12, 14-17, 20-22

RMU (if applicable): Whitefish Vermillion Point Management Area

Management Goals: The Whitefish Vermillion Point Management Area will emphasize protecting the unique dune and swale complex near Whitefish Point and the other natural communities found here, sustainable produce various timber products, and provide for forest-based recreational opportunities.

Soil and Topography: The dominant soils types in this compartment are Deer Park fine Sand and Deer Park-Kinross Complex. Other soils types include: Kinross-Dawson complex, Markey-Kinross-Au Gres complex, Croswell-Markey complex, Dawson and Loxley peats, and Markey and Carbondale mucks. The topography is fairly level around Vermillion Road and the Betsy River. The interior of the compartment up to the Whitefish Point is part of a dune-swale complex, which is mostly rolling hills and a few steep slopes.

Ownership Patterns, Development, and Land Use in and Around the Compartment: State ownership is fairly contiguous in this compartment. There are a few scattered parcels of private land inside the compartment boundary. The majority of the private holdings are around the Wildcat Road and the Whitefish Point Road. There are a few scattered private holdings along Lake Superior. There are a fair amount of permanent homes along the Wildcat Road and the Whitefish Point Road. There is also a fair amount of seasonal cabins scattered along Lake Superior, Wildcat Road, and Whitefish Point Road.

There are many opportunities for recreation, including, but not limited to, hunting, ORV, snowmobiling, hiking, fishing, and berry-picking, within and surrounding the compartment. Much of the surrounding land is also state-owned, which provides additional opportunities for timber harvests.

Unique, Natural Features: Michigan Natural Features Inventory (MNFI) notes the occurrence of a Wooded-Dune and Swale Complex. MNFI also lists potential for eagle, osprey, goshawk, and merlin. Potential for wood turtle along Betsy River. Potential for incurvate emerald, ebony boghaunter, Frigga fritallry and Freija fritillary in bog and fen habitat. Potential for American bittern, least bittern, and yellow rail in marshes. Potential for piping plover, Lake Huron locust, and dune cutworm (moth) to occur throughout compartment along dune shoreline. Potential for Lake Huron tansy, Douglas's hawthorn, dune wild rye, blue wild rye, fleshy stichwort, and satiny willow along shoreline. Potential for English sundew, northern prostrate clubmoss, small yellow pond lily, lake cress, alternate-leaved water-milfoil, American shore-grass, moor rush, alga pondweed, meadow beauty, and panicled screw-stem along shorelines, bogs, and marshes.

Archeological, Historical, and Cultural Features:

Special Management Designations or Considerations: This compartment contains Piping Plover Critical Coastal Habitat, Marsh Lakes Natural Area, Important Bird Area, Wooded Dune & Swale Complex, and several plant & animal element occurrences.

Watershed and Fisheries Considerations:
Fisheries Values: Good
Fisheries Concerns: The Betsy River and the Shelldrake Flooding are located within or near this compartment. No prescribed treatments are scheduled near either of these water bodies, so Fisheries has no concerns at this time.

Wildlife Habitat Considerations: Compartment 59 lies in northwestern Chippewa county in the Grand Marais Sandy End Moraine and Outwash ecological sub-subsection. The compartment includes the important bird area at Whitefish point, a significant amount of critical piping plover habitat along lake Superior shoreline and patterned peatlands. The compartment is highly variable and unique. The Betsy river border the compartment along the western edge providing a well used wildlife travel corridor. The Shelldrake flooding lies in the southwestern corner of the compartment.

Wildlife objectives will be achieved by retaining any hard mast producing species in harvested pine stands. In addition, retaining soft and hard mast producing species where they exist in harvested stands will help provide food sources, nest and den trees, and improve structural diversity of the stands. Species diversity will increase wildlife diversity and thus a variety of non jack pine species will be retained after final harvests such as aspen (for food sources for birds, snags for cavity nesting birds and mammals) and maple (for multi canopy layering for nesting birds) and oak for mast production for deer and squirrels. Scattered residual red and white pine will benefit red crossbills (featured species).
Mineral Resource and Development Concerns and/or Restrictions:
Surface sediments consist of lacustrine (lake) sand and gravel. There is insufficient data to determine the glacial drift thickness. The Precambrian Jacobsville Sandstone subcrops below the Glacial Drift. The Jacobsville was used as a building stone in the past. Gravel pits are not located in the area, and potential appears to be limited. There is no economic oil and gas production in the UP.

Vehicle Access: This compartment has good access via Whitefish Point Road, Vermillion Road, Wildcat Road, Whitefish-Lake Superior Road, and N Doe Lake Road. There are also some scattered two tracks through the compartment.

Survey Needs: None.

Recreational Facilities and Opportunities: The Whitefish Point Snowmobile Trails run through the compartment. The Shipwreck Museum and the Bird Observatory are located at the tip of Whitefish Point and are visited by hundreds of people every year. Other recreational opportunities that exist in this compartment include such things as fishing, hunting, wildlife viewing, and hiking.

Fire Protection: The compartment is part of the Whitefish Zone Dispatch Area. Whitefish Township is working on a Community Wildfire Protection Plan, which is near completion. The Hazardous fuel types and terrain increases the possibilities of large fire growth in the compartment.

Additional Compartment Information:

- **The following reports from the Inventory are attached:**
  - **Total Acres by Cover Type and Age Class**
  - **Proposed Treatment Summary**
  - **Proposed Treatments – No Limiting Factors**
  - **Proposed Treatments – With Limiting Factors**
  - **Stand Details (Forested and Nonforested)**
  - **Dedicated and Proposed Special Conservation Areas**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - **Base feature information, stand boundaries, cover types, and numbers**
  - **Proposed treatments**
  - **Details on the road access system**
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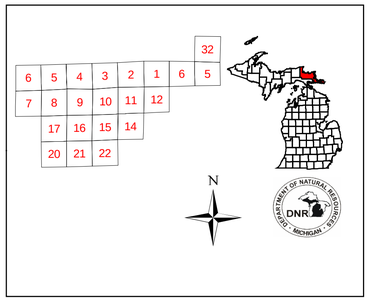
Compartment 059
T51N, R05W, Sec. 32
T50N, R05W, Sec. 5, 6
T50N, R06W, Sec. 1-12, 14-17, 20-22
County: Chippewa
Unit: Newberry
YOE: 2013
Acres: 8,485 GIS Calculated
Stand Examiner: Tori Irving,
Jason Darling
Map Revised: 10/31/2011
Map Phase: Pre-Review



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

Cover Type & Treatment Map

Legend
- Miris Corners
- Remonumented Section Corners
- Survey Corners
- Lighthouse
- Tower
- Pipe
- Power
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Snowmobile Trail
- Lakes and Rivers
- Stream
- Intermittent Stream

Regen Legend
- Natural
- Planted

Treatments
- Clearcut (w/Reserves, Patch/Strip)
- Shelter Wood (w/Reserves)
- Site Preparation

Forest Stands
Level 3
- 412 - Oak Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands
Level 3
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 629 - Mixed non-forested wetland
- 710 - Sand, Soil
- State Forest Land

Stand Boundary Map

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T51N, R05W, Sec. 32
T50N, R05W, Sec. 5, 6
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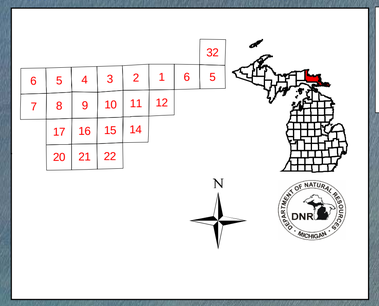

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Level 4 Code
Cover Type Code

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- Stand Boundaries

Forest Stands

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1 0.5 0 1 Miles

Dedicated & Proposed Special Conservation Area Map

Compartment 059
T51N, R05W, Sec. 32
T50N, R05W, Sec. 5, 6
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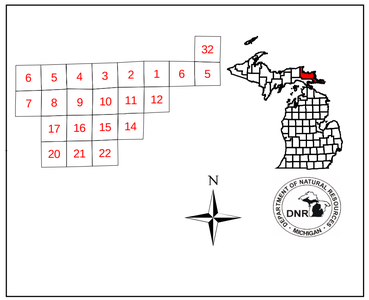

Stand # 23 — Stocking Density
(412)0) - A7
Level 3 Cl
Level 4 Code
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Legend
- Miris Corners
- Remonumented Section Corners
- Stand Boundaries

Proposed Special Conservation Areas
- SCA - Special Conservation Area
- SCA Removal

Dedicated Special Conservation Areas
- Critical Coastal Habitat (Piping Plover)
- Campgrounds
- Boat Access Sites
- Non_Dedicated Natural Areas and National Natural Landmarks

Forest Stands

Level 3
- 412 - Oak Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
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Level 3
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- 710 - Sand, Soil

1 0.5 0 1 Miles

Table 1 – Total Acres by Cover Type and Age Class

Newberry Mgt. Unit **Compartment 059 Year of Entry 2013**

Tori Irving : Examiner

Age Class

	Non-Forested	1-9	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
Cedar	0	0	0	0	0	0	0	0	51	0	0	0	0	0	0	**51**
Herbaceous Openland	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**50**
Jack Pine	0	103	0	5	96	28	0	598	573	59	9	0	0	0	0	**1470**
Low-Density Trees	495	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**495**
Lowland Conifers	0	0	0	0	0	0	51	98	132	0	0	0	0	0	0	**281**
Lowland Mixed Forest	0	0	0	0	0	0	0	137	56	0	0	0	0	0	0	**193**
Lowland Shrub	2568	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2568**
Mixed Upland Deciduous	0	0	0	14	0	0	0	0	0	10	0	37	0	0	0	**61**
Natural Mixed Pines	0	0	0	0	0	0	0	162	375	336	127	0	38	0	0	**1038**
Oak	0	0	0	0	0	0	0	0	0	27	105	9	0	0	0	**142**
Red Pine	0	0	0	0	0	0	0	0	755	0	25	0	0	0	0	**779**
Sand, Soil	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**57**
Tamarack	0	0	0	0	0	0	0	0	0	49	0	0	0	0	0	**49**
Treed Bog	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
Upland Conifers	0	0	0	0	0	0	0	0	261	0	0	0	25	0	0	**286**
Upland Mixed Forest	0	0	0	0	0	0	0	38	61	173	0	0	0	0	0	**271**
Upland Spruce/Fir	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	**17**
Water	674	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**674**
White Pine	0	0	0	0	0	0	0	15	0	13	0	0	0	0	0	**28**
Total	**3857**	**103**	**0**	**19**	**96**	**28**	**51**	**1064**	**2264**	**666**	**265**	**46**	**63**	**0**	**0**	**8523**

Table 2 – Proposed Treatment Summaries

Newberry Mgt. Unit
Year of Entry 2013

Compartment 059
Total Compartment Acres: 8523

Acres by Treatment Type

Commercial Harvest - 421	Site Prep - 33	Tree Planting - 0	Prescribed Burn - 0	Other - 519
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Jack Pine	90	0	0	0	0	0	**90**
Natural Mixed Pines	220	0	0	112	0	0	**332**
Total	**309**	**0**	**0**	**112**	**0**	**0**	**421**

Data updated yesterday after 6:00 PM

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
32	42059032-Cut	219.8	42290 - Natural Mixed Pine	High Density Log	83	Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal

Prescription Specs: Harvest all merchantable species except oak. Leave a represenation of canopy species in retention pockets (No larger than 9 acres of retention.) Per WLD: Leave some mature red and white pine scattered through the stand at a ratio of 1 tree/5 acres for Red Crossbill. Leave all oak. Buffer the low areas on the north with at least one tree length. Leave a maple, aspen, and birch component.

Other Comments: --Tori Irving : 10/17/2011 comments: WLD personnel will be requested by FMD to mark leave trees in the harvesting area for Red Crossbill habitat management.

Next Steps: Scarify after harvest. Trench and plant if scarification fails. Acceptable regeneration is mixed red and jack pine with a small component (no more than 20% of regernating species) of white pine, red maple, and red oak. Continue to monitor regeneration success.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
90	42059090-Cut	53.0	42220 - Natural Jack Pine	High Density Log	73	Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal

Prescription Specs: Cut all species except the retention species requested by wildlife. Use the redline to incorporate buffer requested by WLD. Per WLD: Buffer the Shelldrake flooding by one tree length. Leave oak and non-pine species.

Other Comments:

Next Steps: Scarify stand after harvest is complete. Acceptable species mix: JP with a small component of RP. Continue to monitor re regeneration success.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
110	42059110-Cut	111.8	42290 - Natural Mixed Pine	High Density Pole	76	Harvest	Shelter Wood with Reserves	42290 - Natural Mixed Pine	Cmpt. Review Proposal

Prescription Specs: Shelterwood stand. Remove all jack pine. Remove some of the red pine and white pine. Targer residual BA: 20-30. Per WLD: Buffer low area by at least one tree length. Leave the oak and the non-pine species.

Other Comments:

Next Steps: Scarify after harvest. If scarification fails, trech and plant mixed JP/RP. Acceptable species mix is JP/RP with a small (maintain 10 % of covertype) component of white pine. Monitor regeneration success. After regeneration is established, remove overstory red pine and white pine from the harvest area.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
127	42059127-Cut	36.7	42220 - Natural Jack Pine	High Density Pole	79	Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal

Prescription Specs: Remove limiting factor - delayed treatment for age/size class diversity. Harvest all species. Targer residual BA is 10-20.

Other Comments:

Next Steps: Scarify site after harvest is complete. Plant jack pine if scarification fails. Acceptable species mix is jack pine and a small component of red pine. Monitor for regeneration success.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
18	NF_42059018_small-Prep	33.3	42120 - Planted Jack Pine		79	Site Prep	Trenching	42120 - Planted Jack Pine	Cmpt. Review Proposal

Prescription Specs: FTP C42-582: Scarification and/or plant if natural regeneration does not meet minimum stocking.

Other Comments: Trenching complete in Summer 2011 by Holli Forest Products.

Next Steps: Plant site with jack pine. Work in conjunction with TMS to schedule planting and continue to monitor regeneration success.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
94	42059094-Regen Count	519.0	42210 - Natural Red Pine	Low Density Log	79	Other	Mowing	42220 - Natural Jack Pine	Cmpt. Review Proposal

Prescription Specs: Regen counts as directed by TMS.

Other Comments: This stand was harvested in multiple timber sales; resulting in one cover type. There is not a lot of regeneration present in the understory. The sales and their associated cultivation/regeneration work is listed below:
Goose Marsh Pine (sale # 42-036-03-01) was completed on 5/7/09. Scarified under FTP 42-594, completed 9/30/09.
Vermillion Road Jack Pine (sale # 006-03-01) was completed on 1/24/07. Scarified under FTP 42-583, completed 8/9/07 on 139 acres; thicker RP ridges were avoided.
Sale # 42-005-94-01. Sale completed in 1998.

Next Steps: Monitor for regeneration success.

Total Treatment Acreage Proposed: 973.5

Newberry Mgt. Unit

Table 4 -- Treatments Prescribed with a Limiting Factor

Compartment: 059
Year of Entry 2013

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
			#Error						

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: **0**

Data updated yesterday after 6:00 PM

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2013

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
42045001-Cut	3.9	42210 - Natural Red Pine	High Density Log	89	Harvest	Seed Tree	42210 - Natural Red Pine	Cmpt. Review Proposal

Prescription Specs: Harvest site to imitate a catastrophic crown fire by "clear-cutting all but a patchy mosaic of pine trees and clumps of trees to serve as seed trees" (MNFI). Focus on the 8-18 inch DBH class. Residual BA 10-20 to allow for successful pine regeneration.

Other Comments: This stand is identified by MNFI as a Dry Northern Forest. Move some of the Hemlock and Yellow Birch logs into stand 34 for Hemlock regeneration nurse logs.

Next Steps: Burn the harvested area in the spring to reduce slash, hardwood competition, and to expose the mineral soil. This should be done within 2-3 years after the completion of any harvesting activities. If the site is not burned within the time frame, scarify site to promote pine regeneration. If scarification fails, plant red pine. Acceptable regeneration mix is RP and a small component of WP.

Total Treatment Acreage Proposed: **3.9**

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
5	6120 - Lowland Cedar	High Density Pole	51.4	78	51-80	Stand is part of the Piping Plover Critical Coastal Habitat
8	6124 - Lowland Spruce-Fir	High Density Log	15.0	78	51-80	
9	6121 - Tamarack	High Density Pole	48.8	80		Lowland bowl surrounded by pine ridges.
10	42220 - Natural Jack Pine	High Density Pole	54.9	73		
11	42260 - Natural Pine, Mixed Deciduous	High Density Log	88.8	95	81-110	
15	42260 - Natural Pine, Mixed Deciduous	High Density Log	185.2	72		Jack pine ridge.
16	4199 - Other Mixed Upland Deciduous	High Density Pole	14.2	20	1-50	
19	42210 - Natural Red Pine	High Density Pole	6.2	70	51-80	
20	42220 - Natural Jack Pine	High Density Sapling	25.9	33		Stand was cut in 1978.
23	6123 - Lowland Fir	High Density Log	16.8	65	51-80	
26	42220 - Natural Jack Pine	High Density Pole	47.7	79	81-110	
27	4310 - Pine, Oak Mix	High Density Pole	116.9	80	81-110	
32	42290 - Natural Mixed Pine	High Density Log	282.0	83	51-80	Portions of stand has evidence of an underplanting of red ine that took place in 1960. Planted red pine is suppressed and small.
42	4122 - Oak, Pine	High Density Log	36.2	99	81-110	
43	42220 - Natural Jack Pine	High Density Pole	6.0	62		
44	4122 - Oak, Pine	High Density Log	63.0	99	81-110	
46	42260 - Natural Pine, Mixed Deciduous	Medium Density Log	53.5	81	51-80	Stand was thinned as part Whitefish Red Pine Sale # 37-03-01. Complted 01/24/07. All paper birch and oak were left as residual along with red pine and white pine.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
47	42320 - Upland Spruce	High Density Pole	17.1	62		This stand is part of the Wooded Dune-Swale Complex (Lake Superior High Dune). The jack pine is starting to degrade and jack pine regeneration is minimal in the understory. There is red maple and oak regeneration present.
48	42210 - Natural Red Pine	High Density Log	62.3	78	111-140	
50	4122 - Oak, Pine	High Density Log	5.6	99	81-110	
52	42220 - Natural Jack Pine	High Density Pole	9.8	62		
55	42220 - Natural Jack Pine	High Density Log	25.7	62		
56	4123 - Red Oak	High Density Pole	27.4	80	81-110	Additional BA swings: 1) RO 60, RP 30 2) RO 90, PB 10, RM 10
57	42210 - Natural Red Pine	Medium Density Log	14.7	79	51-80	
58	42220 - Natural Jack Pine	High Density Log	37.6	84		
59	42220 - Natural Jack Pine	High Density Pole	174.9	62		This stand is part of the Wooded Dune-Swale Complex (Lake Superior High Dune). The jack pine is starting to degrade and jack pine regeneration is minimal in the understory. There is red maple and oak regeneration present.
61	4310 - Pine, Oak Mix	High Density Log	17.1	84	51-80	This stand is part of the Piping Plover Critical Coastal Habitat.
65	42211 - Natural Red Pine, Mixed Deciduous	High Density Log	58.3	76	51-80	Stand was harvested as McMullan Lakes Pine Sale #35-03-01. Completed 6/23/05. 2008: Regeneration check completed 05/27/08 - new MO should be red pine. High residual stocking did not allow for scarification. Rolling to steep terrain, in places. Some residual jack pine and oak. Regeneration of white pine (1-2' ht) and RM clumps primarily. Some JP, RP, and oak present.
69	42220 - Natural Jack Pine	High Density Pole	7.7	62		
73	4191 - Mixed Upland Deciduous with Conifer	High Density Log	36.6	100	81-110	
76	42220 - Natural Jack Pine	High Density Pole	27.9	43		
77	42290 - Natural Mixed Pine	High Density Log	38.1	90	51-80	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
83	429 - Mixed Upland Conifers	High Density Pole	50.2	72	51-80	
85	42220 - Natural Jack Pine	High Density Log	29.4	77		
87	42220 - Natural Jack Pine	High Density Pole	25.9	61		
90	42220 - Natural Jack Pine	High Density Log	53.0	73	111-140	There is more red pine in the northwest part of the stand.
94	42210 - Natural Red Pine	Low Density Log	519.0	79	1-50	This stand was harvested in multiple timber sales; resulting in one cover type. There is not a lot of regeneration present in the understory. The sales and their associated cultivation/regeneration work is listed below: Goose Marsh Pine (sale # 42-036-03-01) was completed on 5/7/09. Scarified under FTP 42-594, completed 9/30/09. Vermillion Road Jack Pine (sale # 006-03-01) was completed on 1/24/07. Scarified under FTP 42-583, completed 8/9/07 on 139 acres; thicker RP ridges were avoided. Sale area was checked for regen in Summer 2011: JP 237 t/ac, RP 155 t/ac, WP 146 t/ac. Sale # 42-005-94-01. Sale completed in 1998.
97	6123 - Lowland Fir	High Density Pole	51.3	50	1-50	
99	42220 - Natural Jack Pine	High Density Pole	5.9	64		
101	42220 - Natural Jack Pine	High Density Pole	6.7	64		
102	42220 - Natural Jack Pine	High Density Pole	313.8	62		This stand is a Wooded Dune-Swale Complex (Lake Superior-High Dune). The jack pine is starting to degrade and jack pine regernation is minimal in the understory. There is red maple and red oak regeneration present.
106	42290 - Natural Mixed Pine	High Density Pole	35.8	70	81-110	This stand is part of the Piping Plover Critical Coastal Habitat.
108	42220 - Natural Jack Pine	High Density Log	47.1	77		
110	42290 - Natural Mixed Pine	High Density Pole	111.8	76	111-140	
112	42210 - Natural Red Pine	Low Density Log	72.8	70	1-50	Stand was harvested as Shelldrake Jack Pine #42-034-03-01 and was completed 1/24/2011. All oak and paper birch along with a component of red pine and white pine were left as residual. Scarification in Unit 1 was completed on 11/3/2005 and Unit 2 on 8/11/2007.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
114	42210 - Natural Red Pine	High Density Log	21.8	71	111-140	This stand is in the Piping Plover Critical Coastal Habitat.
115	42220 - Natural Jack Pine	High Density Log	3.7	77		
118	42120 - Planted Jack Pine	High Density Pole	246.3	79		The middle part of this stand was planted in 1939 but didn't take to the stand. Part of it was cut in 1980. The southern part was planted in 1939. Over the years, the various cover types have merged and are now dominated by jack pine and a few scattered red pine.
120	6139 - Mixed Lowland Forest	Medium Density Pole	56.1	75	1-50	
121	429 - Mixed Upland Conifers	High Density Log	210.8	77		Stand is part of the Wooded Dune and Swale complex. There are some spots that are open. There is rolling terrain throughout the stand.
122	42220 - Natural Jack Pine	Low Density Sapling	102.8	4		Stand was harvested as sale #42-034-93 and planted in May of 2000.
126	42220 - Natural Jack Pine	High Density Log	21.0	77		
127	42220 - Natural Jack Pine	High Density Pole	36.7	79		
129	4310 - Pine, Oak Mix	High Density Pole	38.8	86	141-170	Additional BA Swings: 1) RO 50, RM 30, RP 40, JP 30 2) RO 70, RM 0, RP 90, JP 20 3) RO 80, RM 0, RP 30, JP 10 4) RO 20, RM 0, RP 70, JP 10
135	42220 - Natural Jack Pine	High Density Log	5.9	64		
137	42220 - Natural Jack Pine	High Density Pole	33.3	70	51-80	Some large and old red pine. Additional BA Swings: 1) JP 60, RP 20
138	42290 - Natural Mixed Pine	High Density Pole	137.9	63		Jack pine is degrading
144	42290 - Natural Mixed Pine	High Density Log	24.7	73	141-170	Jack pine is starting to degrade.
146	42200 - Natural White Pine	High Density Log	15.1	68	81-110	
149	42210 - Natural Red Pine	High Density Log	24.5	95		

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
152	42290 - Natural Mixed Pine	High Density Log	17.3	69	111-140	
153	6123 - Lowland Fir	High Density Log	80.8	68	111-140	This stand is part of the Piping Plover Critial Coastal Habitat.
154	42290 - Natural Mixed Pine	High Density Log	7.2	62	51-80	
156	4310 - Pine, Oak Mix	High Density Log	37.8	69	81-110	Utility line runs through the stand. Understoyr is really thick with balsam fir along the southern edge of teh stand. There is also some labrador tea, leatherleaf and blueberry in the understory along with some scattered oak regernation.
160	6139 - Mixed Lowland Forest	High Density Log	136.6	68		
161	6124 - Lowland Spruce-Fir	High Density Log	4.7	75	81-110	
170	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	9.7	86	81-110	
171	6124 - Lowland Spruce-Fir	High Density Log	104.6	75	81-110	
176	4123 - Red Oak	High Density Pole	9.5	105	81-110	Sweet fern and blueberry in the understory
177	42200 - Natural White Pine	High Density Log	13.0	86	81-110	
181	6124 - Lowland Spruce-Fir	High Density Log	7.7	75	81-110	
183	42220 - Natural Jack Pine	High Density Pole	70.2	36		Stand was cut as part of sale #42-006-75
185	42220 - Natural Jack Pine	Medium Density Pole	21.4	88		
187	42290 - Natural Mixed Pine	Medium Density Pole	17.7	70		Stand was harvested as part of sale #6-75.
190	429 - Mixed Upland Conifers	High Density Pole	24.8	115	81-110	Stand is part of Piping Plover Critical Coastal Habitat.
192	42220 - Natural Jack Pine	High Density Log	15.4	62		
196	4319 - Mixed Upland Forest	Medium Density Pole	60.5	70		There are some scattered opeings throughout the stand. The jack pine is degrading. There are some 4x4 trails running through the stand and an a lot of old dump piles scattered throughout the stand.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
198	42290 - Natural Mixed Pine	Medium Density Log	38.0	115	1-50	
200	42220 - Natural Jack Pine	High Density Pole	8.9	90		Stand is in the Piping Plover Critical Coastal Habitat
202	42220 - Natural Jack Pine	High Density Sapling	4.8	25		Stand is in the Piping Plover Critical Coastal Habitat. Young jack pine stand, scattered larger white pine throughout.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	710 - Sand, Soil	13.1	No	Unspecified	This site is part of the Piping Plover Critical Coastal Habitat.
2	6229 - Mixed lowland shrub	11.7	No	Unspecified	This stand is part of the Piping Plover Critical Coastal Habitat.
3	6229 - Mixed lowland shrub	1.9	No	Unspecified	
4	6229 - Mixed lowland shrub	14.1	No	Unspecified	This stand is part of the Piping Plover Critical Coastal Habitat.
6	50 - Water	4.2	No	Unspecified	
7	6229 - Mixed lowland shrub	6.1	No	Unspecified	This stand is part of the Piping Plover Critical Coastal Habitat.
12	6229 - Mixed lowland shrub	15.2	No	Unspecified	
13	710 - Sand, Soil	27.2	No	Unspecified	This site is part of the Piping Plover Critical Coastal Habitat.
14	6229 - Mixed lowland shrub	2.1	No	Unspecified	
17	50 - Water	2.1	No	Unspecified	
18	3302 - Low Density Conifer Trees	291.7	Natural Regen	Jack Pine	Harvested as Sale #005-03-01 Weatherhog Lakes Jack Pine. Sale was completed 5/6/05. Scarification (FTP 42-582) completed 2004 and 2005. Regeneration count completed 5/1/2007 (Unit 3 only) =299t/ac (125J, 10R, 48W, 67RM, 10BF). Secondary count 5/27/2008 (Units 1,2&3 = 109 t/ac (31JP, 46RP, 31WP). 6/16/2011: Really good jack pine regeneration. There is residual RP, RO, and W. Birch in the canopy.
21	50 - Water	1.5	No	Unspecified	
22	622 - Lowland Shrub	4.0	N\A	Unspecified	
24	310 - Herbaceous Openland	8.3	N\A	Unspecified	
25	6229 - Mixed lowland shrub	8.2	No	Unspecified	
28	6229 - Mixed lowland shrub	9.2	No	Unspecified	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
29	6229 - Mixed lowland shrub	12.9	No	Unspecified	
30	6229 - Mixed lowland shrub	4.5	No	Unspecified	
31	6229 - Mixed lowland shrub	17.8	No	Unspecified	
33	6229 - Mixed lowland shrub	2.6	No	Unspecified	
34	622 - Lowland Shrub	142.3	N\A	Unspecified	
35	6229 - Mixed lowland shrub	31.2	No	Unspecified	
36	6229 - Mixed lowland shrub	2.8	No	Unspecified	
37	50 - Water	8.1	No	Unspecified	
38	710 - Sand, Soil	6.5	No	Unspecified	This site is part of the Piping Plover Critical Coastal Habitat.
39	6224 - Treed Bog	13.8	No	Unspecified	
40	50 - Water	4.9	No	Unspecified	
41	6229 - Mixed lowland shrub	29.2	No	Unspecified	
45	6229 - Mixed lowland shrub	21.1	No	Unspecified	
49	50 - Water	8.0	No	Unspecified	
51	6229 - Mixed lowland shrub	5.1	No	Unspecified	
53	50 - Water	18.5	No	Unspecified	
54	6229 - Mixed lowland shrub	4.5	No	Unspecified	
60	50 - Water	1.5	No	Unspecified	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
62	50 - Water	3.1	No	Unspecified	
63	50 - Water	13.8	No	Unspecified	
64	6229 - Mixed lowland shrub	90.8	No	Unspecified	
66	6229 - Mixed lowland shrub	31.8	No	Unspecified	
67	50 - Water	64.4	No	Unspecified	
68	6229 - Mixed lowland shrub	98.5	No	Unspecified	
70	50 - Water	12.1	No	Unspecified	
71	50 - Water	2.7	No	Unspecified	
72	50 - Water	1.4	No	Unspecified	
74	6229 - Mixed lowland shrub	11.6	No	Unspecified	
75	50 - Water	7.3	No	Unspecified	
78	6229 - Mixed lowland shrub	9.5	No	Unspecified	
79	629 - Mixed non-forested wetland	332.6	No	Unspecified	
80	50 - Water	16.8	No	Unspecified	
81	50 - Water	22.5	No	Unspecified	
82	310 - Herbaceous Openland	26.0	No	Unspecified	
84	6229 - Mixed lowland shrub	10.0	No	Unspecified	
86	6229 - Mixed lowland shrub	12.3	No	Unspecified	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
88	6229 - Mixed lowland shrub	254.0	No	Unspecified	
89	50 - Water	13.1	No	Unspecified	
91	50 - Water	2.8	No	Unspecified	
92	710 - Sand, Soil	6.9	No	Unspecified	
93	6229 - Mixed lowland shrub	10.2	No	Unspecified	
95	6229 - Mixed lowland shrub	589.4	No	Unspecified	
96	50 - Water	4.2	No	Unspecified	
98	6229 - Mixed lowland shrub	8.3	No	Unspecified	
100	6229 - Mixed lowland shrub	28.7	No	Unspecified	
103	6229 - Mixed lowland shrub	52.0	No	Unspecified	
104	50 - Water	288.5	No	Unspecified	Shelldrake Dam Flooding
105	710 - Sand, Soil	3.6	No	Unspecified	This site is part of the Piping Plover Critical Coastal Habitat. There are old vault toilets that have been mostly covered by blowing sand.
107	622 - Lowland Shrub	10.5	No	Unspecified	
109	6229 - Mixed lowland shrub	21.1	No	Unspecified	
111	6229 - Mixed lowland shrub	8.6	No	Unspecified	
113	3303 - Mixed Low Density Trees	4.2	No	Unspecified	The white birch in the stand is dying.
116	50 - Water	7.1	No	Unspecified	
117	50 - Water	20.4	No	Unspecified	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
119	6229 - Mixed lowland shrub	2.2	No	Unspecified	
123	6229 - Mixed lowland shrub	32.5	No	Unspecified	
124	50 - Water	13.2	No	Unspecified	
125	50 - Water	12.7	No	Unspecified	
128	50 - Water	6.4	No	Unspecified	
130	6229 - Mixed lowland shrub	222.7	No	Unspecified	
131	50 - Water	38.6	No	Unspecified	
132	50 - Water	17.5	No	Unspecified	
133	6229 - Mixed lowland shrub	13.5	No	Unspecified	
134	3303 - Mixed Low Density Trees	157.2	No	Unspecified	
136	50 - Water	2.5	No	Unspecified	
139	6229 - Mixed lowland shrub	1.9	No	Unspecified	
140	6229 - Mixed lowland shrub	25.1	No	Unspecified	
141	6229 - Mixed lowland shrub	11.4	No	Unspecified	
142	6229 - Mixed lowland shrub	32.4	No	Unspecified	
143	6229 - Mixed lowland shrub	1.5	No	Unspecified	
145	6229 - Mixed lowland shrub	25.5	No	Unspecified	
147	310 - Herbaceous Openland	8.7	N\A	Unspecified	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
148	50 - Water	7.8	No	Unspecified	
150	6229 - Mixed lowland shrub	10.4	No	Unspecified	
151	50 - Water	10.1	No	Unspecified	
155	50 - Water	16.8	No	Unspecified	
157	6229 - Mixed lowland shrub	4.6	No	Unspecified	
158	6229 - Mixed lowland shrub	4.0	No	Unspecified	
159	50 - Water	6.5	No	Unspecified	
162	50 - Water	2.4	No	Unspecified	
163	6229 - Mixed lowland shrub	15.1	No	Unspecified	
164	6229 - Mixed lowland shrub	25.8	No	Unspecified	
165	310 - Herbaceous Openland	6.6	No	Unspecified	
166	50 - Water	3.7	No	Unspecified	
167	50 - Water	5.2	No	Unspecified	
168	622 - Lowland Shrub	4.8	No	Unspecified	
169	3303 - Mixed Low Density Trees	17.2	No	Unspecified	
172	50 - Water	1.2	No	Unspecified	
173	622 - Lowland Shrub	4.2	No	Unspecified	
174	6229 - Mixed lowland shrub	42.0	No	Unspecified	The purchase of this parcel of land was complete in 2007.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
175	6229 - Mixed lowland shrub	4.1	No	Unspecified	
178	6229 - Mixed lowland shrub	2.4	No	Unspecified	
179	6229 - Mixed lowland shrub	2.3	No	Unspecified	
180	3303 - Mixed Low Density Trees	2.6	No	Unspecified	
182	3302 - Low Density Conifer Trees	22.5	No	Unspecified	
184	6229 - Mixed lowland shrub	6.3	No	Unspecified	
186	6229 - Mixed lowland shrub	3.7	No	Unspecified	
188	6229 - Mixed lowland shrub	14.0	No	Unspecified	
189	6229 - Mixed lowland shrub	1.4	No	Unspecified	
191	6229 - Mixed lowland shrub	8.3	No	Unspecified	Water in the early spring.
193	6229 - Mixed lowland shrub	7.3	No	Unspecified	
194	6229 - Mixed lowland shrub	10.3	No	Unspecified	Water in the early spring.
195	6229 - Mixed lowland shrub	1.3	No	Unspecified	
197	6229 - Mixed lowland shrub	4.2	No	Unspecified	
199	6229 - Mixed lowland shrub	4.4	No	Unspecified	
201	6229 - Mixed lowland shrub	5.3	No	Unspecified	
203	6229 - Mixed lowland shrub	2.1	No	Unspecified	This stand is part of the Piping Plover Critical Coastal Habitat.
204	6229 - Mixed lowland shrub	42.2	No	Unspecified	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
205	6229 - Mixed lowland shrub	20.2	No	Unspecified	This stand is part of the Piping Plover Critical Coastal Habitat.
206	6229 - Mixed lowland shrub	9.0	No	Unspecified	
207	6229 - Mixed lowland shrub	13.0	No	Low (NonForested)	

7 – 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.

Stand	SCA Type	SCA Name	Acres	Comments
multiple - see	**Unique Site - SCA**	42059_SCA	5238.5	This area is documented as an Element Occurence of a Wooded Dune and Swale Complex by MNFI.
multiple - see	**Unique Site - SCA**	42059_SCA_Remove	529.7	Per Pre-review: Important Bird Area

8 – 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	Concentrated Recreation Area	Facilities that are designed and maintained for routine or heavy recreational use, including State Parks, State Forest campgrounds, motorized and non-motorized trails, trailheads, staging areas and public access sites.
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.
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.