Shingleton Forest Management Unit
Compartment Review Presentation
Compartment #23 Entry Year: 2013
Compartment Acreage: 2,062 County: Schoolcraft

Revision Date: 8/10/2011

Stand Examiner: Adam Petrelius

Legal Description: T44N R16W, Sections 12, 13, 14, 15

RMU (if applicable): Compartment 23 lies within the Seney Manistique Swamp Management Area.

Management Goals: The main goal of this compartment is to conduct multiple resource management for current and future generations.

Soil and Topography: The topography within the compartment is mostly flat. Elevation values range between 666-676 feet. The majority of the land is non-forested marsh. Almost all of the forested land is islands of natural red pine, jack pine, or white pine surrounded by marsh. The two most abundant soils are Markey Mucky Peat and Deford-Meehan-Seney Complex.

Ownership Patterns, Development, and Land Use in and Around the Compartment: State land within this compartment was acquired between 1939 and 1945. The compartment boundary borders private and state land. Structures on private land nearby are camps. The compartment is used mostly by hunters, ORV users, and snowmobile riders.

Special Management Designations or Considerations: All land located west of the West Branch Hickey Creek is classified as potential old growth.

Watershed and Fisheries Considerations: Fisheries Values: Good. The entire Hickey Creek system is classified Second Quality Cold Water (SQCW) for native brook trout. However, the West Branch Hickey, Section 19 Creek and Hay Meadow Creek are all classified as Second Quality Warm Water (SQWW). BMP protection from sand bedload is a high priority.

Wildlife Habitat Considerations: This compartment lies within the Seney Sand Lake Plain ecological sub-subsection. The growing season in this area is less than 100 days with extreme minimum winter temperatures of -46^0 F. Annual snowfall in this area averages between 120 and 140 inches. General Land Office (GLO) Surveyor notes show marsh and low pine ridges to be the dominant landforms in the western portion of the compartment. The ridges held primarily red pine and white pine with some aspen and white birch mixed in. Forested lowlands contained spruce, tamarack, and white birch. The open marshlands contained cranberry, and various grasses and sedges. The eastern portion of the compartment contains more upland. The surveyor notes show this upland portion of the compartment held a mix of white birch, balsam fir, red and white pines, elm, cedar, and red maple. Lower areas contained ash, elm, aspen, red maple, birch and fir. Beaver ponds along the Hay Meadow, W. Branch of the Hickey, and the Hickey Creeks played an important role in the ecology of the area. Wildfire and windthrow also provided natural disturbances within the compartment. The western $2/3^{rd}$ of the compartment is quite similar to the presettlement conditions, containing red and white pine on the ridges within the marsh. The eastern $1/3^{rd}$ of the compartment contains deciduous forest that is similar in species composition to presettlement conditions, but also contains aspen strips that are quite dissimilar to circa 1850 conditions.

Wildlife habitat objectives include protecting the sensitive marsh ecology through the oldgrowth designation, maintaining species and structural diversity within the northern hardwood stands, and converting the aspen strips to a more natural looking stand juxtaposition. Signs of gray wolves (Federal and Michigan endangered) and moose (Michigan special concern) have been observed within this compartment. Other species of interest include common snipe, American bittern, bobcat, and black bear.

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 Ordovician Utica and Collingwood Shales and Trenton Limestone subcrop below the glacial drift. The Trenton is used for stone/dolomite. The nearest gravel pit is 7 miles to the south and potential appears to be limited. A clay pit is located 5 miles to the south. There is no commercial oil and gas production in the UP.

Vehicle Access: Vehicle access is decent to the all land northeast of Section Nineteen Creek. Vehicle access to all land that lies between Hickey Creek and Section Nineteen Creek is limited to private landowners and DNR staff. The DNR recently acquired a management easement through private parcels in Section 13. Vehicle access to all land west of the West Branch Hickey Creek is not possible. Land located west of the West Branch Hickey Creek is extremely remote and difficult to access.

Survey Needs: None needed.

Recreational Facilities and Opportunities: No recreational trails or facilities are located in this compartment. It receives limited use, mostly by adjacent landowners.

Fire Protection: Fire response to this area will be very slow from any office. Any fires which occur in the western portions of the compartment will be extremely difficult to access. Water sources are abundant.

- **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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Table 1 – Total Acres by Cover Type and Age Class

Shingleton Mgt. Unit **Compartment 023 Year of Entry 2013**

Adam Petrelius : 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
Aspen	0	0	0	198	0	0	0	0	0	0	0	0	0	0	0	**198**
Jack Pine	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	**6**
Lowland Conifers	0	0	0	0	0	0	0	69	0	0	0	0	0	0	0	**69**
Lowland Deciduous	0	0	0	50	139	0	0	24	7	179	0	0	0	0	0	**399**
Lowland Shrub	772	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**772**
Lowland Spruce/Fir	0	0	0	0	0	0	0	62	0	0	0	0	0	0	0	**62**
Mixed Upland Deciduous	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	**31**
Natural Mixed Pines	0	0	0	0	0	0	0	0	5	0	22	13	0	0	0	**39**
Northern Hardwood	0	0	0	0	0	0	119	0	0	85	0	0	0	0	0	**204**
Paper Birch	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	**21**
Red Pine	0	0	0	0	0	54	0	0	0	0	0	22	0	0	0	**76**
Upland Conifers	0	0	0	62	13	0	0	0	0	0	0	86	0	0	0	**161**
Upland Mixed Forest	0	0	0	0	19	0	0	2	0	0	0	3	0	0	0	**24**
Total	**772**	**0**	**0**	**310**	**202**	**54**	**119**	**163**	**33**	**264**	**22**	**123**	**0**	**0**	**0**	**2062**

Table 2 – Proposed Treatment Summaries

Shingleton Mgt. Unit
Year of Entry 2013

Compartment 023
Total Compartment Acres: 2062

Acres by Treatment Type

Commercial Harvest - 243	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
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	6	0	0	0	0	0	**6**
Natural Mixed Pines	0	0	5	0	0	0	**5**
Northern Hardwood	16	69	0	0	0	0	**85**
Paper Birch	21	0	0	0	0	0	**21**
Red Pine	0	0	0	0	46	0	**46**
Upland Conifers	0	81	0	0	0	0	**81**
Total	**42**	**150**	**5**	**0**	**46**	**0**	**243**

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
18	41023018-Cut	16.5	4112 - Maple, Beech, Cherry Association	High Density Log	80	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Stand is already on contract. Lock the Gate Sale 17-09.

Other Comments:

Next Steps: Acceptable regeneration includes any species mixture currently found onsite. FTP-1424 for hemlock underplanting in this stand following harvest.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
21	41023021-Cut	9.9	4112 - Maple, Beech, Cherry Association	High Density Log	80	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Stand is already on contract. Lock the Gate Sale 17-09.

Other Comments:

Next Steps: Acceptable regeneration includes any mixture currently found onsite. FTP-1424 for hemlock underplanting in this stand following harvest.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
22	41023022-Cut	15.7	4119 - Mixed Northern Hardwoods	High Density Pole	80	Harvest	Clearcut with Reserves	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal

Prescription Specs: Cut all species except hemlock, oak, and cedar. Paint some large hardwood trees to leave.

Other Comments: Stand is the only one scheduled past Lund's gate. Buffer creek 100 feet, this will be retention patch. Stand will need to be cut in winter due to the low ground accessing stand.

Next Steps: Acceptable regeneration includes any species currently found onsite.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
25	41023025-Cut	19.3	4112 - Maple, Beech, Cherry Association	High Density Log	80	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Stand is already on contract. Lock the Gate Sale 17-09.

Other Comments:

Next Steps: Acceptable regeneration includes any species mixture currently found onsite. FTP-1424 for hemlock underplanting in this stand following harvest.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
27	41023027-Cut	23.5	4112 - Maple, Beech, Cherry Association	High Density Log	80	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Stand is already on contract. Lock the Gate Sale 17-09.

Other Comments:

Next Steps: Acceptable regeneration includes any species found onsite. FTP-1424 for hemlock underplanting in this stand following harvest.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
29	41023029-Cut	81.0	429 - Mixed Upland Conifers	Medium Density Log	100	Harvest	Single Tree Selection	429 - Mixed Upland Conifers	Cmpt. Review Proposal

Prescription Specs: Stand is already on contract 37-03 Lund Camp Sale.

Other Comments:

Next Steps: Acceptable regeneration includes any species mixture currently found onsite.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30	41023030-Cut	20.9	4193 - Birch, Aspen	High Density Pole	75	Harvest	Clearcut with Reserves	4193 - Birch, Aspen	Cmpt. Review Proposal

Prescription Specs: Cut all species except hemlock, oak, and white pine

Other Comments: Retention can be placed on the northern or southern boundary since adjacent stands are young aspen.

Next Steps: Acceptable regeneration includes any species mixture onsite.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
36	41023036-Cut	4.8	42290 - Natural Mixed Pine	High Density Pole	75	Harvest	Seed Tree with Reserves	42290 - Natural Mixed Pine	Cmpt. Review Proposal

Prescription Specs: Cut all species except hemlock and oak. Red pine and white pine should be marked to 30 basal area. Leave younger poles and some mature seed trees with large crowns.

Other Comments: Retention- Red pine and white pine will be the only retention. leave some larger diameter wildlife/seed trees.

Next Steps: Acceptable regeneration includes any species found onsite.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
38	41023038-Cut	5.5	42220 - Natural Jack Pine	High Density Pole	65	Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal

Prescription Specs: Cut all species except red pine, oak, and hemlock.

Other Comments: Retention-all red pine will be left and some jack pine along the edges of stand.

Next Steps: Scarify or plant to jack pine. Acceptable regeneration includes jack pine, red pine, and white pine.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
41	41023041-Cut	45.5	42110 - Planted Red Pine	High Density Pole	46	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: 3rd row thinning. Cut all trees in designated rows. Rows can be spaced wider apart in areas with lower basal area. Do not cut hemlock and oak.

Other Comments:

Next Steps: Thin again next year of entry.

Total Treatment Acreage Proposed: 242.6

Shingleton Mgt. Unit

Table 4 -- Treatments Prescribed with a Limiting Factor

Compartment: 023
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 before 10:00 AM

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
41022_OutOfYOE-Cut	35.6				Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: 3rd row thinning. Cut all trees in designated rows. Rows can be spaced wider apart in areas with lower basal area. Do not cut hemlock and oak.

Other Comments: Do not cut any trees within 50 feet of the West Branch Manistique River.

Next Steps: Thin next year of entry.

41049_OutOfYOE_1-Cut	4.7				Harvest	Single Tree Selection	42290 - Natural Mixed Pine	Cmpt. Review Proposal

Prescription Specs: Mark red pine and white pine to 30 sq. ft. Create gaps in canopy for regeneration where pine exists. Areas that have thicker young poles can be marked to 80. Cut all other species except hemlock and oak if present.

Other Comments: Access to stand is too difficult for continuous thinning.

Next Steps: Regeneration walkthrough during next inventory cycle. Acceptable regeneration includes any species mixture currently found onsite.

41053_OutOfYOE-Cut	10.2				Harvest	Single Tree Selection	42290 - Natural Mixed Pine	Cmpt. Review Proposal

Prescription Specs: Mark red pine and white pine to 30 sq. ft. Create gaps in canopy for regeneration where pine exists. Areas that have thicker young poles can be marked to 80. Cut all other species except hemlock and oak if present.

Other Comments: Access to stand is too difficult for continuous thinning.

Next Steps: Regen walkthrough during next inventory cycle. Acceptable regeneration includes any species mixture currently found onsite.

Total Treatment Acreage Proposed: **50.5**

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	429 - Mixed Upland Conifers	High Density Log	1.7	100	51-80	
2	4319 - Mixed Upland Forest	High Density Pole	3.3	100	81-110	
3	6122 - Black Spruce	High Density Pole	62.0	60		trees growing on slightly raised ridges with higher areas containing rp, aspen, birch. Entire stand interspersed with dense lowland brush
5	42210 - Natural Red Pine	High Density Log	3.5	100	81-110	
6	42210 - Natural Red Pine	High Density Log	3.6	100	81-110	
7	42210 - Natural Red Pine	High Density Pole	1.5	100	51-80	
8	42210 - Natural Red Pine	High Density Pole	3.4	100	51-80	
9	42210 - Natural Red Pine	High Density Pole	2.2	100	81-110	
11	4319 - Mixed Upland Forest	High Density Pole	1.7	60		
14	42290 - Natural Mixed Pine	High Density Log	21.9	90	81-110	
15	429 - Mixed Upland Conifers	High Density Pole	2.8	100	51-80	
17	42211 - Natural Red Pine, Mixed Deciduous	High Density Pole	2.2	100	51-80	
18	4112 - Maple, Beech, Cherry Association	High Density Log	16.5	80		Stand is on contract 17-09-01, Lock the gate. Residual basal area white pine 3 sq.ft., yellow birch 10 sq.ft., beech 7 sq.ft., hard maple 2 sq.ft., red maple 27 sq.ft., white spruce 6 sq.ft., white birch 3 sq.ft., cedar 1 sq.ft., fir 1 sq.ft., hemlock 4 sq.ft., cherry 1 sq.ft., 61 sq.ft. total. FTP W41-1424 for hemlock underplanting is approved.
19	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	69.2	60		Access is extremely difficult for inventory purposes. Multiple creek crossings and thick tag alder blocks snowmobile travel.
20	42210 - Natural Red Pine	High Density Log	5.3	100	51-80	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4112 - Maple, Beech, Cherry Association	High Density Log	9.9	80		Stand is on contract 17-09-01, Lock the gate. Residual basal area white pine 3 sq.ft., yellow birch 10 sq.ft., beech 7 sq.ft., hard maple 2 sq.ft., red maple 27 sq.ft., white spruce 6 sq.ft., white birch 3 sq.ft., cedar 1 sq.ft., fir 1 sq.ft., hemlock 4 sq.ft., cherry 1 sq.ft., 61 sq.ft. total. FTP W41-1424 for hemlock underplanting is approved.
22	4119 - Mixed Northern Hardwoods	High Density Pole	15.7	80	81-110	
23	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	126.0	80		
25	4112 - Maple, Beech, Cherry Association	High Density Log	19.3	80	111-140	Stand is on contract 17-09-01, Lock the gate. Residual basal area white pine 3 sq.ft., yellow birch 10 sq.ft., beech 7 sq.ft., hard maple 2 sq.ft., red maple 27 sq.ft., white spruce 6 sq.ft., white birch 3 sq.ft., cedar 1 sq.ft., fir 1 sq.ft., hemlock 4 sq.ft., cherry 1 sq.ft., 61 sq.ft. total. FTP W41-1424 for hemlock underplanting is approved.
26	6115 - Lowland Ash	High Density Sapling	50.2	20		
27	4112 - Maple, Beech, Cherry Association	High Density Log	23.5	80		Stand is on contract 17-09-01, Lock the gate. Residual basal area white pine 3 sq.ft., yellow birch 10 sq.ft., beech 7 sq.ft., hard maple 2 sq.ft., red maple 27 sq.ft., white spruce 6 sq.ft., white birch 3 sq.ft., cedar 1 sq.ft., fir 1 sq.ft., hemlock 4 sq.ft., cherry 1 sq.ft., 61 sq.ft. total. FTP W41-1424 for hemlock underplanting is approved.
28	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	138.9	35		
29	429 - Mixed Upland Conifers	Medium Density Log	81.0	100		Stand was thinned in 1981 and and stand is on contract, Lund Camp Sale (37-03) Southern portion of stand was harvested in winter 2010. Northern portion has not been cut yet. Residual basal areas from cruise are Unit 1(northern): 13 sq.ft. red maple, 5 sq.ft. beech, 3 sq.ft. yellow birch, 2 sq.ft. white spruce, 1 sq.ft. fir, 4 sq.ft. cedar, 2 sq.ft. white birch, 5 sq.ft. hemlock, 8 sq.ft. white pine = 43 total. Unit 2 (southern) 10 sq.ft. red maple, 1 sq.ft. hard maple, 2 sq.ft. beech, 1 sq.ft. yellow birch, 1 sq.ft. fir, 7 sq.ft. cedar, 1 sq.ft. white birch, 15 sq.ft. hemlock, and 6 sq.ft. white pine = 44 total. data reflects harvested portion
30	4193 - Birch, Aspen	High Density Pole	20.9	75		
31	42260 - Natural Pine, Mixed Deciduous	High Density Log	12.7	100		Access is extremely difficult for inventory purposes. Multiple creek crossings and thick tag alder blocks snowmobile travel.
32	4112 - Maple, Beech, Cherry Association	High Density Pole	118.9	53	51-80	Stand is composed of 5 strips running east/west. 3 of these strips were cut in 2008 with the Lund Camp Sale. The other 2 were cut in 1988. The managment goal of previous cuts were to blend these trips together to have one large stand. Lund Camp Sale is still on contract as of 2/22/2011. An FTP was written at prep time for oak planting on these 3 recently cut stirps. After onsite biologist and forester review it was decided to cancel FTP.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
33	429 - Mixed Upland Conifers	High Density Sapling	61.7	20		south strip cut in 1990, north strip cut in 1998
35	429 - Mixed Upland Conifers	High Density Pole	13.4	30	1-50	appears that all species in stand were cut in past except red pine and white pine, but i could not find any records of it. Most trees are just reaching merchantability except the large red pine and white pine.
36	42290 - Natural Mixed Pine	High Density Pole	4.8	75	81-110	New stand added.
37	4136 - Aspen, Mixed Conifer	High Density Sapling	110.3	20		north and south strip cut in 1990, middle strip cut in 1998
38	42220 - Natural Jack Pine	High Density Pole	5.5	65		trees are dying
39	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	52.9	80		
40	6118 - Lowland Deciduous with Cedar	High Density Pole	7.1	75		New stand added.
41	42110 - Planted Red Pine	High Density Pole	45.5	46	141-170	
42	4191 - Mixed Upland Deciduous with Conifer	Low Density Sapling	31.0	30		cut in 2009, 19 creek red aspen sale,41-010-06-01. futture stand will be aspen, canopy is non-merch hardwood and conifer left from cutting
43	4130 - Aspen	High Density Sapling	83.0	20		north and south strip cut in 1990, middle strip cut in 1998
44	42110 - Planted Red Pine	High Density Pole	8.8	46	81-110	first thinning in 2009, 19 creek red aspen sale. 41-010-06-01
45	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	4.7	60		
47	4319 - Mixed Upland Forest	Low Density Sapling	18.6	30		cut in 2009, 19 creek red aspen, 41-010-06-01. current canopy is residual non-merch fir and maple from cutting
48	6119 - Mixed Lowland Deciduous Forest	High Density Pole	19.4	61		
49	4130 - Aspen	High Density Sapling	5.1	20		

6 – Nonforested Stands

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
4	622 - Lowland Shrub	8.7	N\A	Unspecified	
10	622 - Lowland Shrub	9.0	N\A	Unspecified	
12	622 - Lowland Shrub	673.1	N\A	Unspecified	
13	622 - Lowland Shrub	24.3	N\A	Unspecified	
16	622 - Lowland Shrub	22.2	N\A	Unspecified	
24	622 - Lowland Shrub	8.8	N\A	Unspecified	
34	622 - Lowland Shrub	6.6	N\A	Unspecified	
46	622 - Lowland Shrub	19.7	N\A	Unspecified	

Data updated before 10:00 AM

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**	41023_SCA	907.7	Potential old growth
multiple - see	**SCA Removal**	41023_SCA_Remove	72.8	SCA boundary is being simplified to use the West Branch Hickey Creek as the boundary.

8 – DEDICATED CONSERVATION AREA DETAILS

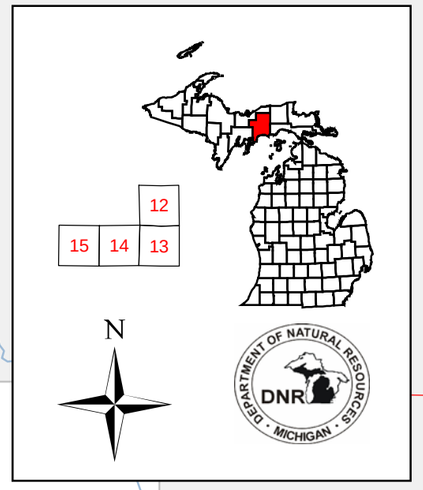
* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

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

Conservation Area	Type	Description
SCA	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.

Cover Type & Treatment Map

Compartment 23
T44N, R16W, Sec. 12-15
County: Schoolcraft
Unit: Shingleton
YOE: 2013
Acres: 2,062 GIS Calculated
Stand Examiner: Adam Petrelius
Map Revised: 9/14/2011
Map Phase: Pre-Review



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

Legend

- Miris Corners
- Remonumented Section Corners
- Paved Roads
- Poor Dirt Roads
- Closed Roads
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Out of YOE Treatment

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

Non-Forest Stands
Level 3
- 622 - Lowland Shrub

Creighton Truck Trl
Section Nineteen Creek
West Branch Manistique River
West Branch Hickey Creek
Hay Meadow Creek
Section Nineteen Creek
41022_OutOfYOE

1 **429** -MC9
2 **4319**-UM6
3 **6122**-S6
4 **622**-L0
5 **4221**-R9
6 **4221**-R9
7 **4221**-R6
8 **4221**-R6
9 **4221**-R6
10 **622**-L0
11 **4319**-UM6
12 **622**-L0
13 **622**-L0
14 **4229**-MC9
15 **429** -MC6
16 **622**-L0
17 **4221**-R6
18 **4112**-M9
19 **6128**-Q6
20 **4221**-R9
21 **4112**-M9
22 **4119**-M6
23 **6117**-E9
24 **622**-L0
25 **4112**-M9
26 **6115**-E3
27 **4112**-M9
28 **6117**-E6
29 **429** -MC8
30 **4193**-B6
31 **4226**-MC9
32 **4112**-M6
33 **429** -MC3
34 **622**-L0
35 **429** -MC6
36 **4229**-MC6
37 **4136**-A3
38 **4222**-J6
39 **6117**-E9
40 **6118**-E6
41 **4211**-R6
42 **4191**-MD1
43 **4130**-A3
44 **4211**-R6
45 **6117**-E6
46 **622**-L0
47 **4319**-UM1
48 **6119**-E6
49 **4130**-A3

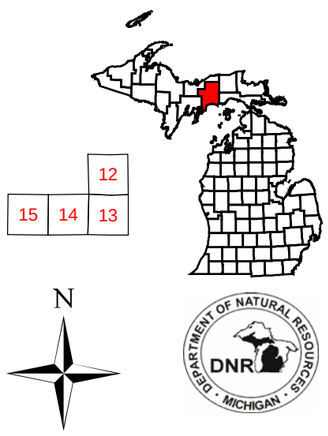
15 14 13 12

1 0.5 0 1 Miles

86°19'0"W 86°18'0"W 86°17'0"W 86°16'0"W 86°15'0"W
46°14'0"N 46°13'0"N 46°12'0"N

Stand Boundary Map

Compartment 23
T44N, R16W, Sec. 12-15
County: Schoolcraft
Unit: Shingleton
YOE: 2013
Acres: 2,062 GIS Calculated
Stand Examiner: Adam Petrelius
Map Revised: 9/14/2011
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
- Intermittent Stream/Drain
- Stream
- Stand Boundaries

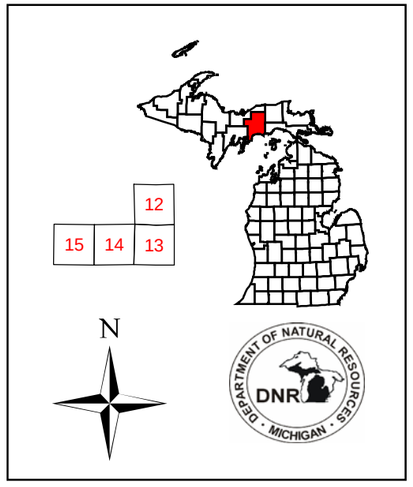
Forest Stands
- Level 3
  - 411 - Northern Hardwood
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 429 - Mixed Upland Conifers
  - 431 - Upland Mixed Forest
  - 611 - Lowland Deciduous Forest
  - 612 - Lowland Coniferous Forest

Non-Forest Stands
- Level 3
  - 622 - Lowland Shrub

1 0.5 0 1 Miles

Dedicated & Proposed Special Conservation Area Map

Compartment 23
T44N, R16W, Sec. 12-15
County: Schoolcraft
Unit: Shingleton
YOE: 2013
Acres: 2,062 GIS Calculated
Stand Examiner: Adam Petrelius
Map Revised: 9/14/2011
Map Phase: Pre-Review



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

Legend

- Miris Corners
- Remonumented Section Corners

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

Dedicated Special Conservation Areas
- Cold Water Streams
- Stand Boundaries

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

Non-Forest Stands
- Level 3
  - 622 - Lowland Shrub