



**Shingleton Forest Management Unit
Compartment Review Presentation
Compartment 117 Entry Year: 2010
Compartment Acreage: 966 County: Schoolcraft**

Revision Date: 9/23/10

Stand Examiner: Mario Molin

Legal Description: T46N R14W SEC. 23,24

Identified Planning Goals ('Management Area' or 'RMU', if applicable): Bullock Ranch Management area.

Management Goals: The goals in this compartment include conducting multiple resource management for current and future generations. Forest Health, Recreation, Biodiversity Stewardship, Wildlife and Timber Management are some of the key management components within this compartment.

Soil and Topography: This compartment is made up from many different soil complexes/types that weave all around the area. These types are, Spot-Finch, Deford-Meehan-Seney, Deford-Rubicon-AuGres, Deford Muck, Histsuls and Aquants, AuGres-Deford and Rubicon sand. The compartment is mainly low and level with small pine island/ridges.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The compartment is one continuous state owned parcel with most of the area around it being state land as well. The northeast corner of the compartment is bordered by private lands.

Unique, Natural Features: There is potential for nesting Northern goshawks (*Accipiter gentilis*, state special concern) to occur throughout this compartment in stands of red pine.

Archeological, Historical, and Cultural Features: None known.

Special Management Designations or Considerations: This compartment falls into the Bullock Ranch Flooding SCA.

Watershed and Fisheries Considerations:

None

Wildlife Habitat Considerations: This compartment is located in the Seney Sand Lake Plain ecological sub-subsection. The growing season within this area ranges from 100 to 130 days with an average annual snowfall of approximately 120 inches. The extreme minimum winter temperature is approximately -40° F. General Land Office notes show that the majority of the forest within this compartment was dominated by tamarack with a mixture of black spruce. Elevated areas contained pine (most likely red pine). There were also extensive areas of marsh and wet meadow. The primary natural disturbance within this area was most likely fire. As with most of this country, it appears that logging and slash fires impacted the vegetation and soils, but not at as high a magnitude as in places such as the Kingston Plains. Current vegetation is substantially different from that of the 1840s. Today, the forest cover is dominated by jack pine and red pine. One tamarack stand remains in the northwest corner of the compartment. The primary wildlife habitat management objective within this compartment is to maintain travel corridors and structural diversity within

the area. There are no known endangered, threatened, or special concern species within this compartment. Wildlife species of interest that potentially utilize this compartment include black-backed woodpecker, gray jay, brown creeper, spruce grouse, meadow jumping mouse, least chipmunk, long-tailed weasel, and snowshoe hare.

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 Trenton limestone, Collingwood and Utica Shales subcrop below the glacial drift. The Trenton is used for stone/dolomite. The nearest gravel pit is 12 miles to the south. There appears to be limited gravel potential on State lands.

Vehicle Access: Access is from the Fox River road across state land on 2-track roads and along the snowmobile trail.

Survey Needs: None known.

Recreational Facilities and Opportunities: A Snowmobile Trail runs through the compartment and also the Fox River pathway hiking trail runs through as well.

Fire Protection: Fire response can be immediate here with the Seney office being only 2 miles away. Due to the low wet ground here there may be some equipment limitations.

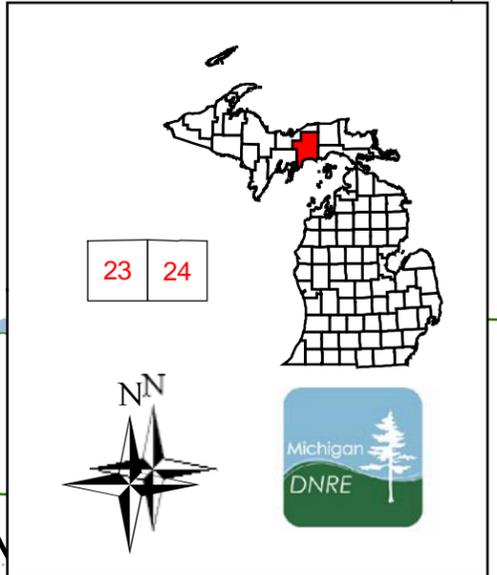
Additional Compartment Information: Text

- **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**

Compartment 117
 T46N, R14W, Sec. 23,24
 County: Schoolcraft
 Unit: Shingleton
 YOE: 2012
 Acres: 958 acres GIS Calculated
 Stand Examiner: Mario Molin
 Map Revised: 9/30/2010
 Map Phase: Pre-Review

Cover Type & Treatment Map



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
- Trail (Non-Recreation)
- Trails
- Snowmobile Trails
- Hiking Trails
- Power
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Out of YOE treatments

Forest Stands

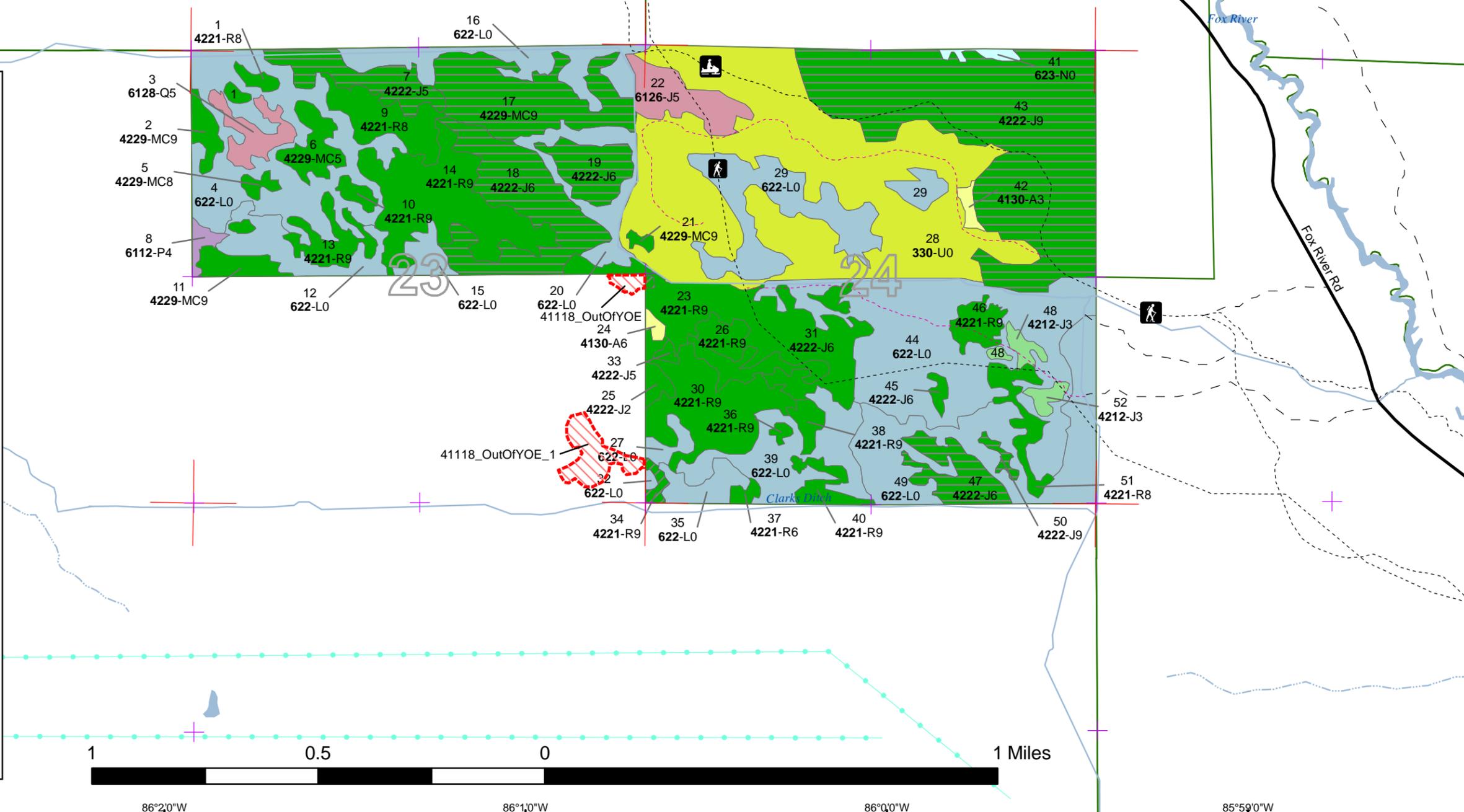
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- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest

Non-Forest Stands

Level 3

- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland



86°30'W 86°20'W 86°10'W 86°00'W 85°50'W

86°30'W 86°20'W 86°10'W 86°00'W 85°50'W

46°23'0"N

46°22'0"N

46°23'0"N

46°22'0"N

Dedicated & Proposed Special Conservation Area Map

Compartment 117
 T46N, R14W, Sec. 23,24
 County: Schoolcraft
 Unit: Shingleton
 YOE: 2012
 Acres: 958 acres GIS Calculated
 Stand Examiner: Mario Molin
 Map Revised: 9/30/2010
 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
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Deer Wintering Areas
- Stand Boundaries
- Forest Stands
- Level 3
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- Non-Forest Stands
- Level 3
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland

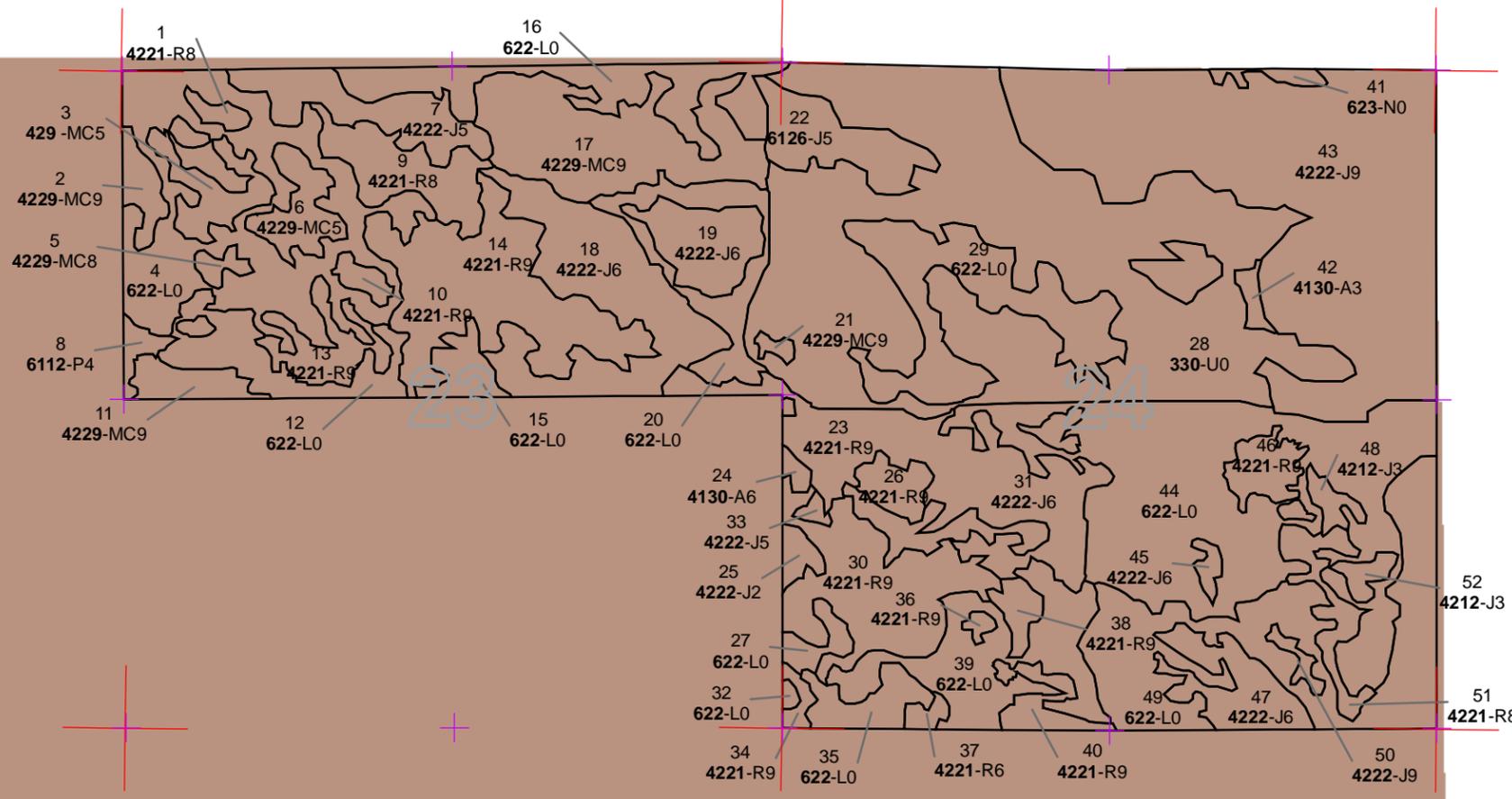
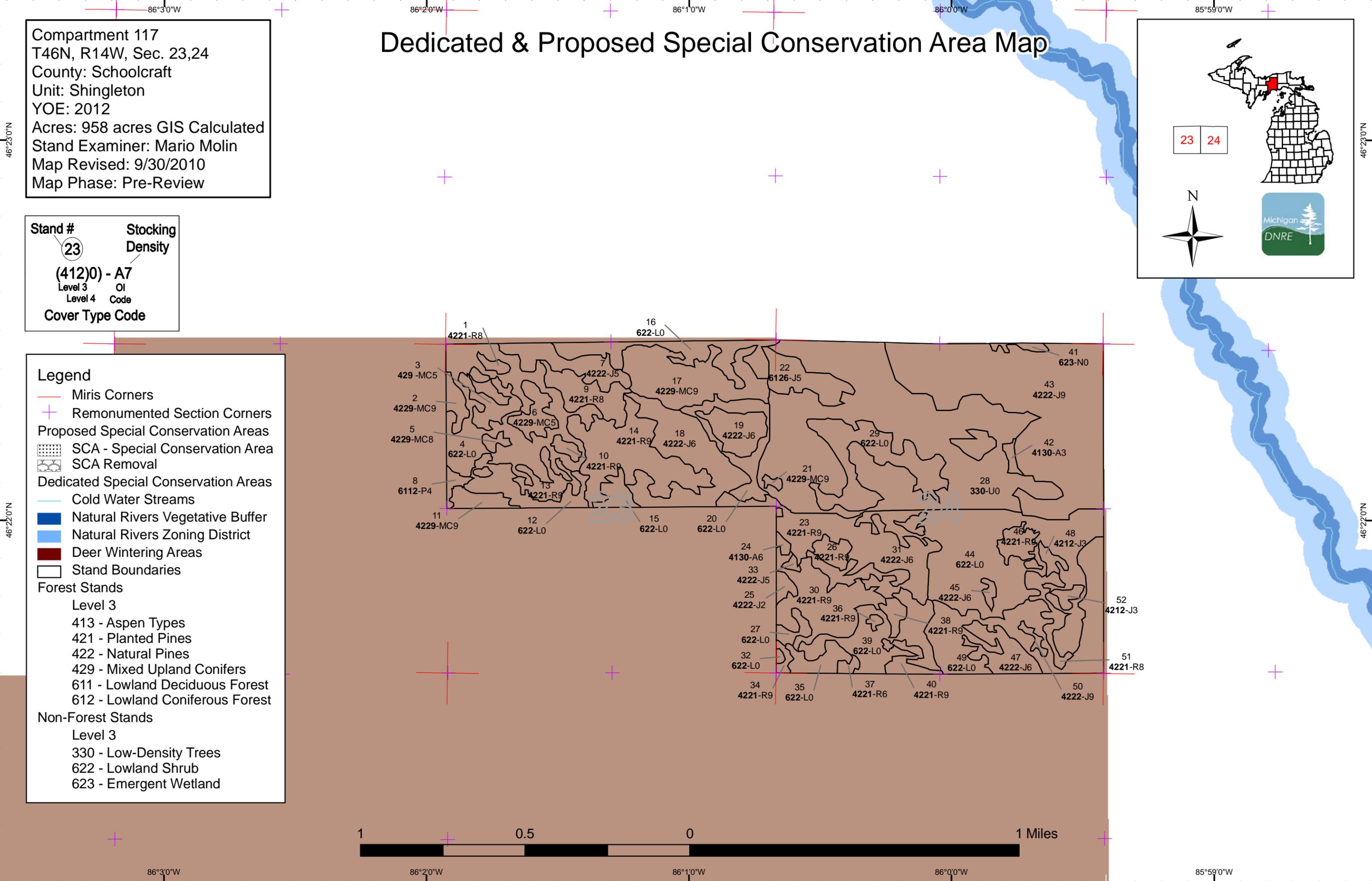



Table 1 – Total Acres by Cover Type and Age Class

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	Age Class														Total	
	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
Aspen	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Jack Pine	0	0	0	63	0	0	0	0	65	147	0	0	0	0	0	275
Low-Density Trees	159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	159
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Lowland Conifers	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	8
Lowland Shrub	321	0	0	0	0	0	0	0	0	0	0	0	0	0	0	321
Marsh	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Natural Mixed Pines	0	0	0	0	0	0	0	2	8	0	48	0	0	0	0	58
Red Pine	0	0	0	0	0	0	0	0	0	14	100	9	0	6	0	129
Total	482	2	0	63	1	0	8	4	73	162	148	9	0	6	0	958



Table 2 – Proposed Treatment Summaries

Data updated before 2:00 PM

Shingleton Mgt. Unit
Year of Entry 2012

Compartment 117
Total Compartment Acres: 957.7

Acres by Treatment Type

Commercial Harvest - 235	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	198	0	0	0	0	0	198
Natural Mixed Pines	35	0	0	0	0	0	35
Red Pine	0	0	0	0	2	0	2
Total	233	0	0	0	2	0	235



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
7 41117007-Cut	15.3	42220 - Natural Jack Pine	Medium Density Pole	78	Harvest	Clearcut	Natural Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> Clear cut all, this is in order to help with aerial application of herbicide if necessary for regeneration.								
<u>Specs:</u>								
<u>Other Comments:</u>								
<u>Next Steps:</u> Use fire to regenerate, scarify, trench and plant, herbicide. Preferred regeneration is jack pine but any mix of pine is acceptable. Check regeneration as recommended by the work instructions.								
17 41117017-Cut	35.4	42290 - Natural Mixed Pine	High Density Log	96	Harvest	Clearcut	Natural Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> Clear cut all, this is in order to help with aerial application of herbicide if necessary for regeneration.								
<u>Specs:</u>								
<u>Other Comments:</u> Use fire to regenerate, scarify, trench and plant, herbicide.								
<u>Next Steps:</u> Preferred regeneration is jack pine but any mix of pine is acceptable. Check regeneration as recommended by work instructions.								
18 41117018-Cut	35.4	42220 - Natural Jack Pine	High Density Pole	75	Harvest	Clearcut	Natural Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> Clear cut all, this is in order to help with aerial application of herbicide if necessary for regeneration.								
<u>Specs:</u>								
<u>Other Comments:</u> Cut with stand to the south. Use fire to regenerate, scarify, trench and plant, herbicide.								
<u>Next Steps:</u> Preferred regeneration is jack pine but any mix of pine is acceptable. Check regeneration as recommended by work instructions.								
19 41117019-Cut	12.4	42220 - Natural Jack Pine	High Density Pole	82	Harvest	Clearcut	Natural Jack Pine	Cmpt. Review Proposal
<u>Prescription</u> Clear cut all, this is in order to help with aerial application of herbicide if necessary for regeneration.								
<u>Specs:</u>								
<u>Other Comments:</u> Use fire to regenerate, scarify, trench and plant, herbicide.								
<u>Next Steps:</u> Preferred regeneration is jack pine but any mix of pine is acceptable. Check regeneration as recommended by the work instructions.								
23 41117023-Cut	0.3	42210 - Natural Red Pine	High Density Log	95	Harvest	Crown Thinning	Natural Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Cut all Jack Pine and Aspen, mark Red Pine to 90BA								
<u>Specs:</u>								
<u>Other Comments:</u> Cut with stand in neighboring compartment 118.								
<u>Next Steps:</u>								
34 41117034-Cut	1.7	42210 - Natural Red Pine	High Density Log	93	Harvest	Crown Thinning	Natural Red Pine	Cmpt. Review Proposal
<u>Prescription</u> Cut all jack pine and mark red pine to 90BA.								
<u>Specs:</u> Cut with stand 22 in comp 118.								
<u>Other Comments:</u> Cut with stand 22 in comp 118.								
<u>Next Steps:</u>								

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
43 41117043-Cut	120.7	42220 - Natural Jack Pine	High Density Log	86	Harvest	Clearcut with Reserves	Natural Jack Pine	Cmpt. Review Proposal

Prescription: Cut all Jack Pine and leave Red Pine, White Pine as reserve.

Specs:

Other Comments: Buffer vernal pond (near trial) using the smaller/shorter wind firm trees around the pond where possible. Agreed to with Kevin Swanson (WLD)

Next Steps: Scarify, trench and plant or herbicide to regenerate. Check regeneration as recommended by the work instructions.

47 41117047-Cut	12.4	42220 - Natural Jack Pine	High Density Pole	70	Harvest	Clearcut with Reserves	Natural Jack Pine	Cmpt. Review Proposal
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Prescription: Clearcut Jack Pine and Aspen, leaving all Red Pine as reserve.

Specs:

Other Comments: Trace amounts of superstory Red Pine

Next Steps: Check regeneration as recommended by the work instructions.

50 41117050-Cut	1.6	42220 - Natural Jack Pine	High Density Log	72	Harvest	Clearcut with Reserves	Natural Jack Pine	Cmpt. Review Proposal
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Prescription: Clear cut all jack Pine leaving all Red Pine as reserve

Specs:

Other Comments: Narrow ridge with few scattered red pine and old Jack Pine.

Next Steps: Check regeneration as recommended by the work instructions.

**Total Treatment
Acreage Proposed: 235.2**



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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription
Specs:

Other
Comment:

Next
Steps:

Limiting Factor and No
Treatment Reason

Total Treatment
Acreage Proposed: 0



Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
41039_OutOfY OE-Cut	14.6				Harvest	Clearcut with Reserves	Natural Pine, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription:</u> Cut all trees except hemlock and oak. Leave a few red pine and white pine for seed.								
<u>Specs:</u>								
<u>Other Comments:</u> Access to this stand will involve the installation of a temporary bridge. This could be built and placed by the logger west of this stand. Winter harvest may be needed. Survey work may be needed. There is a creek / drainage located in southern part of stand, it runs east/west. Buffer 50 feet. Buffer Smith creek 100 feet. These will be the retention areas. East edge of stand has some cedar. Cedar can be cut, but sale boundary should exclude the very dense patches.								
<u>Next Steps:</u> Plant red pine on ridges to maintain component. Low ground should regenerate to mixed species. Acceptable management objectives includes any species mixture currently found onsite.								
41049_OutOfY OE-Cut	15.3				Harvest	Single Tree Selection	Natural Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> Cut all species except red pine ,oak, white pine, and hemlock. Red pine and white pine should be marked. Create regeneration holes where available and thin thicker areas of poles.								
<u>Specs:</u>								
<u>Other Comments:</u> See MNFI comments. Winter harvest will be needed due to road conditions into treatment area. Buffer on Walsh Ditch should be placed at the bottom of spoils. Protect existing red pine and white pine regeneration.								
<u>Next Steps:</u> Natural regeneration of red pine, jack pine, and white pine is acceptable. Plant red pine if regeneration fails.								
41088_OutOfY OE-Cut	2.3				Harvest	Shelterwood	Natural Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> Mark red pine and white pine to 50 sq. ft. basal area to thicken crowns and prepare for regeneration harvest next year of entry. Cut all other species except hemlock and oak.								
<u>Specs:</u>								
<u>Other Comments:</u> Set up treatment as soon as it is approved at compartment review in order to combine it into one timbersale with Comparment 88, stand 43. No additional retention, small stand.								
<u>Next Steps:</u> Evaluate stand next year of entry for possible regeneration harvest. Try to maintain management objective of natural red pine.								
41118_OutOfY OE_1-Cut	8.6				Harvest	Crown Thinning	Natural Red Pine	Cmpt. Review Proposal
<u>Prescription:</u> Cut all Jack Pine and mark Red and White Pine to 90 BA								
<u>Specs:</u>								
<u>Other Comments:</u> Cut with stand 34 comp 117								
<u>Next Steps:</u>								
41179_OutOfY OE-Cut	4.2				Harvest	Single Tree Selection	Sugar Maple Association	Cmpt. Review Proposal
<u>Prescription:</u> Cut to 80 SF using selection system. Release crop trees using the complete marker as a guide, mark for best tree in place. This stand has some species variation across it, thin to improve diversity favor retention of mesic conifers. In areas of beech use beach bark marking guidelines. Place gaps in areas of less shade tolerant species. Cut aspen clones for aspen regeneration. Leave some single aspen trees where possible for soft snags.								
<u>Specs:</u>								
<u>Other Comments:</u> Acceptable regeneration is a mix of hardwood species including Sugar maple, Red maple, Basswood, Black Cherry, Yellow Birch, Aspen, White Birch, Hemlock and White Pine								
<u>Next Steps:</u>								
Total Treatment Acreage Proposed:		45.1						

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Shingleton Mgt. Unit

5 – Forested Stands

Data updated before 2:00 PM

Compartment: 117
Year of Entry: 2012

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42210 - Natural Red Pine	Medium Density Log	3.0	96	1-50	
2	42290 - Natural Mixed Pine	High Density Log	4.5	96	1-50	
3	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	8.3	50	1-50	
5	42290 - Natural Mixed Pine	Medium Density Log	1.9	62	51-80	
6	42290 - Natural Mixed Pine	Medium Density Pole	8.3	76	1-50	
7	42220 - Natural Jack Pine	Medium Density Pole	15.2	78	51-80	Old fire signs in the stand.
8	6112 - Lowland Aspen	Low Density Pole	2.4	65	1-50	Old aspen lowland, filling in with tag alder
9	42210 - Natural Red Pine	Medium Density Log	14.3	85	81-110	
10	42210 - Natural Red Pine	High Density Log	2.4	90	111-140	
11	42290 - Natural Mixed Pine	High Density Log	6.5	96	111-140	Tamarack scattered around. patchwork of jack pine, and red pine.
13	42210 - Natural Red Pine	High Density Log	8.7	106	111-140	
14	42210 - Natural Red Pine	High Density Log	39.0	98	111-140	
17	42290 - Natural Mixed Pine	High Density Log	35.4	96	81-110	
18	42220 - Natural Jack Pine	High Density Pole	35.4	75	111-140	
19	42220 - Natural Jack Pine	High Density Pole	12.4	82	81-110	
21	42290 - Natural Mixed Pine	High Density Log	1.0	96	51-80	
22	6126 - Lowland Jack Pine	Medium Density Pole	14.2	85	1-50	
23	42210 - Natural Red Pine	High Density Log	0.3	95	111-140	goes into next compartment

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Shingleton Mgt. Unit

5 – Forested Stands

Data updated before 2:00 PM

Compartment: 117
Year of Entry: 2012

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	4130 - Aspen	High Density Pole	1.2	30	1-50	
25	42220 - Natural Jack Pine	Medium Density	2.6	22	51-80	
26	42210 - Natural Red Pine	High Density Log	5.0	92	111-140	
30	42210 - Natural Red Pine	High Density Log	29.4	93	111-140	
31	42220 - Natural Jack Pine	High Density Pole	44.3	22	51-80	
33	42220 - Natural Jack Pine	Medium Density Pole	8.4	23	1-50	
34	42210 - Natural Red Pine	High Density Log	1.7	93	81-110	
36	42210 - Natural Red Pine	High Density Log	1.0	96	51-80	
37	42210 - Natural Red Pine	High Density Pole	1.6	93	141-170	bleeds over into next compartment
38	42210 - Natural Red Pine	High Density Log	3.5	95	111-140	
40	42210 - Natural Red Pine	High Density Log	5.5	96	111-140	
42	4130 - Aspen	High Density Sapling	1.8	8		
43	42220 - Natural Jack Pine	High Density Log	120.7	86	51-80	Large old Jack Pine.
45	42220 - Natural Jack Pine	High Density Pole	1.6	25	51-80	
46	42210 - Natural Red Pine	High Density Log	6.1	120	81-110	
47	42220 - Natural Jack Pine	High Density Pole	12.4	70	81-110	Trace super story Redpine.
48	42120 - Planted Jack Pine	High Density Sapling	3.3	22	51-80	
50	42220 - Natural Jack Pine	High Density Log	1.6	72	81-110	

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Shingleton Mgt. Unit

5 – Forested Stands
Data updated before 2:00 PM

Compartment: 117
Year of Entry: 2012



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
51	42210 - Natural Red Pine	Medium Density Log	8.1	96	51-80	
52	42120 - Planted Jack Pine	High Density Sapling	2.4	22	51-80	



Stand	Cover Type	Acres	Gen Cmts:
4	6220 - Alder/willow	54.8	
12	6220 - Alder/willow	14.5	
15	6220 - Alder/willow	5.4	
16	6220 - Alder/willow	21.9	
20	6220 - Alder/willow	14.6	
27	6220 - Alder/willow	3.5	
28	3302 - Low Density Conifer Trees	159.3	Regenerating jack pine stand
29	6220 - Alder/willow	35.6	
32	6220 - Alder/willow	0.6	
35	6220 - Alder/willow	7.3	
39	6220 - Alder/willow	27.3	
41	6232 - Wet Prairie	1.9	
44	6220 - Alder/willow	85.2	
49	6220 - Alder/willow	50.2	



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.

Data updated before 2:00 PM

Stand	SCA Type	SCA Name	Acres	Comments



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.

Data updated before 2:00 PM

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

Conservation Area	Type	Description
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.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.