



Compartment Review Presentation

Shingleton Forest Management Unit

Compartment 41127

Entry Year 2018

Acreage: 2,679

County Schoolcraft

Management Area: Danaher Kingston Outwash

Revision Date: 2016-08-31

Stand Examiner: Scott Kentner

Legal Description:

T47N R14W Sections 13-15, 22-24

Identified Planning Goals:

The main goal in this compartment is to conduct multiple resource management for current and future generations.

Soil and topography:

The topography in this compartment is flat with a couple areas near old ponds and the lakes that have some slope to them. The soil types are mainly poor Rubicon sands with heavy fire influence and the Kalkaska Sands. The compartment is made up of the Kingston Outwash (Sections 22, 23, 24 & east ½ of 13) and Munising Moraine III (Sections 14, 15 and west half of 13) LTA's.

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

Ownership within the compartment is mainly State lands with industrial private to the north. The surrounding lands are mainly state with only a few areas of private ownership.

Unique Natural Features:

Currently under review by Michigan Natural Features Inventory (MNFI).

Archeological, Historical, and Cultural Features:

none

Special Management Designations or Considerations:

Sharptail are actively managed in some parts of this compartment.

Watershed and Fisheries Considerations:

A request of a 100' boundary around any lake for protection from sedimentation when treatments occur.

Wildlife Habitat Considerations:

This compartment lies in the northcentral portion of the Danaher Plains and contains only two small water bodies; Duck Hole Lake and Sunken Lake. During the first survey of the area (circa 1851), the major forest tree species recorded included white pine, red pine, red maple, beech, and yellow birch. Hemlock and balsam fir occurred at moderate levels while sugar maple, white birch, and spruce were minor components. Interestingly, the surveyors noted that nearly all the timber within this compartment was dead and some had fallen over. Logging and hot fire circa 1900 severely altered the ecology of this compartment. Current land cover includes jack pine plantations, grassy opening containing sparse aspen and pine, as well as white pine and red pine stands. The compartment is situated north of the edge of the large opening complex corridor. Due to the difficulties associated with reforestation efforts, an agreement has been reached with FMFMD to focus habitat management in a portion of this area on open land values. This will be accomplished by converting selected poorly stocked pine plantations to grass and replacing them with plantings in other locations on State Forest Lands. Additional goals include maintaining closed canopy conifer forests and dense aspen regeneration. This compartment lies within the Danaher/Kingston Outwash Management Area and featured species in this MA are eastern bluebird, Kirtland's warbler, red crossbill, sharp-tailed grouse, spruce grouse, and upland sandpiper.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and an end moraine of coarse-textured till. There is insufficient data to determine the glacial drift thickness. The Ordovician Black River Group subcrops below the glacial drift. The Black River is quarried for stone/dolomite elsewhere in the UP. Gravel pits at not found in the general area, but there should be potential. There is no commercial oil and gas production in the UP.

Vehicle Access:

Overall access to the compartment is good. There are some areas on access roads where sand holes occur with repeated hauling. These are correctable with gravel.

Survey Needs:

none

Recreational Facilities and Opportunities:

There are no facilities in the compartment. However, Sunken Lake and Duck Hole Lake fall within the compartment. There are also hunting opportunities in the area.

Fire Protection:

Fire response to the area would be out of the Seney Field Office. Access will be good because of the number of drivable trail roads through the compartment.

Additional Compartment Information:

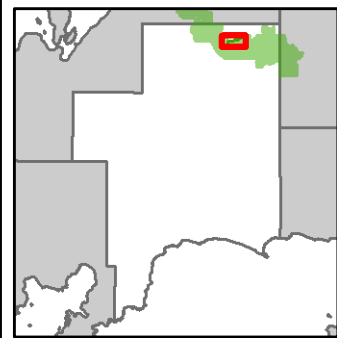
The following reports from the Inventory are attached:

- 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:

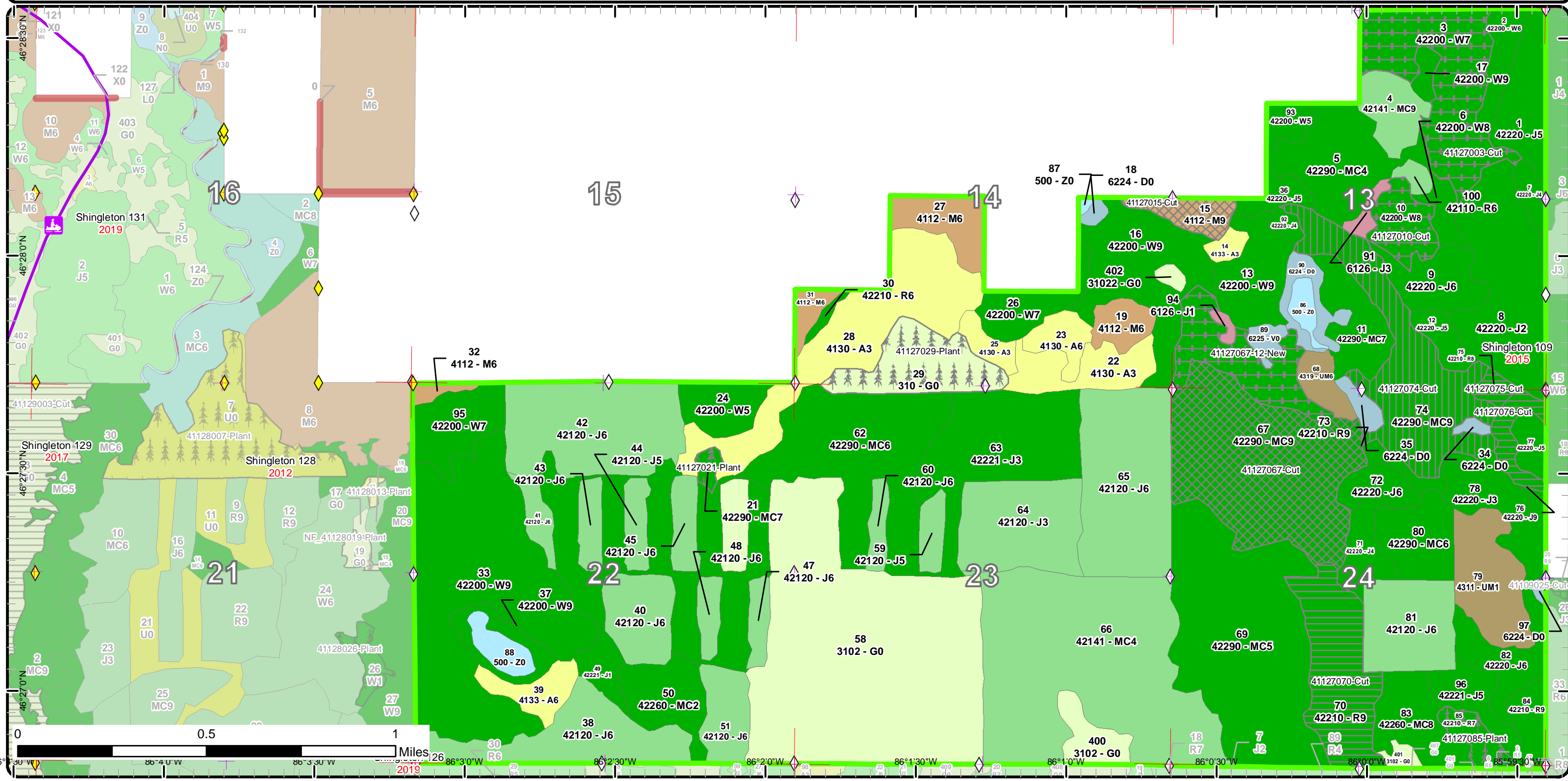
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map



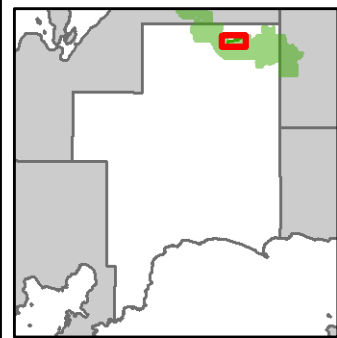
Compartment: 127
 T47N, R14W, Sec: 13,14, 22-24
 County: Schoolcraft
 Unit: Shingleton
 Mgmt Area: Danaher Kingston
 Outwash
 YOE: 2018
 Acres: 2,679 GIS Calculated
 Examiner: Scott Kentner
 Map Revised: 12/6/2016
 Map Phase: Post Review

- Miris Corners
- + Remonumented Section Corners
- ◆ Survey Grade GPS Corners
- ◇ Field Grade GPS Corners
- 🚙 Snowmobile Trails
- Designated Snowmobile Trails
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Planting (tree species)
- Harvest, Overstory Removal
- Shelter Wood (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 612 - Lowland Coniferous Forest
- 310 - Herbaceous Openland
- 500 - Water
- 622 - Lowland Shrub

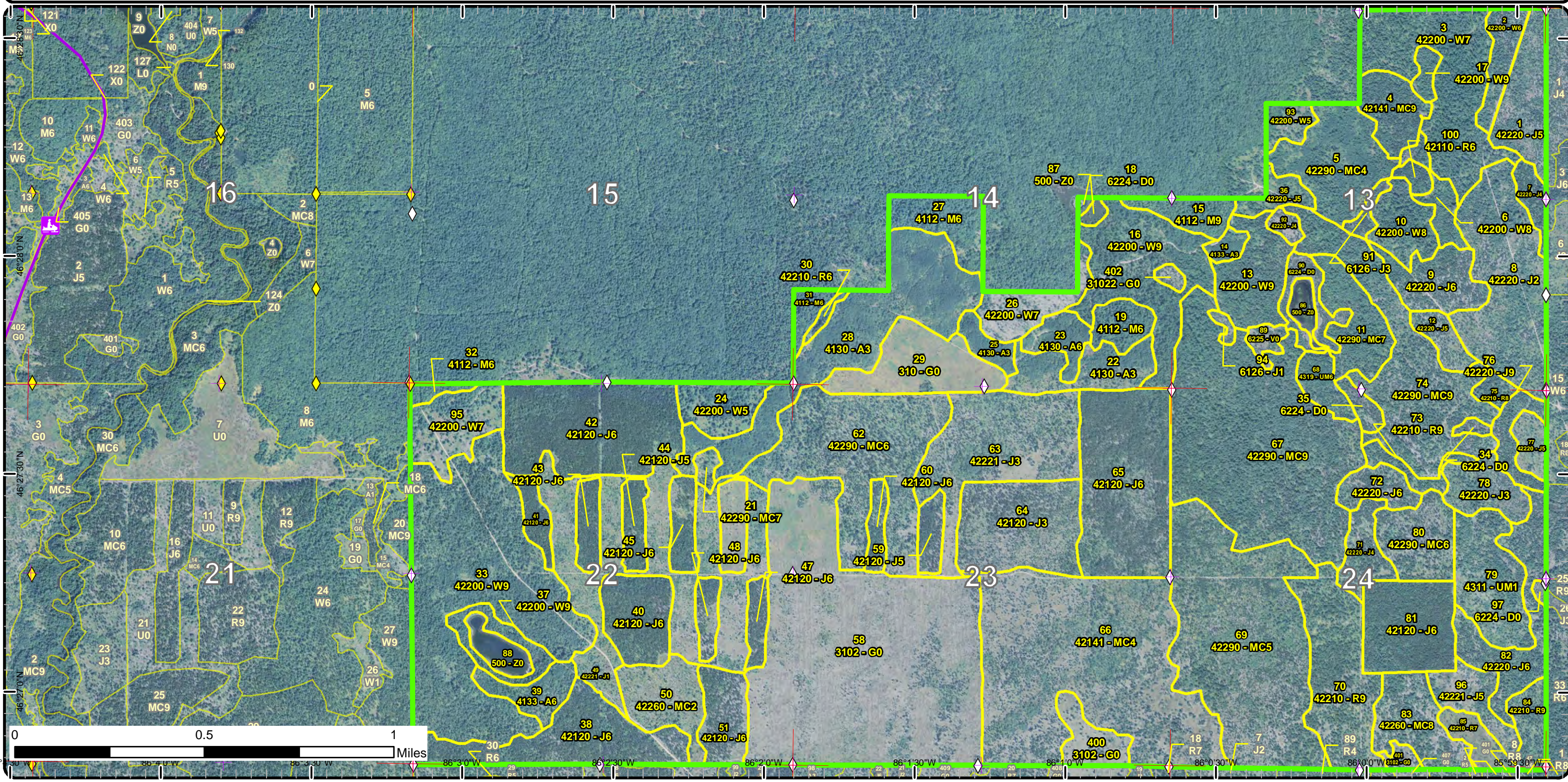


Stand Boundary Map

Compartment: 127
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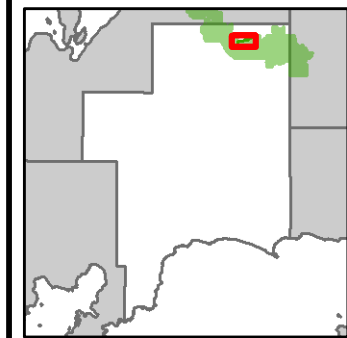


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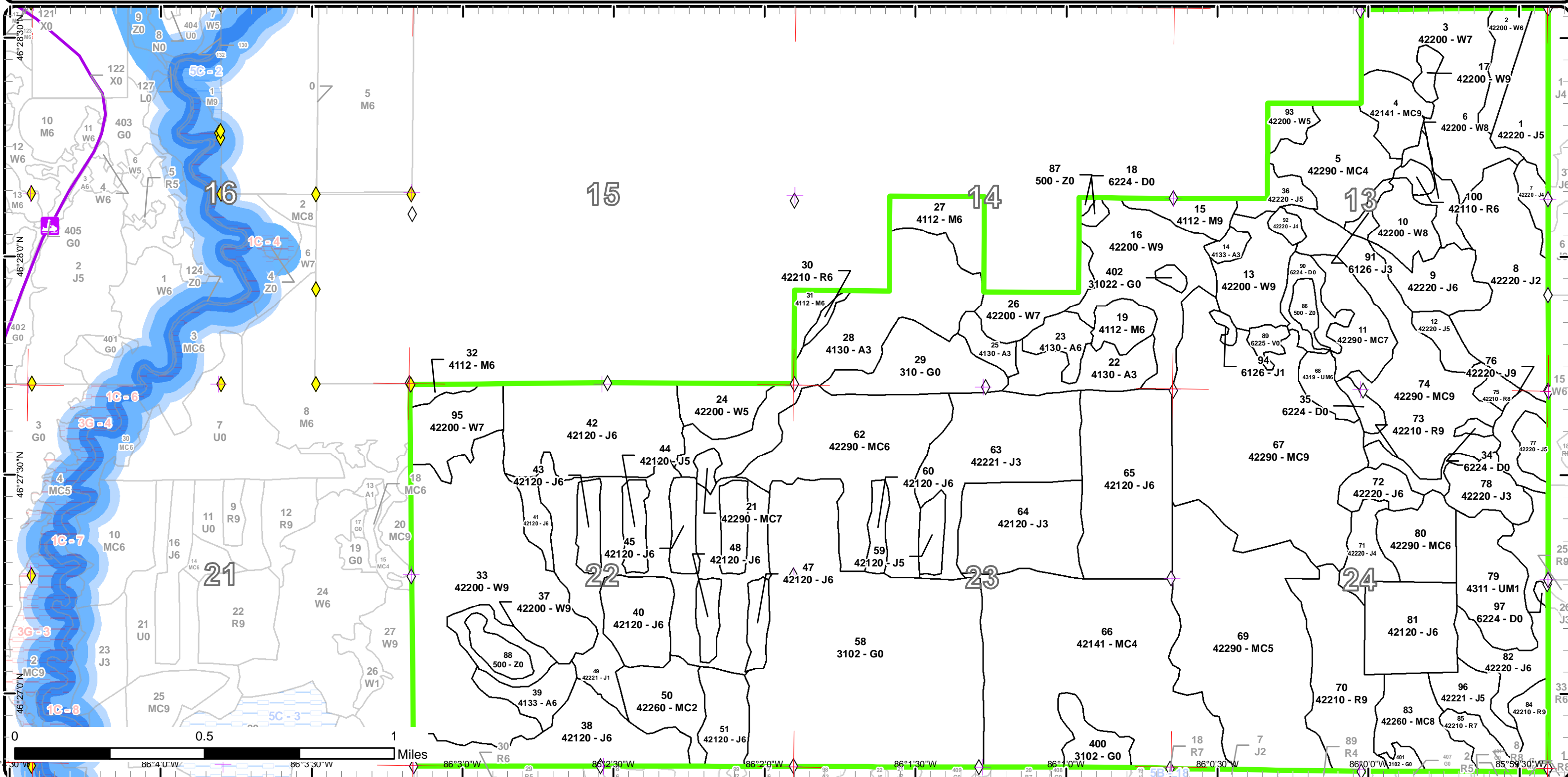


Special Conservation Areas & Site Conditions Map

Compartment: 127
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- Miris Corners
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- ◆ Survey Grade GPS Corners
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- Snowmobile Trails
- Designated Snowmobile Trails
- Compartment Boundary
- Stand Boundaries
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- High Priority Trout Stream Buffer



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	0	14	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141
Bog	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Herbaceous Openland	287	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	287
Jack Pine	0	0	173	187	66	386	2	11	0	0	0	0	0	0	0	0	0	0	825
Natural Mixed Pines	0	0	50	220	0	0	0	40	0	0	0	0	0	0	0	0	0	279	589
Northern Hardwood	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	43	54
Planted Mixed Pines	0	0	0	0	0	183	0	0	0	0	0	0	0	0	0	0	0	0	183
Red Pine	0	0	0	0	0	4	2	0	57	10	0	0	0	0	0	0	0	20	93
Treed Bog	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Upland Mixed Forest	0	0	36	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	46
Water	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
White Pine	0	0	0	0	0	5	88	26	30	64	18	0	0	0	0	0	0	188	419
Total	330	0	273	534	66	589	102	77	87	74	18	0	0	0	0	0	0	530	2680



Report 2 – Treatment Summary

Shingleton Mgt. Unit

Year of Entry: 2018

Acres of Harvest

Compartment 127

Total Compartment Acres: 2,679

Commercial Harvest - 386
 Harvests with Site Condition - 0
 Next Step Harvest - 0
 Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Jack Pine	11	0	0	0	0	0	0	0	0	11
Natural Mixed Pines	0	114	0	0	75	0	35	0	0	224
Northern Hardwood	0	12	0	0	0	0	0	0	0	12
Red Pine	57	0	0	0	0	0	0	0	0	57
White Pine	0	0	0	0	0	0	82	0	0	82
Total	68	126	0	0	75	0	117	0	0	386

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	386	0	50	0	0	0	0	0	0	436
Next Step	0	68	57	0	57	52	532	0	0	764
Total	386	68	106	0	57	52	532	0	0	1200



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
3	41127003-Cut	64.2	42200 - Natural White Pine	Sawtimber Poor	80	51-80	Harvest	Overstory Removal	4220 - Natural White Pine	Two-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Remove overstory. Cut all red pine and white pine except a few that should be left for diversity. Place spec in timbersale to protect the regeneration.

Specs: Leave all trees with 1 stick or less or 6 inch diameter.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable White pine, Red pine, Jack pine.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

10	41127010-Cut	17.9	42200 - Natural White Pine	Sawtimber Medium	90	81-110	Harvest	Overstory Removal	4220 - Natural White Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Remove overstory. Cut all red pine and white pine except a few that should be left for diversity. Place spec in timbersale to protect the regeneration.

Specs: Leave all trees with 1 stick or less or 6 inch diameter.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable White pine, Red pine, Jack pine

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

15	41127015-Cut	12.4	4112 - Maple, Beech, Cherry Association	Sawtimber Well	83	111-140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Selection harvest: Mark stand to 80 BA following the complete marker. Corners are needed to set up sale.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Any species currently on site

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

21	41127021-Plant	3.5	42290 - Natural Mixed Pine	Sawtimber Poor	81	1-50	Planting	Underplant	4211 - Planted Red Pine	Two-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Hand plant red pine in logging opening.

Specs:

Next Step Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable Red pine

Regen:

Other

Comment:

Proposed Start Date: 10/01/2007



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
29	41127029-Plant	35.8	310 - Herbaceous Openland	Nonstocked	0	Unspecified	Planting	Replant	4212 - Planted Jack Pine	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**Prescription Replant Jack pine in rows filling in failed areas.Specs:Next Step Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)Treatments:Acceptable Jack pineRegen:Other Percent to Treat = 100%Comment:Proposed Start Date: 11/02/2015

67	41127067-12-New	35.2	42290 - Natural Mixed Pine	Sawtimber Well	59	81-110	Harvest	Overstory Removal	429 - Mixed Upland Conifers	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**Prescription Remove overstory. Cut all red pine and white pine except a few that should be left for diversity. Place spec in timbersale to protect the regeneration.Specs: Leave all trees with 1 stick or less or 6 inch diameter.Next Step Monitoring, Natural Regen (Re-Inventory)Treatments:Acceptable Red pine, white pine, jack pine, paper birch, red maple, aspen.Regen:OtherComment:Proposed Start Date: 10/01/2017

67	41127067-Cut	113.8	42290 - Natural Mixed Pine	Sawtimber Well	59	81-110	Harvest	Single Tree Selection	429 - Mixed Upland Conifers	Uneven-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**Prescription Selection: Mark stand to 70-80 BA. focus on opening up around future crop trees and removing trees that are 14'-18' DBH. Designate all Jack pine trees to be cut.Specs:Next Step Monitoring, Natural Regen (Re-Inventory)Treatments:Acceptable Red pine, white pine, jack pine, paper birch, red maple, aspen.Regen:OtherComment:Proposed Start Date: 10/01/2017

70	41127070-Cut	51.9	42210 - Natural Red Pine	Sawtimber Well	74	111-140	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**Prescription Clear-cut with retention: Cut all trees down to 2". Leave retention pocket. Slash will be burned for site prep.Specs:Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr); Burn, Slash; Pesticide,Treatments: Skidder/MechanicalAcceptable Red pineRegen:OtherComment:Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
74	41127074-Cut	75.4	42290 - Natural Mixed Pine	Sawtimber Well	74	51-80	Harvest	Shelterwood with Retention	429 - Mixed Upland Conifers	Even-Aged	Draft Field Boundary

Habitat Cut: No**Site Condition:**

Prescription Green tree 30 -40 BA of over-sized red and white pine. Remove all other species. Birch ridges running through the stand will be left as retention.
Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Any species currently on site.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

75	41127075-Cut	4.6	42210 - Natural Red Pine	Sawtimber Medium	79	51-80	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clear-cut: 2" spec and chip all slash. No retention due to small acreage.
Specs:

Next Step SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr); Burn, Slash
Treatments:

Acceptable red pine
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

76	41127076-Cut	11.0	42220 - Natural Jack Pine	Sawtimber Well	61	81-110	Harvest	Clearcut with Retention	4222 - Natural Jack Pine	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription Clear-cut with reserves: Cut all Jack pine, green tree scattered Red pine as seed trees (10-20BA)
Specs:

Next Step SitePrep, Scarification; Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Jack pine, Red pine, white pine.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

85	41127085-Plant	10.2	42210 - Natural Red Pine	Sawtimber Poor	80	1-50	Planting	Interplant	4310 - Pine, Oak Mix	Even-Aged	Draft Field Boundary
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Habitat Cut: No**Site Condition:**

Prescription plant to oak and/or paper birch
Specs:

Next Step Monitoring, Natural Regen (Intermediate)
Treatments:

Acceptable Any species.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

**Total Treatment
Acreage Proposed: 435.9**

Mgt. Unit

Compartment: #Type!

Year of Entry:



Report 5 – 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
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Comments

Mgt. Unit

Compartment:

Year of Entry



Report 6 – 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
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	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42220 - Natural Jack Pine	Poletimber Medium	26.3	18	51-80	JP is 1-10' tall. There are also scattered aspen, white pine and an occasional red pine coming in independently.
2	42200 - Natural White Pine	Poletimber Well	13.5	51	81-110	Mix of White pine and Jack pine, a few white spruce scattered (less than 1%).
3	42200 - Natural White Pine	Sawtimber Poor	64.2	80	51-80	Stand thinned in '92. [11-23-09] Stand is now under contract - TS 41-042-08-01 Blueberry Pine. [11-23-10] Sale is now completed TCR dtd 11-10-10. [11-20/15] Regen survey passes, 850 T/A
4	42141 - Planted Mixed Pine, Mixed Deciduous	Sawtimber Well	18.2	46	51-80	Poor plantation, consider even age management in the future once the stand grows to merchantable height (aspen).
5	42290 - Natural Mixed Pine	Poletimber Poor	40.2	68	1-50	TS# 43-98 TCR dtd 6-7-00; [7/17/06 jb] Aspen is 10-15' tall. There are some residual JP, WP with scattered RP, WP log trees.
6	42200 - Natural White Pine	Sawtimber Medium	10.9	51	81-110	White pine mixed stand with varying age classes. BA is 50-100. Aspen seems younger in age.
7	42220 - Natural Jack Pine	Poletimber Poor	7.6	42	111-140	JP is about 30' tall. Some areas are fairly heavy to white pine in the understory.
8	42220 - Natural Jack Pine	Sapling Medium	67.1	26	Immature	CUT TS #15-99 TCR dtd 11-3-00; Scarification done 5/11/02 under FTP C41-907. Schedule regen survey for 2005. [06-14-06] After regen check in 2005, 7000 red pine handplanted on 22 acres by inmates - C41-907 partial completion report dtd 05-04-06. Schedule new regen check for 2007. [7/17/06 jb] There is good volunteer regeneration on aspen, jack pine(15-35' tall), white pine(1-2" tall). The red pine regen looks healthy, it is 1-3' tall. There were residual white and red pine left in stand.
9	42220 - Natural Jack Pine	Poletimber Well	22.7	42	81-110	Scattered red pine 30' tall.
10	42200 - Natural White Pine	Sawtimber Medium	17.9	90	81-110	Other spp were removed from cut in '92, pine was thinned at the same time. [11-23-09] Stand is now under contract - TS 41-042-08-01 Blueberry Pine. [11-23-10] Sale is now completed TCR dtd 11-10-10. Schedule regen survey. Regen survey passed well over 800 TPA.
11	42290 - Natural Mixed Pine	Sawtimber Poor	24.6	66	81-110	Area not cut with sale in '94. Understory is aspen, white birch, white pine. Overstory of white pine logs or large pulp trees. Wait to cut when understory is ready for harvest.
12	42220 - Natural Jack Pine	Poletimber Medium	8.9	22	81-110	UPDATED TCR 1/12/99 - 072-94-01 [7/17/06 jb] Regen is natural, no cult work was ever done. JP is now 5-10' tall, looks good. There are also white pine, aspen regen coming in. With large scattered RP, WP.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
13	42200 - Natural White Pine	Sawtimber Well	27.9	61	81-110	Rolling terrain. Scattered white birch, red maple and cherry, but less than 1% each.
14	4133 - Aspen, Mixed Pine	Sapling Well	4.3	24	Immature	Stand is regenerating to aspen well, 10-33' tall. There are also scattered white pine.
15	4112 - Maple, Beech, Cherry Association	Sawtimber Well	12.4	83	111-140	Thinned in '94. There are scattered lg spruce, some yellow birch of different size classes and white pine with a good number of wp seedlings coming up. Only a couple beech some with scale.
16	42200 - Natural White Pine	Sawtimber Well	54.9	51	81-110	TS# 43-98 TCR dtd 6-7-00.
17	42200 - Natural White Pine	Sawtimber Well	4.7	49	51-80	mix of White pine and Aspen, fir. Younger stand.
19	4112 - Maple, Beech, Cherry Association	Poletimber Well	11.4	46	81-110	TS# 43-98 TCR dtd 6-7-00.
21	42290 - Natural Mixed Pine	Sawtimber Poor	3.5	81	1-50	TS#41-014-08-01 Salt Block Jack Pine. Residual basal area: red pine = 30 sq.ft./acre. See also FTP C41-1388 (handplant red pine.) TCR dtd 01/07/12. No regen present stand needs to be planted.
22	4130 - Aspen	Sapling Well	25.0	27	Immature	
23	4130 - Aspen	Poletimber Well	11.4	24	Immature	Aspen just a little older than stand 23. One really old, huge Red pine tree, over 100years old 30" DBH.
24	42200 - Natural White Pine	Poletimber Medium	17.8	67	1-50	Patchy White pine stand that is slowly filling in an opening.
25	4130 - Aspen	Sapling Well	7.7	24	Immature	
26	42200 - Natural White Pine	Sawtimber Poor	18.3	76	51-80	[5/6/13bb] Stand is now on proposal, Duck Lake Beech. 10' of white pine left with trace amounts of yellow birch, red pine and hemlock. Also retention pocket on west side. (11/13/13) Stand is now cut - sale will remain open until the road repairs/grading is completed. Regen survey to be scheduled in accordance with the work instructions. (7/30/14) Sale is closed check beech brush during OI.
27	4112 - Maple, Beech, Cherry Association	Poletimber Well	20.2	41	51-80	Thinned in '94. Very low residual BA, and all beech is either dead or dying. Beech rush fills the understory.
28	4130 - Aspen	Sapling Well	78.8	24	81-110	Stand is regenerating to aspen well, 10-33' tall.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
30	42210 - Natural Red Pine	Poletimber Well	2.3	59	51-80	
31	4112 - Maple, Beech, Cherry Association	Poletimber Well	6.5	59	81-110	
32	4112 - Maple, Beech, Cherry Association	Poletimber Well	3.7	66	51-80	10/22/12 bb, A portion of this stand 1.5 acres on the west side was scheduled as an Out of Entry treatment with adjacent compartment 128 at the 2012 Review. "Spaceman Hardwood", Part of Unit 2. Residual BA = hard maple 16', red maple 54', mix softwood 10', mix hdwd 5' 84 total
33	42200 - Natural White Pine	Sawtimber Well	141.8	83	81-110	TS #: 012-96 TCR = 1/12/99. White pine stand with more Red pine in the Northern part, patchy.
36	42220 - Natural Jack Pine	Poletimber Medium	8.6	42	81-110	Jack pine with some patches of aspen and small openings.
37	42200 - Natural White Pine	Sawtimber Well	11.9	78	81-110	PERMANENT LEAVE BUFFER STRIP AROUND SUNKEN LAKE. There is a 15-20% slope all the way around.
38	42120 - Planted Jack Pine	Poletimber Well	48.9	47	111-140	Planted to RP '57, '62, '69, and JP in '70.
39	4133 - Aspen, Mixed Pine	Poletimber Well	13.8	18	Immature	Good aspen regeneration is coming in 1-20' tall.
40	42120 - Planted Jack Pine	Poletimber Well	25.4	47	111-140	Red pine planted in '57, '59 then jack pine in '69.
41	42120 - Planted Jack Pine	Poletimber Well	8.4	47	111-140	Red pine planted in '57, '59, '62 then jack pine in '69.
42	42120 - Planted Jack Pine	Poletimber Well	70.6	47	111-140	2-3 stick Jack pine. Road runs of stand might want to check easement on, if we ever decide to cut stand.
43	42120 - Planted Jack Pine	Poletimber Well	9.4	47	111-140	Red pine planted in '57, '59 then jack pine in '69.
44	42120 - Planted Jack Pine	Poletimber Medium	9.5	47	111-140	Red pine planted in '57, '59, '62 then jack pine in '69.
45	42120 - Planted Jack Pine	Poletimber Well	11.0	47	111-140	Red pine planted in '57, '59, then jack pine in '69.
47	42120 - Planted Jack Pine	Poletimber Well	7.8	47	111-140	Red pine planted in '57, '59, '62 then jack pine in '69.
48	42120 - Planted Jack Pine	Poletimber Well	7.6	47	111-140	Red pine planted in '57, '59, '62 then jack pine in '69.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
49	42221 - Natural Jack Pine, Mixed Deciduous	Sapling Poor	97.5	17	Immature	CUT TS# 10-99 TCR dtd 6-7-00.[4-3-00] Per agreement w/WLD, we moved the planting of RP from stand 89 to stand 49 because of the the amount of aspen regeneration in stand 89. See FTP's C41-966 and W41-911.(5-8-01) Trenching/planting completed - schedule regen check for 2002.[9-4-03 RFT] 2003 survey indicates 246 RP + 54 other trees per acre - may need additional handplanting to fill in.FTP has been cancelled at review 12/18/06.
50	42260 - Natural Pine, Mixed Deciduous	Sapling Medium	25.3	17	Immature	CUT TS# 10-99 TCR dtd 6-7-00. LOTS OF OAK 6" TALL, LEFT R&W PINE - RELEASED UNDER FTP W41-911.
51	42120 - Planted Jack Pine	Poletimber Well	19.2	47	111-140	Red pine planted in '57, '59, '62 then jack pine in '69.
59	42120 - Planted Jack Pine	Poletimber Medium	8.2	47	111-140	Red pine planted in '57, '59, then jack pine in '69.
60	42120 - Planted Jack Pine	Poletimber Well	7.2	47	111-140	Red pine planted in '57, '59, '62 then jack pine in '69.
62	42290 - Natural Mixed Pine	Poletimber Well	89.9	27	81-110	Stand was salvaged in 89 because of budworm, no cultural work was done after the cut. Clumps of Red pine are nice quality.
63	42221 - Natural Jack Pine, Mixed Deciduous	Sapling Well	67.1	27	Immature	Stand was salvaged in 89 because of budworm, no cultural work was done after the cut.
64	42120 - Planted Jack Pine	Sapling Well	48.7	18	Immature	FTP#C41-898 machine planted May-98. [7/20/06 jb] Stand was planted in '69 then underplanted in '98.
65	42120 - Planted Jack Pine	Poletimber Well	76.2	47	111-140	Red pine planted in '57, '59, '62 then jack pine in '69. there are some scattered p. birch, Red maple and White pine.
66	42141 - Planted Mixed Pine, Mixed Deciduous	Poletimber Poor	165.0	47	1-50	Very open grown jack pine with aspen growing in under. Grass filling in openings.
67	42290 - Natural Mixed Pine	Sawtimber Well	149.0	59	81-110	Thinned in '69, '76 and '99. Mixed stand with deciduous. Varying age classes from small poles to XL white and red pine. Old skid trails/roads have great regeneration, even red pine seems to be regenerating within the old skid trails.
68	4319 - Mixed Upland Forest	Poletimber Well	10.3	56	81-110	Paper birch stand that is pretty much dead, most trees are dead and tops falling down. Site converting to White pine. I think the Paper birch is too far gone to attempt to harvest.
69	42290 - Natural Mixed Pine	Poletimber Medium	129.9	26	51-80	Stand had patches of natural JP that were removed in salvage cuts in late '80's because of budworm. Stand now has overstory of RP with areas of JP and aspen regeneration. There are also scattered white pine of different age classes and some open areas.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
70	42210 - Natural Red Pine	Sawtimber Well	51.9	74	111-140	[11-23-09] Stand is now under contract - TS 41-042-08-01 Blueberry Pine.[11-10-10] Sale is now closed.[11-23-10] Sale is now completed TCR dtd 11-10-10. See FTP C41-1395 (Red pine regeneration.)11/12/15: Stand looks like there is too much regen to have any type of red pine regen. Write a new FTP after stand is harvest again.
71	42220 - Natural Jack Pine	Poletimber Poor	14.4	27	111-140	1-2 stick Jack pine, larger red pine. .
72	42220 - Natural Jack Pine	Poletimber Well	11.7	32	81-110	Regeneration is 10-15' tall. Scattered residual lg red pine. Boggy areas scattered through out.
73	42210 - Natural Red Pine	Sawtimber Well	7.6	66	1-50	Some scattered red maple in the stand. Trees are healthy. Stand is on a small ridge. .
74	42290 - Natural Mixed Pine	Sawtimber Well	75.4	74	51-80	[7/21/06 jb] No real red pine regeneration coming in, only on the heavily used skid trails. In the holes from the cut the regen is white pine, jack pine and aspen. Scattered large white pine pulp and logs trees. [6/6/11 JB] Site was visited and sufficient regen is coming in on its own. FTP can be closed. [10/22/15] All aged stand of mixed pine, a lot of red pine. Some patches of thicker Jack pine.A few ridges of paper birch.
75	42210 - Natural Red Pine	Sawtimber Medium	4.6	79	51-80	
76	42220 - Natural Jack Pine	Sawtimber Well	11.0	61	81-110	Jack stand with mixed in Red pine.
77	42220 - Natural Jack Pine	Poletimber Medium	8.3	22	Immature	[12-15-98] Received a completion for scarification under FTP #C41-657. [1-9-03] Regen survey during 2002 indicates that the stand is now fully regenerated. [7/21/06 jb] Stand is healthy.
78	42220 - Natural Jack Pine	Sapling Well	17.4	22	Immature	
79	4311 - Pine, Aspen Mix	Sapling Poor	35.6	16	Immature	TS #15-99 TCR dtd 11-3-00; SEE FTP C41-908 (OAK UNDERPLANTING).
80	42290 - Natural Mixed Pine	Poletimber Well	25.1	16	Immature	Stand was seedtree cut in 2000 and scarified in 2002. Inmates filled in holes in 2006, C41-907. (4/28/09 AP) 2009 regen count: 196 red pine, 64 jack pine, 78 white pine. Residual basal area is about 30 sq.ft./acre. Stand looks good FTP C41-907 can be closed.
81	42120 - Planted Jack Pine	Poletimber Well	37.3	47	111-140	
82	42220 - Natural Jack Pine	Poletimber Well	34.4	31	81-110	



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
83	42260 - Natural Pine, Mixed Deciduous	Sawtimber Medium	26.9	57	51-80	
84	42210 - Natural Red Pine	Sawtimber Well	12.2	69	51-80	Thinned in '73 [11-23-09] Stand is now under contract - TS 41-042-08-01 Blueberry Pine. Residual BA: rp = 34; wp = 21; total = 55 sq.ft./acre.[11-23-10] Sale is now completed TCR dtd 11-10-10. See FTP C41-1396 (Red pine regeneration.)Stand is too thick with residual to get any regen to succeed. Cancel FTP for planting.
85	42210 - Natural Red Pine	Sawtimber Poor	10.2	80	1-50	[11-23-09] TS 41-042-08-01 Blueberry Pine.[11-10-10] Sale is now closed. See FTP C41-1397 (prescribed fire/scarification for birch & pine regen.)Stand was burned, via FTP. No regen is found within stand.
91	6126 - Lowland Jack Pine	Sapling Well	4.1	23	81-110	Areas have cranberry, leather leaf, blueberry and/or marsh grasses.
92	42220 - Natural Jack Pine	Poletimber Poor	3.8	38	1-50	Stand has converted to a J4 with and understory consisting of jack pine, white pine.
93	42200 - Natural White Pine	Poletimber Medium	7.8	56	1-50	Open WP with cherry and spruce.
94	6126 - Lowland Jack Pine	Sapling Poor	2.0	51	1-50	Peat and marsh grasses for ground cover.
95	42200 - Natural White Pine	Sawtimber Poor	25.8	62	1-50	
96	42221 - Natural Jack Pine, Mixed Deciduous	Poletimber Medium	16.1	30	51-80	Area was cut in for salvage of budworm damage in '86. No regeneration work was done.
100	42110 - Planted Red Pine	Poletimber Well	3.8	46	111-140	Poor Red pine plantation with a mix of other species. Wait for trees to become merchantable (aspen) before harvest. Even age management might want to be considered in the future.



Stand	Cover Type	Acres	Managed Site	General Comments:
18	6224 - Treed Bog	2.2	No	Areas have cranberry, leather leaf, blueberry and/or marsh grasses.
29	310 - Herbaceous Openland	35.8		[6-24-09] TS#41-014-08-01 Salt Block Jack Pine. See also FTP C41-1389 (jack pine regeneration.) For retention a 1-acre patch will be left undisturbed. [01/19/12] TS 41-014-08-01 has been completed TCR dtd 01/07/12. (Stand was trenched in summer of 2012 by holli and planted in spring of 2013 by Superior forestry Planted approx. 1114 T/A cost of 5824.65 Regeneration check scheduled in 2014) 2014 count results are 802 T/A, count again in in 2016. regen check during inventory = 369 T/A
34	6224 - Treed Bog	2.0	No	Bog areas
35	6224 - Treed Bog	5.2	No	Bog areas
58	3102 - Grass	231.5	No	[6-24-09] Stand is now under contract TS#41-014-08-01 Salt Block Jack Pine.[01/19/12] TS 41-014-08-01 has been completed TCR dtd 01/07/12.Site is now converted grass.
86	500 - Water	5.7	No	Duck Hole Lake
87	500 - Water	0.9	No	.
88	500 - Water	9.6	No	Sunken Lake
89	6225 - Bog	4.7	No	Areas have cranberry, leather leaf, blueberry and/or marsh grasses.
90	6224 - Treed Bog	11.7	No	Areas have cranberry, leather leaf, blueberry and/or marsh grasses.
97	6224 - Treed Bog	1.2	No	
400	3102 - Grass	13.9	No	There are scattered jack pine, white pine, aspen and cherry brush starting to regenerate in the stand.
401	3102 - Grass	3.5	No	
402	31022 - Warm Season Grass	2.5	No	There are scattered jack pine, white pine, aspen and cherry brush starting to regenerate in the stand.