Compartment Review Presentation

Sault Ste. Marie Forest Management Unit

Compartment 108
Entry Year 2015
Acreage: 1,925
County Mackinac
Management Area: Carp River Red Pine

Revision Date: 07/01/2013

Stand Examiner: Josh Brinks

Legal Description:

T43N-R6W, Sections 1 – 3

Identified Planning Goals:

The compartment is located south of Trout Lake approximately two and one half miles. This compartment is composed of a variety of lowland and upland types and species. The eastern half of the compartment is mostly red pine, jack pine and aspen, both high and low ground. The western half of the compartment is mostly lowland types of lowland brush, black spruce and cedar. Most of the red pine stands have been treated in the past. Most of the jack pine was cut either in the early 1990's or late 1990's. Proposed management within the compartment for this treatment period will focus primarily on red pine stands along with one white pine stand and a stand of tamarack and black spruce. The Carp River transects the middle of the compartment, flowing north to south, and the Ozark Creek cuts through the southeastern corner of the compartment. The Carp River is designated as a wild and scenic river in the stretch downstream on the Hiawatha National Forest.

Soil and topography:

The compartment is located south of Trout Lake approximately two and one half miles. This compartment is composed of a variety of lowland and upland types and species. The eastern half of the compartment is mostly red pine, jack pine and aspen, both high and low ground. The western half of the compartment is mostly lowland types of lowland brush, black spruce and cedar. Most of the red pine stands have been treated in the past. Most of the jack pine was cut either in the early 1990's or late 1990's. Proposed management within the compartment for this treatment period will focus primarily on red pine stands along with one white pine stand and a stand of tamarack and black spruce. The Carp River transects the middle of the compartment, flowing north to south, and the Ozark Creek cuts through the southeastern corner of the compartment. The Carp River is designated as a wild and scenic river in the stretch downstream on the Hiawatha National Forest.

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

The north, west and south sections surrounding the compartment are in state ownership. The sections to the east are in federal ownership on the Hiawatha National Forest.

Unique Natural Features:

MNFI has identified records of a northern wet meadow and a muskeg within the compartment. Carp River and Ozark Creek flow through the compartment.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

The Carp River is designated as a wild and scenic river in the stretch downstream on the Hiawatha National Forest. Adequate buffers will be left along Carp River. The ORV trail within stands to be harvested will be signed and kept clear of logging debris daily while harvesting operations take place.

Watershed and Fisheries Considerations:

The Carp River, a designated trout stream with Type 4 trout stream regulations, flows through this compartment. A no clear-cut buffer of at least 300 feet should be kept adjacent to this river. Prescribed treatments are appropriate for the protection of this waterbody.

Wildlife Habitat Considerations:

Compartment 108 is located in the Carp River Red Pine Management Area. Red pine plantations are common in this compartment, particularly near the Carp River which runs south through the compartment near its center. Further west, stands are dominated by upland and lowland conifers including cedar, tamarack, white spruce, and white pine. Aspen and pine are common east of the river, most of which is young.

Wildlife management objectives include keeping a stand of maturing pine in the western portion and much of the lowland conifer cover in the compartment, maintaining diversity in pine plantations where possible, and protecting the river corridor. Cedar and hemlock will be left where present. White pine has been left in areas in previous treatments. These activities will benefit blackburnian warblers, bobcat, snowshoe hare, black bear, and other species. Most treatments will occur within red pine stands, and other species will be left in thinned stands where possible to encourage stand diversity. The young aspen resulting from former treatments benefits deer and numerous birds. The riverine and riparian communities will be protected by placing a no-cut buffer along the river. All natural community types will be protected; no harvesting will occur within these identified areas

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of lacustrine (lake) sand and thin to discontinuous glacial till over bedrock. There is insufficient data to determine the glacial drift thickness. The Silurian Engadine and Manistique and Burnt Bluff Groups subcrop below the glacial drift. The Engadine is quarried for stone/limestone two miles to the east. A gravel pit is located two miles to the northeast, but potential appears to be limited. There is no economic oil and gas production in the UP.

Vehicle Access:

The compartment has good vehicle access to the higher ground areas. The Carp River Truck Trail runs north and south through the middle of the compartment. The access into Section 1 is the Huckleberry Lake Road from the north. These roads are mainly sand that could use gravel when hauling occurs, especially during extended dry periods. Some roadwork as been done on these sand roads by various timber sale contractors. The J.T. Camp Road cuts through the southwestern portion of the compartment. The J.T. Camp Road recently had some work done by timber sale contractors and is now in drivable shape except for the portion of the road south of this compartment. There are few two-track roads accessing other areas of the compartment.

Survey Needs:

No new survey projects are required for this compartment with adequate corners present.

Recreational Facilities and Opportunities:

The only developed recreation facilities within this compartment is the Brevort-Trout Lake Motorcycle trail and snomwomobile #2. Both of these trails run through the middle of the compartment, and the motorcycle trail also runs through the southwest corner of the compartment. Unless absolutely necessary for winter logging, avoid using the groomed trail for hauling. Do not skid along the motorcycle trail. If skidding across the MC trail is necessary, keep the trail clear of slash and logging debris. Do not cut trees with trail markers on them, unless absolutely necessary (as in a clear cut). It cutting is required, then cut above the trail marker. The compartment is heavily used for all types of recreational activities including motorized vehicle use, fishing, hunting, trapping and nature viewing.

Fire Protection:

The eastern half of the compartment has a potential for a moderate to higher intensity fire. The Thunder Alley Fire burned through portions of section 11 (to the south) in 1999. The west portion of the compartment has lower fire intensity potential. The problem of ground fire does exist in this portion of the compartment. The response time to a fire in this area will be longer due to the distance from the field office and the road conditions in the area.

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 & Treatment Map

Compartment: 108
T43N R06W Sections 1, 2, 3
County: Mackinac
Unit: Sault Ste. Marie
YOE: 2015
Acres: 1,925 GIS Calculated
Examiner: Josh Brinks
Map Revised: 06/17/2014
Map Phase: Post-Review

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

Carp River Truck Trail

Legend

- Miris Corners
- Remonumented Section Corners
- Survey Grade
- PLSS Corner
- Motorcycle Trails (DNR License)
- Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Motorcycle (DNR License)
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Non-Forest Regeneration
Planned Regeneration
- Natural
- Planted

Treatments Post Review
- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Other Treatment - See Comments

Forest Stands
Level 3
- 413 - Aspen 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
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland

3 2 1

N

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1 0.5 0 1 Miles

85°3'0"W 85°2'0"W 85°1'0"W 85°0'0"W 84°59'0"W
46°9'0"N 46°8'0"N

Stand Boundary Map

Compartment: 108
T43N R06W Sections 1, 2, 3
County: Mackinac
Unit: Sault Ste. Marie
YOE: 2015
Acres: 1,925 GIS Calculated
Examiner: Josh Brinks
Map Revised: 06/17/2014
Map Phase: Post-Review

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

Legend

- Miris Corners
- Remonumented Section Corners
- Survey Grade
- PLSS Corner
- Motorcycle Trails (DNR License)
- Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Motorcycle (DNR Sticker)
- Snowmobile Trail
- Stream
- Intermittent Stream
- Stand Boundaries

Forest Stands
Level 3
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
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1 0.5 0 1 Miles

3 2 1

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Special Conservation Areas & Site Conditions Map

Compartment: 108
T43N R06W Sections 1, 2, 3
County: Mackinac
Unit: Sault Ste. Marie
YOE: 2015
Acres: 1,925 GIS Calculated
Examiner: Josh Brinks
Map Revised: 06/17/2014
Map Phase: Post-Review

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

5C - 002
3J - 012
3J - 006

Legend

- Miris Corners
- Remonumented Section Corners
- Stand Boundaries

Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)

Site Condition Type
- Available Factors W/ Constraints
  - 5C: Delay treatment for age/size class diversity or exceptional site quality
- Unavailable Factors
  - 3J: Water quality / BMPs (stream, river, or lake)

Dedicated Special Conservation Areas
- Cold Water Streams
- High Priority Trout Stream Buffer
- Ecological Reference Areas

1 0.5 0 1 Miles

3 2 1

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85°3'0"W 85°2'0"W 85°1'0"W 85°0'0"W 84°59'0"W
46°9'0"N 46°8'0"N

Cover Type & Treatment Map

Compartment: 108
T43N R06W Sections 1, 2, 3
County: Mackinac
Unit: Sault Ste. Marie
YOE: 2015
Acres: 1,925 GIS Calculated
Examiner: Josh Brinks
Map Revised: 06/17/2014
Map Phase: Post-Review

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

Carp River Truck Trail

Legend

- Miris Corners
- Remonumented Section Corners
- Survey Grade
- PLSS Corner
- Motorcycle Trails (DNR License)
- Snowmobile Trails
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
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- Snowmobile Trail
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- Lakes and Rivers
- State Forest Land

Non-Forest Regeneration
Planned Regeneration
- Natural
- Planted

Treatments Post Review
- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Other Treatment - See Comments

Forest Stands | Non-Forest Stands

1 0.5 0 1 Miles

85°3'0"W 85°2'0"W 85°1'0"W 85°0'0"W 84°59'0"W
46°9'0"N 46°8'0"N

N

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Report 1 – Total Acres by Cover Type and Age Class

Sault Ste. Marie Mgt. Unit **Compartment 108 Year of Entry 2015**

Josh Brinks : Examiner

Age Class

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	Total
Aspen	70	148	84	0	0	0	0	0	0	0	0	0	0	0	**303**
Cedar	0	0	0	0	0	0	0	0	17	5	0	0	143	0	**165**
Hemlock	0	0	0	0	0	0	0	6	5	0	0	0	0	0	**11**
Herbaceous Openland	45	0	0	0	0	0	0	0	0	0	0	0	0	0	**45**
Jack Pine	0	71	100	5	0	0	0	0	0	0	0	0	0	0	**176**
Low-Density Trees	81	0	0	0	0	0	0	0	0	0	0	0	0	0	**81**
Lowland Conifers	2	0	83	0	0	0	109	0	0	16	0	0	0	0	**210**
Lowland Mixed Forest	0	0	0	0	9	0	0	0	0	0	0	0	0	0	**9**
Lowland Shrub	107	0	0	0	0	0	0	0	0	0	0	0	0	0	**107**
Lowland Spruce/Fir	0	0	3	23	14	11	0	14	0	0	0	0	0	0	**65**
Marsh	54	0	0	0	0	0	0	0	0	0	0	0	0	0	**54**
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	6	0	0	0	0	0	**6**
Natural Mixed Pines	0	0	13	0	0	7	0	0	0	0	0	0	0	0	**19**
Red Pine	20	0	0	0	0	0	0	297	23	0	0	0	0	0	**341**
Tamarack	0	0	8	23	16	0	0	11	0	0	0	0	0	0	**58**
Treed Bog	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Upland Conifers	90	4	0	9	0	0	0	0	0	6	0	0	0	0	**109**
Upland Mixed Forest	84	34	38	0	0	0	0	0	0	0	0	0	0	0	**155**
Upland Spruce/Fir	0	0	0	0	0	5	0	0	0	0	0	0	0	0	**5**
Water	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total	**559**	**257**	**329**	**59**	**39**	**23**	**109**	**328**	**51**	**28**	**0**	**0**	**143**	**0**	**1925**

Report 2 – Proposed Treatment Summaries

Sault Ste. Marie Mgt. Unit
Year of Entry 2015

Compartment 108
Total Compartment Acres: 1,925

Acres by Treatment Type

Commercial Harvest - 276	Tree Planting - 67	Other - 62
Habitat Cut - 0	Opening Maintenance - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Lowland Coniferous Forest	8	0	0	0	0	0	**8**
Planted Pines	67	0	0	0	201	0	**269**
Total	**75**	**0**	**0**	**0**	**201**	**0**	**276**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
24	45108024-Cut	23.3	42110 - Planted Red Pine	High Density Log	82	141-170	Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Clearcut stand with retention of live trees on the edges of the treatment. Standing trees within the stand after harvest create a hazard for aerial spraying of the stand for release and pest management so all retention must be along the edges. When the sale is set up it should be determined weather a prescribed burn will be possible. If it is not feasable the sale should be chipped following the woody biomass retention guidlines.

Other Comments:

Next Steps: After harvest treatment is completed, the stand may be prescribed burned if necessary for site prep depending on amount of slash left on site. Trenching and hand planting of red pine seedling to acceptable regeneration levels will need to be completed within 2 years of the Timber Cutting Report date. After establishment of red pine regeneration, regeneration surveys need to be scheduled for 1 year and 3 years for monitoring of regeneration. Release as necessary determined by TMS an monitor for RHPS.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
45	45108045_CC-Cut	43.8	42110 - Planted Red Pine	High Density Log	74	141-170	Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Clearcut stand with retention of live trees on the edges of the treatment. Standing trees within the stand after harvest create a hazard for aerial spraying of the stand for release and pest management so all retention must be along the edges. When the sale is set up it should be determined weather a prescribed burn will be possible. If it is not feasable the sale should be chipped following the woody biomass retention guidlines. A portion of the stand located at the tip of the finger extending to the west should be left for retention.

Other Comments:

Next Steps: After harvest treatment is completed, the stand may be prescribed burned if necessary for site prep depending on amount of slash left on site. Trenching and hand planting of red pine seedling to acceptable regeneration levels will need to be completed within 2 years of the Timber Cutting Report date. After establishment of red pine regeneration, regeneration surveys need to be scheduled for 1 year and 3 years for monitoring of regeneration. Release as necessary determined by TMS an monitor for RHPS.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
45	45108045_ThinSouth-Cut	87.6	42110 - Planted Red Pine	High Density Log	74	141-170	Harvest	Crown Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Thin to around 120 Basal Area. Leave species diversity within the stand were present. Leave piles of tops in the portion of the stand between the road and the river for rabbit habitat. Buffer the Carp River by not cutting any trees on the hillside that slopes down to the river. No trees are to be felled toward the river.

Other Comments: Some areas of this stand are already at or near 120 BA and should be walked through taking only the poor quality or the large diameter trees where necessary.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
45	45108045-Cut	80.0	42110 - Planted Red Pine	High Density Log	74	141-170	Harvest	Crown Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Thin to around 120 Basal Area. Leave species diversity within the stand were present. Leave piles of tops in the portion of the stand between the road and the river for rabbit habitat. Buffer the Carp River by not cutting any trees that are on teh hill side down to the river. No trees are to be felled toward the river.

Other Comments: Portions of this stand are at or near 120 BA to begin with and should be walked through taking only the poor quality trees and the very large trees where needed.

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
52	45108052-Cut	33.8	42110 - Planted Red Pine	High Density Pole	73	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Thin to around 120 Basal Area. Leave species diversity within the stand were present. A buffer of 300ft is being left along the carp river. The portion of the stand within this buffer is being thinned. Do not drop trees over the hillside into the river corridor.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
71	45108071-Cut	7.9	6121 - Tamarack	High Density Pole	71		Harvest	Clearcut with Reserves	6121 - Tamarack	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Cut all deciduous 2" or more and conifer 4" or more. Leave a representative, healthy, mature spruce or tamarack spaced every 75ft (this will leave 8 trees per acre). Leave all white pine. Leave a buffer along the edge of the wetland. Leave at least one pile of tops per acre for rabbit habitat.

Other Comments: Cut with stand 42 to the south in compartment 107

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

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
3	45108003-Other	2.2	6123 - Lowland Fir	Low Density Sapling	9		Other	Unspecified	6120 - Lowland Cedar	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Continue to monitor this stand for cedar regeneration.

Other Comments: Stand shows some sign of cedar regeneration. This stand should be looked at least once more to determine if this treatment was succeful in regenerating cedar. This stand may have to be monitored for many entires.

Next Steps: No further follow up is needed if regeneration is acceptable. If regeneration is not acceptable, then decisions will have to be made to obtain acceptable regeneration. Acceptable regeneration includes cedar, spruce, hemlock, balsam fir with birches, aspen and maple.

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
28	45108028-Other	20.4	42110 - Planted Red Pine	Medium Density Sapling	7		Other	Unspecified	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Monitor effects of release and treat as necessary. Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2014

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
49	NF_45108049-Other	38.8	3301 - Low Density Deciduous Trees				Other	Unspecified	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Monitor effects of release and treat as necessary. Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
56	NF_45108056-Other	1.0	3302 - Low Density Conifer Trees				Other	Unspecified	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete

Prescription Specs: Monitor effects of release and treat as necessary. Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

Total Treatment Acreage Proposed: 338.7

Report 4 -- Treatments Prescribed with a Site Condition

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

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Type!

Limiting Factor

Total Treatment Acreage Proposed: 0.0

Report 5 – Site Conditions

Sault Ste. Marie Mgt. Unit

Josh Brinks : Examiner

Compartment 108

Year of Entry 2015

Availability for Management

Total Acres	Acres Available	Acres Not Available		Dominant Site Conditions No	5C	3J
303	303		**Aspen**	303		
165	165		**Cedar**	165		
11	11		**Hemlock**	11		
176	176		**Jack Pine**	176		
210	210		**Lowland Conifers**	195	15	
9	9		**Lowland Mixed Forest**	9		
65	65		**Lowland Spruce/Fir**	65		
6	6		**Mixed Upland Deciduous**	6		
19	19		**Natural Mixed Pines**	19		
341	341		**Red Pine**	341		
57	55	3	**Tamarack**	55		3
109	109		**Upland Conifers**	109	0	
155	155		**Upland Mixed Forest**	155		
5		5	**Upland Spruce/Fir**			5
1,632	1,625	8	Total Forested Acres	1,610	15	8
	100%	0%	Relative Percent			

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002	**Available**	**5C: Delay treatment for age/size class diversity or exceptional site quality**	15				
Comments:							
006	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	5				
Comments:							

012	**Not Available**	**3J: Water quality / BMPs (stream, river, or lake)**	3	2G: Too wet (sensitive soils, does not include access issues)

Comments:

This portion of the stand is wet and is being left as a buffer for the pond/wetland area.

Report 6 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres

Comments

Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

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

Conservation Area	Type	Description
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42350 - Upland Hemlock	Medium Density Log	5.9	79	51-80	Stand was thinned to encourage hemlock regeneration as part of JT's Junk in 2010. There is a fair amount of hemlock regeneration present regardless of the amount of deer sign present in the stand.
2	429 - Mixed Upland Conifers	High Density Log	6.3	93		An island out in the middle of the cedar swamp that can be seen from the ridge on the carp river truck trail. May be able to access fro the west , looks like there may be an old ice road from the west.
3	6123 - Lowland Fir	Low Density Sapling	2.2	9		These little stands were clear cut in 2005. They are right on the edge of being a forest stand. The Northern most area is definitely forested and coming in thick. Others are a bit more thin. On my way through some of the adjacent cuts I did notice some cedar regeneration poking through the snow.
4	42350 - Upland Hemlock	Medium Density Log	5.4	87	51-80	Stand was cut as part of JT'S Junk in 2010. It was a shelterwood with hemlock and white pine. There is lots of good regeneration coming up with lots of browse on the red maple. There is some cedar on the east edge where it transitions into lower, wetter ground.
5	6120 - Lowland Cedar	High Density Pole	142.8	126	200+	Wet cedar stand with a variety of other species mixed in. Waiting to see what there is for regeneration in the checkerboard cuts along the west edge of the stand before more of this stand is prescribed.
7	6127 - Lowland Pine	High Density Pole	1.0	96	111-140	This is part of larger stand to the North. A lowland stand consisting of large super canopy white pine with spruce, tamarack and red maple. There are a few scattered yellow birch present in the stand.
8	4319 - Mixed Upland Forest	High Density Sapling	28.3	4	1-50	Stand was cut as part of JT's Junk in 2010. This stand was cut leaving white pine, hemlock and some cedar. There is a ridge that runs through the stand. On the ridge there is mostly white pine that was left behind after the harvest. As you go north off of the ridge there is mostly hemlock. On the dry ground regeneration is moslty aspen but on the lower ground it is mostly red maple and balsam fir. Some pruce and white pine are also present.
9	4319 - Mixed Upland Forest	High Density Sapling	55.3	4	1-50	This stand was cut as part of Grandview Harvest in 2010. There is very good regeneration coming in taht is mainly an aspen/ fir mix. Some of the birch that was left during the harvest is starting to die and fall over. Besides birch, white pine, hemlock and cedar were also retained in the harvest.
10	6121 - Tamarack	Medium Density Pole	8.1	27		Small tamarack stand. There is a patch of tag alder in the middle of the stand.
11	6127 - Lowland Pine	High Density Log	15.1	93	141-170	Nice stand of white pine that was left unharvested because of adjacent timber sales. There are some areas of smaller trees and less stocking. There is more black spruce with some scattered cedar on the north side of the stand.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
13	42290 - Natural Mixed Pine	High Density Pole	6.5	54	111-140	A mixed conifer stand with the pines, spruce and fir. Larger white pine and red pine. Very thick to walk through.
14	6122 - Black Spruce	Medium Density Pole	15.1	37	51-80	Lowland spruce and tamarack stand with scattered white pine. There are some open areas with tag alder and other lowland shrub species. Leatherleaf and sphagnum covers the ground.
15	6122 - Black Spruce	High Density Pole	14.0	49		This is a lowland black spruce stand. Small diameters and thick.
16	6120 - Lowland Cedar	High Density Pole	17.0	88	141-170	This is a wet cedar stand. A portion of the stand on the north east side contains a nice black spruce patch.
17	429 - Mixed Upland Conifers	High Density Sapling	1.4	7		This stand was just as part of Partridge Pine. It now has sapling size spruce and red pine. The stand contains some low ground that is covered by leatherleaf, this is where most of the spruce is found.
18	4319 - Mixed Upland Forest	High Density Sapling	34.1	14		Cut in 99 as part of Ridge-N-Swale Mix. It has regenerated nicely. Along the ridge to the north it is mostly Red pine and spruce/fir. Further to the south there is more aspen mixed in. Some areas of leatherleaf at the bottom of the ridge which is where most of the spruce and tamarack are coming in. Scattered log size red pine along southern boarder.
19	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	13.3	65	111-140	This is a pole size black spruce stand that has a large component of log size white pine. Mostly low ground with a few narrow ridges of dry ground.
20	6120 - Lowland Cedar	High Density Pole	5.5	96		
21	4130 - Aspen	Medium Density	10.1	16		Stand was cut as part of Bear Dog Mix in 1997. It runs a ridge which drops off on both sides to wetter ground. Regen is adequate but there are some small opening present in the stand.
24	42110 - Planted Red Pine	High Density Log	23.3	82	141-170	Very nice red pine stand that is ready to go. Has some conifer and maple whips in the understory. Last thinned in 1999.
25	6129 - Mixed Coniferous Lowland Forest	High Density Pole	95.6	69	111-140	A stand of very mixed lowland conifers. There are patches of black spruce, tamarack, and cedar. There are some patches of open canopy that have tag alder growing in them. Wet ground.
26	6122 - Black Spruce	Medium Density Pole	10.8	54	81-110	Stand of lowland Black Spruce with medium stocking,
27	429 - Mixed Upland Conifers	Medium Density	88.9	5	1-50	Stand was cut as part of Bunker Hill Aspen in 2009. White pine was retained during the harvest. There is a ridge that runs along the southern sided of the stand. On the ridge there is great aspen regeneration. On the lower, wetter ground there is spruce, fir and white pine regenerating. The regen is taking a bit longer on the low ground, right now just the tips of the seedlings are poking through the snow. Given more time it will be adequate. A few patches of pole size cedar exist in the stand.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
28	42110 - Planted Red Pine	Medium Density	20.4	7		Young red pine stand that is now tall enough to be a forested stand. Red pine seems to have made it above the competition. There are some pockets of aspen and cherry whips in the canopy. Planted in 2006, FTP# C44-520
30	6121 - Tamarack	High Density Pole	22.6	38	111-140	Nice stand of tamarack that is not quite ready for harvest on a second glance. Some of the wetter ground to the south has tag alader growing in the understory and scattered cedar.
31	6122 - Black Spruce	High Density Pole	14.1	70	111-140	Lowland stand that is mostly black spruce and white pine. There is lower ground with cedar and yellow birch with a tag alder understory. Nice size to the cedar.
32	6126 - Lowland Jack Pine	High Density Sapling	5.2	11		This stand was cut in 1999 as part of Partridge Pine. This is a lowland stand that has regenerated to mostly jack pine with some spruce, tamarack and maple in the lower areas. On the higher ground around the edge there is red pine and aspen coming back. Sphagnum and leatherleaf covers the ground. There was standing water in some area in the middle of the stand.
33	429 - Mixed Upland Conifers	Medium Density	3.7	13		Sapling size stand of jack pine and balsam fir. There are some red pine and balsam fir seedlings in the understory. Scattered pole size trees are present in the stand.
34	4133 - Aspen, Mixed Pine	Medium Density	7.6	13		This stand has aspen growing underneath Red pine, jack pine and white pine. aspen is heaviest on the east side of the stand. More open on the west side of the stand. This stand was cut through as part of Partridge Pine.
36	6126 - Lowland Jack Pine	High Density Sapling	1.7	22		Small pocket of lowland jack pine with black spruce, tamarak and scattered paper birch. Some scattered pole size spruce present. Stand was cut and scarified in 1991.
37	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	6.0	27	51-80	Mixed lowland conifer stand. Mostly tamarack on the west edge then the ground get a little drier on the east edge and there is more white pine.
38	4136 - Aspen, Mixed Conifer	Medium Density	12.9	3		This stand was part of Grandview Harvest which was closed in 2010. This unit of the sale was cut earlier and had more advanced regen left behind making it a forested stand unlike the stand to the west. Lots of aspen coming up with some scattered conifers.
39	6122 - Black Spruce	Medium Density	3.2	22		Lowland black spruce stand with jack pine and paper birch mixed in. Stand is boarder line sapling/pole. The ground is cover with sphagnum and leatherleaf and is lower than the jack pine stand on the NE side. This was part of a sale cut in 1991.
40	4130 - Aspen	High Density Sapling	8.5	13		
41	4132 - Aspen, Jack Pine	High Density Sapling	13.4	22		Young aspen stand with jack pine and white spruce. Cut in 1991. Very good regeneration. Scattered overstory red pine and a pocket of jack pine at the south end.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	4319 - Mixed Upland Forest	Medium Density Pole	25.7	25		This is a 24 year old clearcut that had spotty regeneration. There are some areas of pole size trees and other areas where saplings are filling in the openings. Some patches of thick conifer.
43	42220 - Natural Jack Pine	High Density Sapling	3.0	11		Small pocket of jack pine with a few scatterd deciduous trees, tamarack and spruce. When the stand was cut in 1991 it was scarified. Border line pole stand. The stand is on lowground covered with leatherleaf and moss. There is aspen growing on the higher ground close to the road.
44	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	5.7	85	81-110	Retention left along the river from the adjacent clearcut. This stand is located onteh ridge that runs along the carp ricer. Nice birch in this stand.
45	42110 - Planted Red Pine	High Density Log	211.5	74	141-170	Log size red pine stand that has scattered aspen, jackpine, red mapel and white pine in the canopy. Portion of the stand south of the fire break was planted in 1938, this portion of the stand has very little brush and high BA. It was thinned in 2003 as part of Borderline Bear Pine. The portion of this stand north of the fire break was planted in 1940. This portion of the stand is brushier and has lower BA. It was last thinned in 1999 as part of Partridge Pine. There are a lot of trails that run through this stand down to the river.
46	429 - Mixed Upland Conifers	Medium Density Pole	9.2	37	51-80	A buffer strip left along the Carp River. Mostly jack pine with a good patch of paper birch. Some red pine was left along the egde of the plantation.
47	4134 - Aspen, Spruce/Fir	High Density Sapling	8.4	12		Small mixed stand that extends into the compartment to the North. Stand has some larger pole size trees taht were left during the harvest.
51	4136 - Aspen, Mixed Conifer	High Density Pole	18.5	26	51-80	Young aspen stand with scattered conifer stand runs along the river and between two red pine stand. Lots of variation in DBH of the aspen in this stand. More spruce in the canopy as you head further west.
52	42110 - Planted Red Pine	High Density Pole	85.7	73	111-140	Red pine stand taht is right on the edge of a log/pole size stand. DBH's are bigger on the ridge to the south. There are scattered aspen, black cherry, and paper birch in the canopy. The understory has low-medium density whips. This stand is quite hilly. The ridge to the south was last thinned in 1999 as part of High Bluff Pine. Portion of the stand on the East side of Huckleberry Lake road was thinned in 2008 as part of Huckleberry Mix.
54	4132 - Aspen, Jack Pine	Medium Density	3.5	14		Small mixed stand in the middle of the pine plantations. Aspen, cherry and maple with scattered pines and fir. Stand was cut in 1999.
55	42220 - Natural Jack Pine	High Density Pole	5.0	31	51-80	This is a forested stand consisting of Jackpine with scattered red pine and pockets of young aspen. Stand is naturally filling in the opeing starting along the red pine plantation and working south toward the aspen.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
58	4130 - Aspen	High Density Sapling	48.0	5		Young aspen stand cut in 2008 as part of Huckleberry Mix. Scattered overstory white pine were left behind when the stand was harvested. Some red pine regeneration is present on the north end of the stand. Berm on the road into the stand seem to be keeping ATV's out, no traffic is evident in the stand
60	6127 - Lowland Pine	Medium Density Pole	29.0	25	81-110	Lowland mixed conifer stand that is mostly jack pine and tamarak. Some areas of this stand on the higher ground seem to have been planted or scarified for jack pine. There is an open ridge running through the center of the stand with jack pine at the top. In the lower ground off of the ridge it turns into a mixed tamarack/jack pine stand. Very thick stand with lots of saplings. Rabbits.
61	4130 - Aspen	Medium Density	9.5	5		Young aspen stand with red maple stump sprouts scattered throughout the stand. There are a few pole size trees left behind during the harvest. The stand transitions into lower ground which is covered by leatherleaf as you head down the hill tothe east. In this area there is a larger component of jack pine regeneration. Except for an open area in the middle of the stand there is nice regeneration. Stand was harvested as part of Huckleberry Mix which was closed in 2008.
62	42121 - Planted Jack Pine, Mixed Deciduous	Medium Density	6.1	22		This stand was cut in 1991 as part of Huckleberry Road Sale, scarified then was seeded and hand planted. It now has jack pine that is thicker then thick in some places then open in others. There are a few pockets of aspen present in the stand. In some areas of the stand the ground is covered with leatherleaf and in others it is higher ground covered with blueberry.
63	6132 - Mixed Lowland Forest with Cedar	Low Density Pole	9.3	49	1-50	Lower ground in the middle of an aspen stand. Some aspen mixed with balsam fir and spruce. In the center of the stand there is tag alder opening with scattered cedar.
65	4132 - Aspen, Jack Pine	High Density Sapling	7.0	22		Young aspen stand on the edge of a wetland and jack pine. Some aspen and scattered conifer in teh understory.
67	4311 - Pine, Aspen Mix	High Density Sapling	11.8	23		Aspen/jack pine stand. Cut in 1991. Regeneration looks very good. This part of the cut came back heavier to aspen then jack pine.
69	4132 - Aspen, Jack Pine	High Density Sapling	104.9	18		Young aspen/jack pine stand. South and west portion of the stand was cut in 1998, North and East side of the road was cut in 1991. Because of this, trees on the east side of the road have slightly higher diameters and heights. There are portions of the stand on the west side of the road have poor stocking. Road into the stand is hard to find but is evident on the air photo.
70	42290 - Natural Mixed Pine	High Density Sapling	13.0	23		
71	6121 - Tamarack	High Density Pole	10.7	71		Awesome stand of tamarack and spruces. Shows great potential for regeneration. Some tamarack, spruce and fir in the understory. Leatherleaft ground. In open area around the edges of the stand there is awesome natural regeneration coming up.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
72	4136 - Aspen, Mixed Conifer	High Density Sapling	7.1	22		Young aspen stand in the middle of jackpine. Aspen is pretty open underneath, some misc. understory is present mostly conifer.
73	6126 - Lowland Jack Pine	High Density Sapling	10.3	14		Lowland Jack Pine stand that was scarified after the harvest in 1998 then places were trenched and planted in 2000. Ground is covered in leatherleaf. Regen is doing very well.
75	6125 - Lowland Black Spruce, Jack Pine	Medium Density Pole	25.8	23	51-80	Lowland jackpine, spruce, and tamarack stand. There are pockets of higher drier ground that have ferns and blueberries instead of low wet leatherleaf ground. Stand is very thick but the pole size canopy is sparse in areas.
76	42121 - Planted Jack Pine, Mixed Deciduous	Medium Density Pole	92.5	22		Stand was cut in 1991 as part of Huckleberry Road Sale then was scarified and seeded with some hand planting also occuring. Rows are evident in some areas but not in others. There are scatted pockets of aspen and some openings in the stand. Right on the boarder of a sapling/pole size stand.
77	6121 - Tamarack	High Density Pole	16.1	44	51-80	Tamarack stand with scattered pole size trees and lots of smaller stuff in between. Stand is very thick. Rabbit sign.
78	6122 - Black Spruce	Medium Density Pole	7.6	37	1-50	Lowland spruce and white pine stand with thick leatherleaf covering the ground. Lots of variation in the size of the trees.
79	6129 - Mixed Coniferous Lowland Forest	Low Density Pole	12.7	25		Lowland mix stand, canopy consists of pole size trees with lots of sapling size stuff in between. Some open/wet areas are full of tag alder. Trail through the stand seems to be rutted under the snow.
81	42220 - Natural Jack Pine	Medium Density	52.3	14		Cut in '99 as part of Ozark Creek Jack Pine. Did not regenerate well in wetter areas which gives the stand a patchy apperance. Scattered leatherleaf ground with black spruce and tamarack. Scattered large snags.
82	6128 - Lowland Coniferous, Mixed Deciduous	High Density Sapling	9.6	23		Marginal ground with a very mixed stand. Mostly tamarack and fir.
83	4132 - Aspen, Jack Pine	High Density Sapling	35.9	22		Young aspen/jack pine stand with some mixed conifers scattered throughout. Stand was cut in 1991 as part of Huckleberry Road Sale. Some scattered pole size trees were left during the harvest.
84	4136 - Aspen, Mixed Conifer	High Density Sapling	2.3	23		Small aspen stand that looks healthy. 4-wheeler trail right to the stand.
85	42340 - Upland Spruce/Fir	Medium Density Pole	5.2	56	1-50	This stand is a buffer left along the stream. There are a few scattered overstory red pine with pole size spruce, fir, and tamarack. There area some areas where saplings are filling in teh open areas.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
87	4134 - Aspen, Spruce/Fir	High Density Sapling	5.2	15		This stand was part of Ozark Creek Spruce cut in 1998. The portion of the harvest that is in this compartment has a higher percentage of conifer regen compared with the stuff to teh south.

Report 9 – Nonforested Stands

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
6	623 - Emergent Wetland	4.3	Unspecified	Unspecified	
12	622 - Lowland Shrub	56.0	Unspecified	Unspecified	
22	629 - Mixed non-forested wetland	34.0	No	Unspecified	Stand is mostly tag alder with scattered cedar, white pine and a few spruce.
23	623 - Emergent Wetland	2.1	Unspecified	Unspecified	
29	3302 - Low Density Conifer Trees	18.6	Natural Regen	Aspen	This stand is part of Grandview Harvest which was closed in 2010. This unit does not have the regeneration present like the stand to the East making it a Non-Forest stand.
35	623 - Emergent Wetland	16.6	Unspecified	Unspecified	
48	3303 - Mixed Low Density Trees	10.8	Unspecified	Unspecified	Stand is filling in with cherry, aspen, white pine, jack pine, and white spruce. Ground is covered with ferns and grass.
49	3301 - Low Density Deciduous Tree	38.8	Plantation	Red Pine	Cut in 2010 as part of Ridge Edge Pine. Stand has lots of hardwood whips and some scattered conifer saplings.FTP#C44-583. Planted in 2012.
50	3102 - Grass	45.1	Unspecified	Unspecified	
53	3301 - Low Density Deciduous Tree	9.5	No	Unspecified	Opening with pockets of sapling size aspen.
56	3302 - Low Density Conifer Trees	1.0	Plantation	Red Pine	Stand was cut in 2010 as part of Ridge Edge Pine. Has lots of hardwood whips and some scattered conifer saplings. FTP#C44-583. Planted in 2012.
57	622 - Lowland Shrub	9.4	Unspecified	Unspecified	
59	6224 - Treed Bog	1.4	Natural Regen	Lowland Conifers	This stand was cut in 2008 as part of Huckleberry Mix. This was a lowland pocket of jack pine and spruce that was included in the species designation of a pine unit. Leatherleaf covers the ground in this stand. There is a medium stocking of regeneration which includes jack pine, tamarack, spruce and white pine. There is a patch of aspen growing on the higher ground on the south edge of the stand. A few scattered pole size trees are present.
64	6224 - Treed Bog	1.7	Natural Regen	Lowland Conifers	Stand was cut as part of Huckleberry Mix in 2008. This is a lowland stand where the ground is covered with leatherleaf. There is good regeneration of jack pine, spruce, tamarack and white pine. Regeneration is not 3ft tall yet. There are a few overstory white pine that were retained from the harvest.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
66	629 - Mixed non-forested wetland	2.6	No	Unspecified	Lowland stand with scattered cedar snags.
68	623 - Emergent Wetland	31.1	Unspecified	Unspecified	
74	50 - Water	1.4	Unspecified	Unspecified	
80	3302 - Low Density Conifer Trees	2.8	No	High	Opening is growing in with black cherry, jack pine and spruce.
86	622 - Lowland Shrub	5.1	Unspecified	Unspecified	